

A quality of life framework for an adventure-based sport

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Thesis submitted in fulfillment of the requirements for the degree *Philosophiae Doctor* in **Tourism Management** at the Potchefstroom Campus of the North-West University

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November 2016

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Reference list quality control

This letter serves as proof that I, Dr Marco Scholtz, conducted quality control on **Mr Dewald Venter**'s PhD dissertation. The student's dissertation reference list is appropriate for submission.



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PLAGIARISM DECLARATION

I **Dewald Venter**, student number **20269218** hereby declare that this thesis is my own, independent work. All work used has been properly acknowledged and referenced in accordance with the requirements as stated in the North-West University reference guidelines.

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ACKNOWLEDGEMENTS

FOR THE PAINTBALLERS AROUND THE GLOBE WHO SHARE THE CAMARADERIE OF OUR ADVENTURE (COMBAT) SPORT

My appreciation goes out to my beautiful wife Carina who has manoeuvred alongside me for the past 8 years, half of which has been spent with this PhD. Without your support, love, understanding and endless cups of coffee, I would not have made it this far. My endless love to our daughter Ciska (4) who somehow comprehended that I had to work and couldn't always play with her as much as I wanted to. To my parents who raised me and gave me values to live by, which ultimately led me on my life's course, thank you. My parents-in-law, thank you for your support and understanding that I couldn't always be present at family gatherings because of deadlines.

With regard to the technical details of this PhD, I am specifically grateful to the following people for their support and assistance:

- My promotor and friend, Dr Stefan Kruger. We had some interesting discussions on QoL, leisure and adventure sport. Thank you for always being positive and encouraging.
- Hester van der Walt for her quick response and professional service in conducting the language editing.
- Dr Suria Ellis for her swift and professional service, patient analysis and re-analysis of the statistics for the new model.
- Dr Marco Scholtz, who conducted the quality control of my bibliography, for his prompt and professional service.

Another word of thanks to the anonymous interviewees who consented to the interviews, shared their passion for paintball and kept me motivated with their energy. I also want to thank the global paintball community who shared and completed the online survey. Without your passion, this study wouldn't have gone far. Special thanks to

Hennie Johnson for his professional photographs of me that were used during the marketing campaign of this study.

Thank you to the NRF for funding my sabbatical year, without which I wouldn't have been able to complete the thesis as quickly as I did, and to all those persons at the VUT who made the sabbatical opportunity possible. Heartfelt thanks goes out to the Research Directorate for their timely assistance when I needed it most.

I want to thank the Lord Almighty for the talents and passion He has given me, the courage to complete and never quit my dreams, and the privilege for being on this planet one more day.



ABSTRACT

It is evident that throughout human history, the spirit of adventure and the need for survival, to explore the unknown and to push the limits of our being have propelled us forward constantly. If it were not for those adventure seekers who came before us, we would not have achieved the marvels of today. Modern living has brought many benefits such as global communication and instant access to information and to one another, which help to improve our overall quality of life. However, the demands on human work performance have also risen sharply, with said benefits leading to an increase in stress, especially in urbanised countries, which detracts from our overall quality of life.

It is evident that the comforts of modern living have taken from us the basic need to be adventurous, though. This is one of the important reasons for the growth of adventure sports, which has become a way for society to deal with the increased stresses of modern living. Participation in adventure sports forces the body to release adrenaline and endorphins that serve as natural narcotics, help to reduce pain and stimulate a feeling of bliss. Humans are by nature social and seek interpersonal communication and opportunities to bond and socialise. What better way to feed this human need for adventure, socialisation and camaraderie than simulated combat. However, there is a lack of understanding in literature as to why individuals participate in such adventure (combat) sports. The research undertook to identify the aspects that motivate participation and the effects on participant's quality of life. By showing the positive affect aspects thereof the allure of such adventure sports can be increased.

Paintball is one of two (modern) adventure combat sports (airsoft being the other) that simulate modern armed conflict without the associated bloodshed; in this sport, teams compete for domination and attempt to 'mark' opposing players, thereby eliminating them from the game. The goal of this study was to develop a quality-of-life framework for an adventure-based sport, namely paintball. To achieve said goal, the author first conducted interviews with 12 paintballers from across the globe. Preceding the survey, an extensive marketing campaign, targeting paintballers via Facebook, was done by

stating the goal of the study and encouraging them to join the dedicated Facebook group Global Paintball Research Project. The self-administered questionnaire was made available via the group page and ran between 1 July 2016 and 31 July 2016. More than 2 000 paintballers joined the group page, of which 506 completed the online survey. To fulfil the goal of the study (cf. 1.4.1), the author set the following five objectives:

The first objective (cf. 1.4.2) was to analyse popular theoretical frameworks of quality of life, leisure and activities related to the study. This was achieved in Chapter 2 (cf. 2.1) through an extensive analysis of related literature, which provided the theoretical framework of quality of life, leisure and activities that were relevant to adventure sports. The framework postulated that the effect of an adventure-based sport experience (paintball) on a participant's quality of life might influence several life domains, for example social, emotional, health and safety, financial, leisure, travel and family life, which could then determine a participant's overall quality of life.

The second objective (cf. 1.4.2) was to analyse quality of life in relation to adventure sports by means of a literature review. This analysis was assigned to Chapter 3 (cf. 3.1). The first step was to understand the concept of 'quality of life', based on its historic origins, followed by a review of the life domains that are most suitable to adventure sport. Concepts of quality of life were compared and the psychology of quality of life was explored. An analysis on the relationship between quality of life and leisure, sport and adventure was conducted to determine how an adventure-based sport can enhance a participant's overall quality of life.

The third objective (cf. 1.4.2) was to analyse leisure, adventure sport and the adventure sport experience by means of a literature review. This was achieved as part of Chapter 4 (cf. 4.1) by first reviewing the history of leisure in the Western world and the various ways in which leisure can be defined. This was followed by a theoretical explanation of leisure in society. The relationship between leisure, play, recreation and tourism was examined, which helped to position adventure sport as a subsection of recreation and

leisure. Adventure sport was investigated to determine its rise and nature. Paintball's place in adventure sport was clarified, followed by an analysis of the adventure sport experience, based on the experiences in tourism, sport and adventure. Popular experience themes found in tourism and adventure were analysed in conjunction with themes that were identified as part of the paintball experience, which led to the creation of unique themes for adventure sport that were tested in the empirical study.

The fourth objective (cf. 1.4.2) was to provide the empirical results of the study, contained in Chapter 5 (cf. 5.1). The author made use of a sequential exploratory mixed methods design that involved a qualitative section first, followed by a quantitative section. The qualitative section was carried out and interviews were transcribed. An analysis thereof was carried out, which helped to identify important aspects related to paintball as an adventure-based sport. The results of the online questionnaire were analysed by means of exploratory factor analysis, *t*-tests, analysis of variance and correlations, and presented as descriptive results. With the last section completed, the quality-of-life framework for an adventure-based sport was drawn up by means of a structural equation model, thereby achieving the main goal of the study.

The fifth objective was to provide the conclusions and recommendations, based on the literature and empirical findings provided in Chapters 2 to 5, all directed towards achieving a quality-of-life framework for an adventure-based sport. This was achieved as part of Chapter 6 (cf. 6.1). Also included are the limitations of the study and suggestions for future research, based on the empirical findings and the author's interpretation. The importance of the final model lies in the fact that it shows the successful combination of the bottom-up spillover theory and activity theory, and depicts the structural relationship represented by the linear relationship between adventure-based sport and quality of life. A groundbreaking contribution has been made to the field of adventure (combat) sport, based on the findings in Chapters 2 to 5 and the inclusion of a final, combined SEM presented in Chapter 6.

Key words: Tourism, leisure, sport, adventure sport, adventure tourism, paintball, life domains, positive and negative affect, quality of life, hedonic well-being, activity theory, bottom-up spillover theory

OPSOMMING OBZORWING

Regdeur die mens se geskiedenis is dit duidelik dat die mens gedurigdeur voortgedryf word deur sy avontuurlus, oorlewings- en ontdekkingsdrange en die drang om grense te verskuif. As dit nie vir die avontuursoekers in ons voorgeslagte was nie, sou die wonders van die moderne tyd ons nie beskore gewees het nie. Die modern samelewing gaan met baie voordele gepaard soos globale kommunikasie en onmiddellike toegang tot inligting en tot mekaar; dit bring mee dat ons algehele lewenskwaliteit verbeter. Hiermee saam het die eise van menslike werksprestasie, gepaardgaande met die styging in die mens se stresvlakke, in veral verstedelike lande skerp gestyg. Dit het op sigself 'n negatiewe invloed op lewenskwaliteit in die algemeen.

Al die geriewe van die modern samelewing het die mens egter van sy basiese avontuurlus ontnem. Tog is laasgenoemde een van die belangrikste redes vir die groei van avontuursport, wat vir die mens 'n manier geword het om die toenemende stresvlakke van die hedendaagse leefwyse te hanteer. Deelname aan avontuursport verhoog die vrystelling van adrenalien en endorfiene in die liggaam, wat as 'n natuurlike kalmeermiddel en pynverligter dien en die mens met 'n gevoel van geluksaligheid laat. Mense is van nature sosiale diere op soek na interpersoonlike kommunikasie en geleenthede om bande te smee en te sosialiseer. Daar is min maniere wat beter is as gesimuleerde gevegte om die mens se drang na avontuur, sosialisering en kameraderie te voed.

Daar is egter 'n gebrek aan begrip in die literatuur wat kan aan voer waarom individue deel neem aan sulke (moderne) avontuur-gevegsportsoorte. Die navorsing het onderneem om die aspekte wat deelname motiveer te ondersoek en die uitwerking daarvan op deelnemer se kwaliteit van lewe die identifiseer. Deur die positiewe effek aspekte daarvan uit te wys kan die aanloklikheid van die soort avontuur-sportsoorte verhoog word.

Verfbal is een van twee (moderne) avontuur-gevegsportsoorte (waarvan die ander een “airsoft” is) wat gewapende konflik sonder die gepaardgaande bloedvergiëting simuleer. In hierdie avontuursport kompeteer spanne vir dominansie en poog hulle om opponente te merk en hulle uit die spel uit te elimineer.

Die doel van die studie was om ’n lewenskwaliteitraamwerk vir ’n avontuurgebaseerde sport, naamlik verfbal, te ontwikkel. Om genoemde doelwit te bereik het die outeur eerstens onderhoude met 12 verfbalspelers van oor die hele wereld gevoer. Die opname is voorafgegaan deur ’n uitgebreide bemarkingsveldtog wat op verfbalspelers via Facebook gerig is. Dit is gedoen deur die doel van die studie uiteen te sit en verfbalspelers aan te moedig om by die toegewyde Facebook-groep, Global Paintball Research Project, (Globale Verfbal-navorsingsprojek) aan te sluit. Die selfgeadministreerde vraelys is via die groepblad beskikbaar gestel en tussen 1 Julie 2016 en 31 Julie 2016 bedryf. Meer as 2 000 verfbalspelers het by die groepblad aangesluit, van wie 506 die aanlynopname voltooi het. Om die doel van die studie te bereik, het die outeur hom die volgende vier aspekte ten doel gestel:

Die eerste doelstelling was ’n analise van populêre teoretiese raamwerke vir lewenskwaliteit, ontspanning en soortgelyke aktiwiteite wat met die studieveld verband hou. Dit is in Hoofstuk 2 deur ’n uitgebreide analise van verwante literatuur bereik wat ’n teoretiese raamwerk verskaf het vir lewenskwaliteit, ontspanning en soortgelyke aktiwiteite wat op avontuursport betrekking het. Die hipotese van die raamwerk is dat die effek van ’n avontuurgebaseerde sportondervinding (verfbal) op ’n deelnemer se lewenskwaliteit op verskeie terreine kan beïnvloed, soos byvoorbeeld die deelnemer se sosiale lewe, emosionele welstand, gesondheid en veiligheid, finansies, ontspanning, reislewe en gesinslewe. Dit kan dan ’n bepalende uitwerking op ’n deelnemer se algehele lewenskwaliteit hê.

Die tweede doelstelling was om lewenskwaliteit in verhouding tot avontuursport deur middel van ’n literêre oorsig te analiseer soos wat dit in Hoofstuk 3 beskryf word. Die eerste stap was om die konsep van ‘lewenskwaliteit’, gebaseer op sy historiese

oorsprong, te verstaan, gevolg deur 'n oorsig van die geskikste lewensterreine vir avontuursport. Konsepte van lewenskwaliteit is vergelyk en die psigologie daarvan is ontgin. 'n Analise van die verband tussen lewenskwaliteit en ontspanning, sport en avontuur is uitgevoer om te bepaal hoe 'n avontuurgebaseerde sport 'n deelnemer se algehele lewenskwaliteit kan bevorder.

Die derde doelstelling was die analisering van ontspanning, avontuursport en die avontuursportervaring deur middel van 'n literêre oorsig. Dit is as deel van Hoofstuk 4 bereik deur eerstens 'n oorsig te gee van die geskiedenis van ontspanning in die Westerse wêreld en die verskillende maniere waarop ontspanning gedefinieer kan word. Dit is deur 'n teoretiese verduideliking van ontspanning in die samelewing opgevolg. Die verband tussen ontspanning, spel, vryetydsbesteding (rekreasie) en toerisme is ondersoek, wat gehelp het om avontuursport as 'n onderafdeling van vryetydsbesteding en ontspanning te plaas. Avontuursport is ondersoek om die aard en opgang daarvan te bepaal. Verfbal se plek in avontuursport is uitgeklaar, gevolg deur 'n analise van die avontuursportervaring, gebaseer op die ervarings in toerisme, sport en avontuur. Gewilde belewenistemas wat in toerisme en avontuur gevind word, is geanaliseer, tesame met temas wat geïdentifiseer is as deel van verfbalervarings. Dit het weer tot die skepping van unieke temas vir avontuursport gelei wat in die proefondervindelike studie getoets is.

Die vierde doelstelling was om proefondervindelike resultate van die studie te verskaf soos wat dit in Hoofstuk 5 vervat is. Die outeur het gebruik gemaak van 'n ontwerp van opeenvolgende, ondersoekende, gemengde metodes wat eerstens 'n kwalitatiewe afdeling insluit, gevolg deur 'n kwalitatiewe afdeling. Die kwalitatiewe afdeling is uitgevoer en onderhoude is getranskribeer. 'n Analise daarvan is gedoen wat gehelp het om belangrike aspekte te identifiseer wat met verfbal as 'n avontuursport verband hou. Die resultate van die aanlynvraelys is ontleed en by wyse van ondersoekende analise van faktore, t-toetse, analysis of variance en korrelasies as beskrywende resultate aangebied. Met die laaste seksie voltooi, is die lewenskwaliteit-raamwerk vir 'n

avontuurgebaseerde sport deur middel van 'n strukturele vergelykingsmodel opgestel. Op hierdie manier is die hoofdoelstelling van die studie bereik.

Ten laaste bevat Hoofstuk 6 die gevolgtrekkings en aanbevelings wat op die literêre en proefondervindelike bevindings gebaseer is en in Hoofstukke 2 tot 5 verskaf is, alles gerig op die bereiking van 'n lewenskwaliteit-raamwerk vir 'n avontuurgebaseerde sport. Die beperkinge van die studie en voorstelle vir toekomstige navorsing, gebaseer op die proefondervindelike bevindings en die outeur se interpretasie daarvan, is ook ingesluit. Die belangrikheid van die finale model lê in die feit dat dit die suksesvolle kombinasie van die omkeer-oorspoel-teorie en die aktiwiteitsteorie aantoon en ook die strukturele verband aandui soos wat dit deur die lineêre verband tussen avontuurgebaseerde sport en lewenskwaliteit voorgestel word. 'n Grondverskuiwende bydrae is op die gebied van avontuursport gelewer, gebaseer op die bevindings in Hoofstukke 2 tot 5 en die insluiting van die finale, gekombineerde SEM in Hoofstuk 6.

Sleutelwoorde: Toerisme, ontspanning, sport, avontuursport, avontuurtoerisme, verfbal, lewensterreine, positiewe en negatiewe uitwerking, lewenskwaliteit, hedonistiese welsyn, aktiwiteitsteorie, omkeer-oorspoel-teorie

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LIST OF ACRONYMS

ACRONYM	DESCRIPTION
α	Cronbach's alpha
$\bar{x}$	Mean
ANOVA	Analysis of Variance
ATDI	Adventure tourism development index
ATTA	Adventure travel trade association
BTS	Bartlett's Test of Sphericity
β	Beta – value
cf.	Compare
CFA	Confirmatory factor analysis
CFI	Comparative fit index
CQB	Close quarter combat
d	Effect size
df	Degrees of freedom
DVD	Digital versatile disc
EFA	Exploratory factor analysis
GPRP	Global paintball research project
KMO	Kaiser-Meyer-Olkin
MAGFED	Magazine fed
MILSIM	Military simulation
MILSIM-S	MILSIM\scenario
MLT	Military/law enforcement/ formal tactical training
N	Number of respondents
p	Pearson correlation coefficient
Pro	Professional
PTSD	Post-traumatic stress disorder
QoL	Quality of life
r	Correlation
R	Respondent
RMSEA	Root mean square error
SANPA	South African National Paintball Association
SEM	Structural equation model
Semi-Pro	Semi-professional
SFIA	Sport and fitness industry association
Sig	Significance
Std.	Standard

SPSS	Statistical Package for the Social Science
SWB	Subjective well-being
TV	Television
USSR	Union of Soviet Socialist Republics
χ^2	Chi-square
$\bar{x}$	Mean

1

CHAPTER 1

INTRODUCTION AND PROBLEM STATEMENT

1.1 INTRODUCTION

According to Mealing *et al.* (2009:9), the tourism industry is constantly changing to keep up with new developments and social trends in the form of niche tourism (Figure 1.1). Adventure tourism has emerged alongside sport tourism, both of which are niche markets in tourism (Beedie, 2008; Hudson, 2003). Page (2015:4) notes that the tourism industry responds to consumers changing interests. According to the Adventure Tourism Development Index (ATDI, 2015:4), adventure tourism is in a growth phase and charted an annual growth of 65% in North America, South America and Europe between 2009 and 2012. This figure was mirrored by the Adventure Travel Trade Association (ATTA, 2013:2) Report. One in every four travel trips contains an adventure travel component and it is estimated that by 2050, 50% of all travel trips will be adventure based (ATDI, 2012:3). There are an estimated 165 million adventure sport enthusiasts worldwide and it is considered to be one of the fastest growing segments in tourism (George, 2014:223).

George (2015:430) defines adventure tourism as a leisure activity that usually takes place outdoors and has an element of personal risk, challenge and excitement. There is often a heavy pursuit with high levels of risk, adrenaline rush, excitement and personal challenge for the participant (Page, 2011:122). According to Furnham (2008), people choose risky or adventurous activities because they are motivated by sensation or risk seeking. Beedie (2003:23) observes that adventure tourism combines travel, sport and outdoor recreation. According to the Virtuosos (2016:1) report for 2017 adventure tourism again took the lead as a top tourism trend.

It should be noted that there is a difference between sport tourism and adventure sport. The former is defined as the active, passive or nostalgic engagement with sport-related activities while travelling away from one's normal place of residence (Smith, Macleod & Robertson, 2010:165). Saayman and Uys (2003:293) summarise sport tourism as all types of sport that improve tourism, where the aim is to serve the general well-being of the sport and the community. According to Gibson (1998:49), sport tourism is leisure-

based travel that takes individuals temporarily outside of their home communities to participate in, watch or visit an attraction associated with physical activity.

Adventure sport is increasingly recognised as a discipline in its own right (Saayman, 2012:304). It features physical activity but also includes risk-taking with an uncertain outcome in a natural setting (Beedie, 2003:203; George, 2015:430; Krein, 2007:80; Ryan & Trauer, 2005:143). Mei-Dan and Carmont (2013:11) state that adventure sport contains elements of increased risk and is usually performed in beautiful, exciting and often remote locations. Examples include skydiving, BASE jumping, fighter-plane flying, abseiling, paintball, adventure racing, white-water rafting, extreme skiing, and ice climbing (Crawford, *et al.*, 2016:175; Ellmer & Rynne, 2016:107; George, 2014:216; Gomez & Rao, 2016:371; Jessica & Zorn, 2015; Saayman, 2012:308; Venter, 2014a).

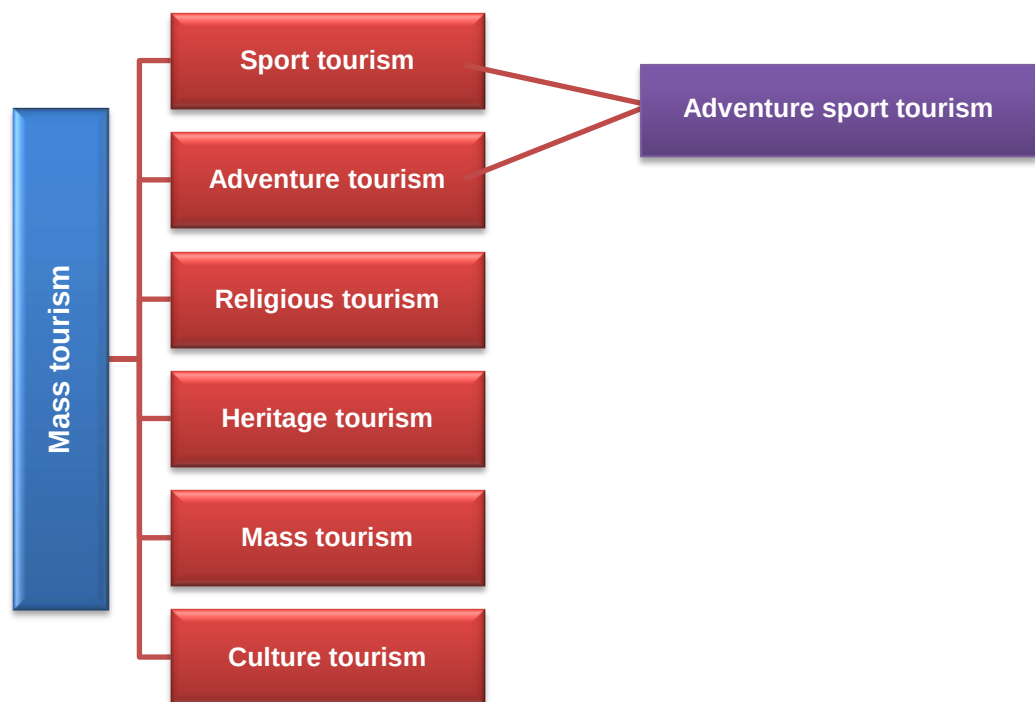


Figure 1.1: Types niche tourism

Source: Adapted from Mancini (2010:2) and Venter (2017:4)

Adventure sport is also increasingly recognised as a major tourism market with many destinations, tailoring their tourism offerings to suit the market needs (Swarbrooke, *et al.*, 2003:55). Paintball is a popular adventure sport and had more than 5 million participants in the United States during 2011 (Sbicca & Hatch, 2012:124). Paintball has shown remarkable growth worldwide (Ilie & Mihaela, 2014:294; Koh, 2013:3). The 2014

Sport and Fitness Industry Association (SFIA) Report, as mentioned by Thomas (2014:3), stated that since the 2007 economic crisis, paintball in the United States experienced its first growth phase (1.9%) in 2013. More recently paintball field owners such as David Preston have expressed interest in enhancing tourism through paintball (Business NH Magazine, 2016).

In order for any tourism activity to take place, though, sufficient leisure time is needed. Swarbrooke *et al.* (2003:5) are of the opinion that tourism shares strong fundamental characteristics and theoretical foundations with the leisure field of study. They argue that the terms 'leisure' and 'tourism' share the focus on experience and activities. George (2014:570) is of the opinion that many tourists seek a more intensive or extreme leisure experience in the form of adventure activities.

Leisure is defined as the time left after one has completed all normal daily functions such as working, sleeping, eating and routine responsibilities (George, 2014:591); it holds great benefits, as it allows humans to achieve relaxation, diversion, refreshment and recreation of the self (Russell, 2013:22). According to Zauhar (2003:28), individuals choose to be tourists by leaving home for a period of time and engaging in leisure; some will choose to perform a leisure activity. Although there is no agreement about the classification of leisure activities in literature, researchers agree that leisure contributes to quality of life (QoL) and suggest that the relationship between leisure and QoL is complex (Kuykendall, *et al.*, 2015; Lloyd & Auld, 2002; Leung & Lee, 2005; Nimrod & Adoni, 2006; Iwasaki, 2007). Leisure activities play a very important role in QoL, as they provide opportunities for individuals to meet their life values and needs such as building social relationships, feelings or emotions, and acquiring additional skills and knowledge, thereby improving their QoL (Brajša-Žganec, *et al.*, 2011:83).

The purpose of Chapter 1 is to discuss the research process that will be followed in this study. This will be realised by analysing the problem statement, followed by the goals and objectives of the study, the research methodology, definitions of key concepts and, lastly, the chapter classification. It will be done by following the structure in Figure 1.2.

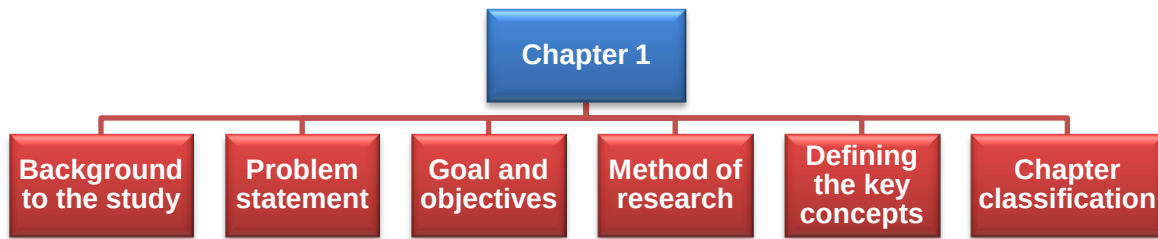


Figure 1.2: Outline of Chapter 1

1.2 BACKGROUND

Due to urbanisation and an inactive lifestyle an imbalance has occurred (Carnicelli-Filho, *et al.*, 2010:953) which has led to human beings experiencing a decline in QoL (Veenhoven, 2005) that could be related to stress factors that have become part of routine life, generating physiological (Vuori, 2007) and psychological (Asbury, *et al.*, 2006) imbalances as a consequence of sedentary lifestyles (Carnicelli-Filho, *et al.*, 2010:953). Mental exertion and stress due to long working hours are typical in modern society (Karpara & Cervone, 2003).

According to Saayman (2012:303), adventure tourism appears to have developed from traditional outdoor and wilderness recreation tourism during the 20th century due to urbanisation. Adventure tourism is primarily associated with activities where the purpose of the trip is to participate in an adventure experience rather than in sightseeing traditional tourist attractions (Sung, *et al.*, 1997:2). The difference between traditional outdoor activities and adventure tourism is the latter's active pursuit of risk and exploring the unknown (Ewert, 1987). According to McKay (2014:53) adventure involves risk, uncertainty, challenge, active physical involvement and the experience of strong emotions, such as fear and excitement.

Mannell and Kleiber (1997:55) suggest that leisure as a subjective phenomenon can be understood as a mental experience while engaged in leisure activities and the satisfaction or meaning derived from these involvements. Andrews *et al.* (2014:825) found that leisure (recreation) activities are an important factor in the successful promotion of social inclusion and peer friendships among children, adolescents and adults.

Saayman (2012:304) argues that adventure sport is a subset of the overall adventure tourism and travel industry. Hall (1992:143) describes adventure sport as tourism activities that cover a broad spectrum of outdoor activities, which are often commercialised. Furthermore, it involves interaction with the natural environment away from participants' home environments and contains elements of risk, where the outcome is influenced by the participants themselves, others, the setting and the organisers of the experience.

Lloyd and Auld (2002:44) have grouped leisure activities into several categories, based on their frequency, namely mass media, social, outdoor, sport and cultural activities, as well as hobbies. Scott and Willits (1998:319) have labelled leisure activities as socialising, creative or artistic, intellectual and sports activities. One of the most frequently debated topics in the field of recreation is the definition of leisure (Craik & Pieris, 2006; Leitner & Leitner, 2012). Coalter (1999) suggests that the focus on leisure tourism activities should shift away from what individuals do when participating to why individuals participate in leisure tourism activities.

Scott and Willits (1998:319) and Brajša-Žganec *et al.* (2011:82) agree that sport can be seen as a leisure activity. Brymer and Schweitzer (2012:478) are of the opinion that leisure activities include extreme and adventure sport. Therefore, a leisure activity can be applied to any activity undertaken by an individual for the purpose of enjoyment. Adventure sports have developed significantly and have become an attractive alternative to traditional travel worldwide (Venter, 2014a). The term 'adventure sport' is also used in a wider sense and includes sports that are labelled 'alternative', 'extreme', 'X', 'gravity', 'lifestyle' and 'action' sports (Breivik, 2010:260). According to Saayman (2012:302), adventure sports do more than defy the limits of acceptable behaviour. Such sports cover an entire spectrum of outdoor activities in the air, in and on water, on land and on ice. Adventure sports offer something different from traditional sports and are characterised by a strong perceived risk of physical injury (Venter, 2014a:4), but, although they are not free from risk, they are less likely to be fatal when accidents occur. Due to the nature of adventure sports, they typically take place in remote settings and there are certain external factors present such as risk, which is impossible to eliminate from the activities (Krein, 2007:80). Recently, there has been a sharp growth in participation in all adventure sports (Saayman, 2012:306), including paintball.

Venter (2014a:1) classifies paintball as an adventure sport that is composed of opposing teams who use compressed air- or carbon dioxide (Co2)-powered markers (paintball guns) to shoot their opponents with a water-based paintball that breaks on impact. Matches require physical activity, fast-paced movement and tactical teamwork to outmanoeuvre the opposing team and mark them with paintballs or complete the objective of the match. Paintball is most often played outside on specially prepared fields or rough terrain, or even in the wilderness. The most common forms of paintball are speedball, bushball/woodsball and military simulation (MILSIM). Venter (2014a:4) notes that there has been an increase in the number of paintball players who are taking up MILSIM as their preferred form of paintball; this type requires a substantial investment in military-style clothing, apparel and realistic, magazine-fed (MAGFED) markers. Venter (2014a:4) emphasises that MILSIM paintball is most often played by participants who have formal military, law enforcement or tactical training. Each form of paintball offers a different experience and requires different levels of fitness, equipment and skills. Woermann and Rokka (2015:1493) note that participants in paintball refer systematically to the “speed,” “rapidness,” or “fastness” as an important quality of the sport and its appeal.

According to Brajša-Žganec *et al.* (2011:81), leisure activities play a very important role in subjective well-being (QoL), as they provide opportunities to meet life values and needs. Leversen *et al.* (2012:1588) state that the participation in leisure activities is an important arena for the positive psychological development of adolescents. Van Hout *et al.* (2013:621) are of the opinion that the relationship between sport (including adventure sport) and QoL can be viewed as a virtuous circle, where aspects influence one another in terms of inputs and outcomes. There is also a relationship between the different aspects of sport such as physical functioning, general health perceptions and vitality (Laforge, *et al.*, 1999:349), where a slight change could make a difference to all single aspects as well as to QoL; for example, an individual who is physically fit would have more vitality and enjoy his or her adventure sport experience more than someone who is unfit.

Every tourism or leisure experience is evaluated in terms of its benefits and costs within the associated life domains. Sirgy *et al.* (2011:2) give examples of positive and negative affect. Positive affect includes feelings such as enthusiasm, interest, determination,

excitement and being inspired, alert, active, strong, proud or attentive. Negative affect includes feelings such as being scared, afraid, upset, distressed, jittery, nervous, ashamed, guilty, irritated or hostile. For this study's frame of reference, the following example of positive and negative affect has been adapted from Sirgy *et al.* (2011:2). Paintball players might experience positive affect in their social life. The feeling of satisfaction might be due to meeting new individuals, making new friends, spending quality time with team mates, achieving victory or spending time away from life's chores and responsibilities. On the other hand, paintball players might experience negative affect (irritation) from having to deal with inexperienced players on their team who compromise their chances to win. Time that could have been spent with friends is turned into coaching new players. The negative feelings may decrease paintball players' social lives, which, in turn, might affect their overall QoL.

Scholars do not agree on a precise definition of QoL (Dissart & Deller, 2000; Massam, 2002). It is a vague and difficult concept to define and has possibly more than 100 definitions (Bramston, *et al.*, 2002; Cummins, 1998; Michalos, 2003; Smith & Puczkó, 2009; Veenhoven, 2000). Omorou *et al.* (2013:2021) define QoL as individuals' perceptions of their position in life in the context of the culture and value systems in which they live in relation to their goals, expectations, standards and concerns. Schalock *et al.* (2002) define it as a socially and culturally formed and multidimensional construct that subsumes a number of related factors such as satisfaction with life and subjective well-being.

Uysal *et al.* (2012:283) are of the opinion that QoL is a multidimensional, societal construct that includes both objective and subjective indicators. These indicators can be used to measure the overall QoL within a life domain (Sirgy & Samli, 1995). Objective indicators are measures that are devoid of subjective assessment such as standard of living, physical health and personal income. They can be defined and quantified without relying on individual perception. However, objective indicators may not reflect an individual's experience of subjective well-being accurately (Andrews & Withey, 1976). Subjective indicators, on the other hand, are mostly based on psychological responses such as satisfaction with life, job satisfaction and personal well-being. They measure experiences that are important to individuals. Available literature shows that a

participant's satisfaction with an experience is based on psychological domains (e.g., social life, leisure and recreation life).

In its simplest form, QoL can be regarded as individuals' satisfaction/dissatisfaction with their lives, which can range from positive to negative (Dissart, *et al.*, 2000; Massam, 2002; Smith & Puczkó, 2009). However, this multifaceted concept involves more issues, indicators and measures. Furthermore, Lloyd and Little (2005:150) emphasise that the values differ across individuals' cultures. QoL is influenced by various life domains (Kruger, *et al.*, 2013:1; Page & Connel, 2010:29). This study will focus on seven major life domains, namely the social life domain (Kruger, *et al.*, 2013), emotional life domain (Kim, *et al.*, 2013), health and safety life domain (Sirgy, *et al.*, 2011), financial life domain (Shim, *et al.*, 2012), leisure and recreation life domain (Dolnicar, *et al.*, 2012), travel life domain (Kruger, *et al.*, 2013) and family life domain (McCabe & Johnson, 2013).

The effect of a selected adventure sport activity experience on participants' QoL will be explained by making use of the bottom-up spillover theory, as illustrated in Figure 1.3 (Diener, 1984; Sirgy, 2002; Sirgy & Lee, 2006; Diener, *et al.*, 1999), and the activity theory, as illustrated in in Figure 1.4 (Engeström, 1991; Daniels, 2016; Harman, 2008; Roberts, 2008; Säljö, 1999; Vygotsky & Cole, 1978).

In order to explain the impact that an adventure-based sport (paintball) could have on participants' QoL and satisfaction with the adventure sport experience, the bottom-up spillover theory will be used (e.g. Diener, 1984; Diener, *et al.*, 1999; Sirgy, 2002; Sirgy & Lee, 2006) in combination with the activity theory (e.g. Daniels, 2016; Hardman, 2008; Leont'ev, 1981 Vygotsky & Cole, 1978). The activity theory postulates that the greater the frequency of participation and intimacy thereof, the higher the levels of QoL (Kim, *et al.*, 2015; Lemon, *et al.*, 1972; Rodriguez, Látková & Sun, 2008). The bottom-up spillover theory has been acknowledged by many authors (see Sirgy, *et al.*, 2011:262).

This theory states that satisfaction with a consumption experience (participating in an adventure-based sport) is located in the concrete psychological domains, namely social life, emotional life, health and safety life, financial life, leisure and recreation life, travel

life and family life. This affect moves from the most concrete to the most abstract domains.

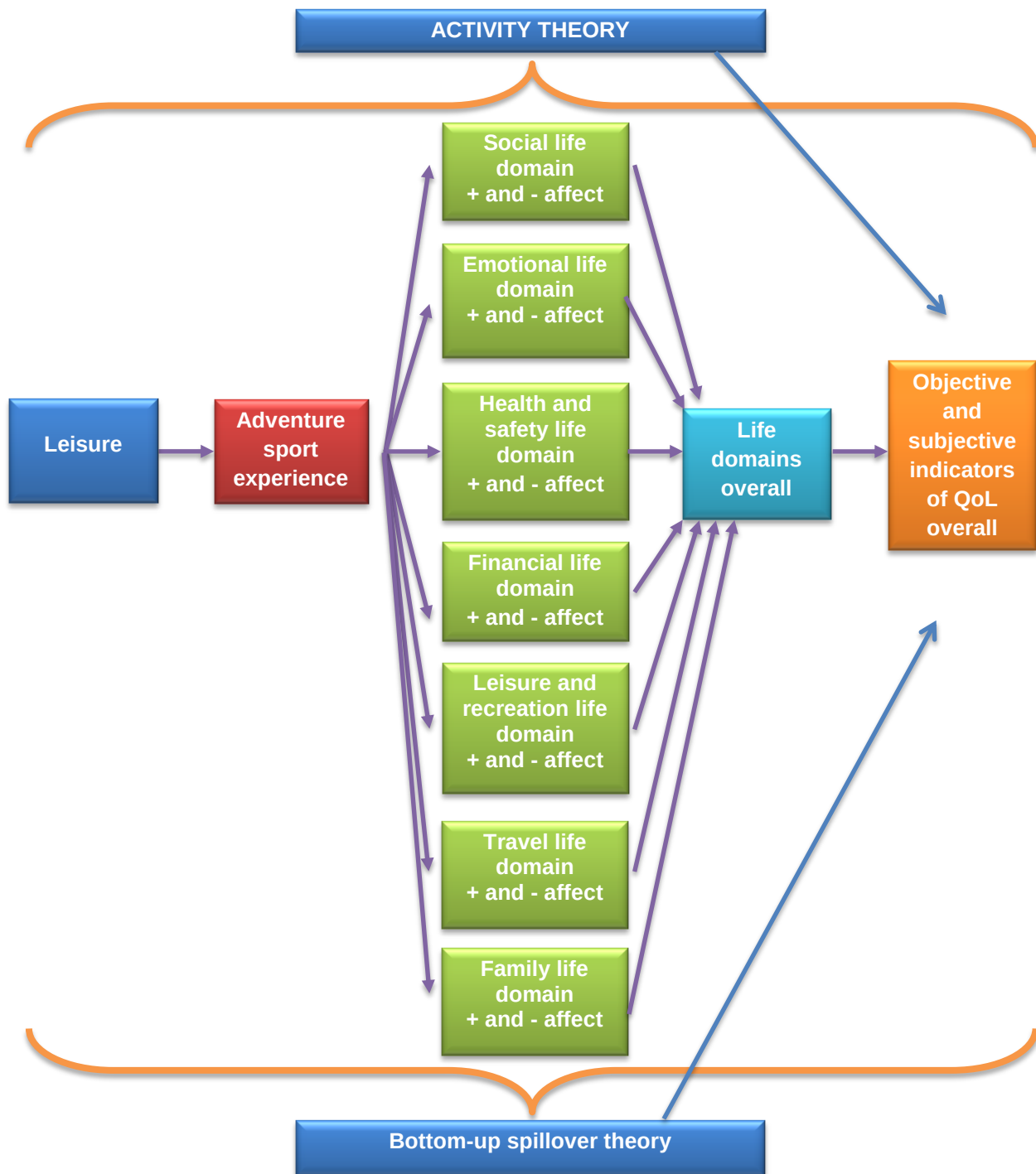


Figure 1.3: Hypothesised theoretical model combining the bottom-up spillover theory and third-generation activity theory

Source: Adapted from Hardman (2008), Sirgy and Lee (2006), and author's own compilation

The affect that is related to a consumption experience (e.g., satisfaction with an adventure-based sport experience) relates to positive and negative affect in the five proposed domains (Figure 1.3) that could influence participants' QoL. The following section will discuss the activity theory that forms part of the hypothesised theoretical model. Activity theory is a framework or descriptive tool for a system in which individuals (paintballers) are socio-culturally embedded actors (Learning Theories, 2005).

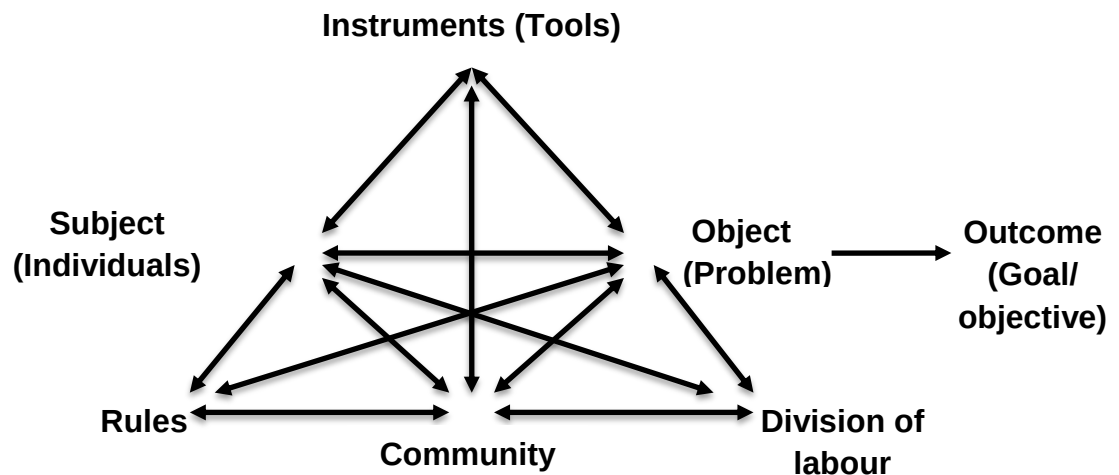


Figure 1.4: The third-generation activity theory by Engleström (1991)

Source: Hardman (2008)

The activity theory has its origins in the 1920s in the former Union of Soviet Socialist Republics (USSR) and was proposed by Vygotsky (Vygotsky & Cole, 1978), a psychologist who postulated that the mind is socially constructed during communicative interaction between culturally knowledgeable individuals and their subordinates (Hardman, 2008:67).

The activity theory explains the idea of tool-mediated, object-orientated activity as the basis for the development of human understanding, which is the foundation of Vygotsky's work (Daniels, 2016:59). Knowledge is mediated by using tools and artefacts, where the unit of analysis is defined as an activity (Roberts, 2008). The core concept of the activity theory is that society is based (and dependent) on knowledge being passed on or constructed between those who possess the knowledge and those who seek it.

This theory proposes that tools, artefacts and symbols mediate between the subjects and the object (Roberts, 2008). Individuals' interaction with objects in the world is mediated by cultural artefacts that include signs, symbols and practical tools (Hardman, 2008:68). Artefacts carry with them a history of use and are altered, shaped and changed when used in activities (Säljö, 1999:144). 'Subject' refers to an actor or actors conducting an activity and whose view social scientists want to understand (Roberts, 2008). Leont'ev (1981) focuses on division of labour as a central historical factor in the development of higher cognitive functions and the hierarchical structure of activity that it implies.

Building on Vygotsky's initial model of human action, Leont'ev (1974) demonstrates how individuals' actions are goal-orientated, whereas collective (community) action is object-orientated (Hardman, 2008:76). Collective action implies that when an activity is undertaken, there are implicit or explicit rules that will influence the way in which the activity occurs (Roberts, 2008). The division of labour deals with the way in which labour is divided in the specified activity.

The third-generation activity theory model (Figure 1.4) of Engeström (1991) illustrates that the subject's action influences the object in order to transform it by using mediating artefacts so that it arrives at specific outcomes (goal/objective). The subject's position is influenced by the rules of the system, community and division of labour (Daniels, 2016:78). The two-way arrows indicate the dynamic nature of the key points on the triangle. The third-generation activity theory model puts the individual's action at the pinnacle of the triangle within a context where power relations and rules impact the subject's actions (Wells, 1999:250). When two activity systems' outcomes start to interact, expansive learning is made possible (Roberts, 2008).

Both theories serve as measuring instruments that, when combined, may provide a better overall framework to understand QoL, as it pertains to adventure sport activity and might add value to research knowledge in QoL.

1.3 PROBLEM STATEMENT

Excessive amounts of work prevent employees from spending enough time in other activities and work schedules interfere with their leisure time (Staines & O'Connor,

1980). According to Rice *et al.* (1992:167), research has indicated that work-leisure conflict causes a cross-domain spillover effect that has a negative impact on QoL. Desired leisure experiences might have a positive effect on an individual's satisfaction, psychological well-being, health and ability to cope with stress (Coleman, 1993; Coleman & Iso-Ahola, 1993). One of the most common barriers associated with adventure sport activities (e.g. paintball) is the lack of available leisure time to participate in these sports (Hudson, 2003:18). Liu (2013:68) states that when individuals have leisure time, they seek to escape as well as, physical and mental relaxation amongst other things. According to Jensen (1997:19), leisure time is becoming scarcer, with the result that shorter, more intense experiences are sought. A lack of available leisure time exists which has given way to individuals seeking quality time activities such as adventure sports, which, in turn, could affect individuals' level of QoL. A QoL framework can help explain why individuals seek adventure sport activities by measuring the impact on their QoL. By implication, the paintball industry, which includes stakeholders such as manufacturers, sponsors and paintball field owners, could make use of such a model to enhance their marketing strategies by communicating more effectively to paintball players' QoL needs in order to stimulate growth. According to George (2015:430) adventure sport tourists are increasingly becoming more integrated in the travel market as a whole, thus offering more opportunities for tour operators, guide services, gear outfitters and destinations to assist more adventure sport tourists in entering the market. Through literature analysis, major themes were identified that are prevalent in an adventure-based sport. Those themes contribute to the elements that were tested through the qualitative and quantitative analysis. George (2014:446) points out that new trends and themes such as adventure sports make newsworthy stories which increases awareness of tourist destinations and activities and subsequently increase tourism. The study therefore sought to answer the question, which elements should form part of the framework (model) in order to address QoL in relation to an adventure-based sport?

1.4 GOAL OF THE STUDY

The following section will identify the main goal and objectives of the study:

1.4.1 Main goal of the study

The main goal of the study was to develop a QoL framework for an adventure-based sport.

1.4.2 Objectives

In order to reach the formulated goal, the following objectives will be presented:

Objective 1

The first objective is to analyse popular theoretical frameworks of QoL, leisure and activities related to the study.

Objective 2

The second objective is to analyse QoL in relation to adventure sport by means of a literature review.

Objective 3

The third objective is to analyse leisure, adventure sport and the adventure sport experience by means of a literature review.

Objective 4

The fourth objective is to provide the empirical results of the study, indicating (as a final step) the QoL framework for an adventure-based sport. To realise the framework, a structural equation model that depicts the main goal of the study was used.

Objective 5

The fifth objective is to draw conclusions, make necessary recommendations, present limitations of the study and make suggestions for future research in terms of the empirical findings.

1.5 ENVISAGED CONTRIBUTION

The studies envisaged contribution will be elaborated on next:

1.5.1 Literature contribution

It is envisaged that the study will:

- Shed some light on paintball's position as an adventure-based sport on a global scale.
- Expand the literature on adventure-based sport, leisure and QoL.
- Combine the bottom-up spillover theory, leisure theory and activity theory, as well as develop a QoL framework for an adventure-based sport activity.

1.5.2 Practical contribution

The envisaged practical contribution will be the theoretical framework of the combined bottom-up spillover theory and activity theory as it relates to the adventure sport experience, leisure, positive and negative affect in the life domains and participants' QoL.

1.6 METHOD OF RESEARCH

Mixed methods research is not a new form of research but has only been described in recent years (Teddlie & Tashakkori, 2009). According to Andrew and Halcomb (2009), mixed methods research is not simply an ad hoc combination of qualitative and quantitative methods but rather a planned mixing of different methods to be used at a predetermined stage of research.

This section describes the literature study and empirical survey, which includes the research design, method of data collection, sampling, development of the questionnaire, survey and data analysis.

1.6.1 Literature study

The literature study explored numerous books and journals related to the subject field. Extensive use was made of scientific databases that included Science Direct, Proquest, Ebscohost and Google Scholar. Searches were conducted by using the library catalogue, indexes and internet. Various additional sources had been consulted such as industry reports and interviews. Specific keywords were used to explore literature, including *tourism, leisure, sport tourism, adventure sport, adventure tourism, paintball, life domains, positive and negative affect, QoL, hedonic well-being, activity theory* and

bottom-up spillover theory. Table 1.1 illustrates some of the most relevant literature were consulted in order to gain comprehensive insight into the research topic and used to develop the qualitative and quantitative questionnaire.

Table 1.1: Literature consulted

Areas of Research	Author	Title of article/book
Tourism	George (2014)	Marketing tourism in South Africa
	Murphy (2013)	Tourism: A community approach
Leisure	George (2014)	Marketing tourism in South Africa
	Brajša-Žganec, Merkaš and Šverko (2011)	Quality of life and leisure activities: How do leisure activities contribute to subjective well-being?
Sport tourism	George (2015)	Managing tourism in South Africa
	Turco <i>et al.</i> (2012)	Sport tourism
Adventure tourism	Mei-Dan and Carmont (2013)	Adventure and extreme sport injuries: Treatment, rehabilitation and preservation
	Saayman (2012)	An introduction to sport tourism and event management
Adventure sport	Smith <i>et al.</i> (2010)	Key concepts in tourist studies
	Hudson (2003)	Sport and adventure tourism
Paintball	Saayman (2012)	An introduction to sport tourism and event management
	Popular Mechanics (2011)	Popular Mechanics
Life domains	Kruger <i>et al.</i> (2013)	Examining the influence of the Wine Festival experience on tourists' quality of life
	Hajiran (2006)	Toward a quality of life theory: Net domestic product of happiness
Positive and negative affect	Sirgy <i>et al.</i> (2011)	How does a travel trip affect tourists' life satisfaction?
	Kruger <i>et al.</i> (2013)	Examining the influence of the Wine Festival experience on tourists' quality of life
Quality of life	Omorou <i>et al.</i> (2013)	Contribution of taking part in sport to the association between physical activity and quality of life
	Brajša-Žganec <i>et al.</i> (2011)	Quality of life and leisure activities: How do leisure activities contribute to subjective well-being?
Hedonic well-being	Sirgy (2012)	The psychology of quality of life: Hedonic well-being, life satisfaction, and eudaimonia. Social Indicators Research Series 50.
	Deci and Ryan (2008)	Hedonia, eudaimonia and well-being: An introduction

Bottom-up spillover theory	Sirgy <i>et al.</i> (2011)	How does a travel trip affect tourists' life satisfaction?
	Kruger <i>et al.</i> (2013)	Examining the influence of the Wine Festival experience on tourists' quality of life
Goal theory	Sirgy (2010)	Toward a quality-of-life theory for leisure travel satisfaction
	Chen and Petrick (2013)	Health and wellness benefits of travel experiences: A literature review
Activity theory	Vygotsky and Cole, (1978)	Mind in society: The development of higher psychological processes
	Hardman (2008)	Researching pedagogy: An activity theory approach

1.6.2 Empirical survey

The following section highlights the methods that were chosen to conduct the empirical analysis.

1.6.2.1 Research methodology and method of data collection

This study made use of the sequential exploratory mixed methods design. Clark and Creswell (2008:180) explain that this design is conducted in two phases, with priority given to the initial qualitative data collection and analysis, followed by the phase of quantitative data collection and analysis. The findings of the qualitative data was used to strengthen the quantitative measuring instrument validity.

Creswell (2002:567) is of the opinion that qualitative research is conducted first in order to explore the phenomenon, after which quantitative research is conducted to explain the relationship found in the qualitative data. Quantitative research involves numbers or quantities of one or more variables. A topic under investigation is quantified and investigated through numbers. Morgan (1998:362) suggests that the sequential exploratory design is appropriate to use when testing elements of an emerging theory resulting from the qualitative phase and that it can also be used to generalise qualitative findings to different samples. Doing so will allow the development of the research questionnaire that can then be formally tested during the quantitative study. The quantitative study was conducted to gather numerical data (Sukamolson, 2006:2). Primary data was gathered through the use of an online questionnaire to support the

main goal of this cross-sectional study. The qualitative and quantitative studies were done between 1 May 2016 and 31 July 2016.

1.6.2.2 Qualitative study

The following section will explain how the qualitative study was conducted.

1.6.2.2.1 *Interview population*

A qualitative study was conducted first to develop questions, after which they were analysed and interpreted, and then used in the quantitative study. This was achieved by means of semi-structured, one-on-one interviews with paintball players via Skype, Facebook video, Facebook call or in person, as proven effective in a previous study by Maree (2010) and Kumar (2011). According to Kumar (2011:128), eight to ten participants are sufficient. Potential paintball participants were identified, based on their continental region of origin, social standing in the paintball community and style of paintball (speedball/MILSIM/both), indicated through pictures on their social media (Facebook) profiles. A total of 24 paintballers from across the globe were approached via social media to be part of the qualitative study; this was done by making a personal appeal (i.e., the author explained the objectives of the study and requested the person's participation) to a shared camaraderie. No statistical guidelines exist in literature depicting the percentage of paintballers according to style of play, therefore the author attempted to reach an equal ratio of speedball/MILSIM/both (33/33/33). An interview consent form was created (Annexure A) that stipulated the ethics number of the study, study title, purpose of the study, methods used, anonymity of the interview, recording process, rights of the interviewee, outcome of the study and informed consent declaration. The interview consent form was sent to each potential interviewee for review. Twelve paintballers accepted the terms as laid out in the interview consent form and agreed to take part. The qualitative analysis comprised a semi-structured, one-on-one interview with paintball players globally via Skype, Facebook video call, Facebook voice call or in person. The questions were formulated to measure leisure-based activity, activity theory, adventure sport experience, life domains, sources of positive and negative affects in life domains, life domains overall and QoL. A phenomenological approach was used, as it focuses on participants' paintball experiences.

1.6.2.2.2 *Developing of the interview guide*

A semi-structured, one-on-one interview guide was constructed (Annexure B), consisting of open- and close-ended questions. Based on literature, the questions were formulated to measure leisure-based activity, including leisure and activity theory themes, adventure sport experience, life domains, sources of positive and negative affect in life domains, life domains overall and QoL. A phenomenological approach was used, as it focuses on individuals' experiences, beliefs and perceptions (Guest, *et al.*, 2013). This was done to enhance the questions that are found in the online questionnaire (Annexure C).

1.6.2.2.3 *The interview*

The semi-structured, one-on-one interview guide consisted of the interviewer and the participant who consented to the interview orally (via Skype, Facebook video or Facebook voice call) or by signing the interview consent form (Annexure A) (one-on-one). The consent form also contained the ethical clearance number (NWU-00115-12-A4) of the study. The interviews were conducted during the month of May 2016 at the leisure of the participants. Each interview was recorded, transcribed and analysed as prescribed by Burnard, *et al.* (2008), Kumar (2011) and Maree (2010).

1.6.2.2.4 *Interview analysis*

One of the distinguishing characteristics of a semi-structured, one-on-one interview guide is that oral data are combined with observation as a data-gathering technique (Maree, 2010:92). Audio and video recordings of any non-verbal elements that may have slipped the attention of the interviewer or moderator were made for later analysis. Transcripts were written in a question-by-question format in order to capture what participants had to say regarding each question. The author made use of the deductive and inductive approach as described by Burnard *et al.* (2008) to analyse the transcribed interviews while also identifying overlapping literature that validates the analysis.

1.6.2.3 Quantitative study

The following section will explain how the quantitative study was conducted.

1.6.2.3.1 *Sampling population*

The latest statistics on paintball show that during 2011, an estimated 3.56 million individuals played paintball at least once in the United States of America (Statista, 2010). The adventure sport is well developed in North America, Europe, South Africa, Asia and Australasia, where the majority of professional, league-based paintball sporting events are held.

There are several approaches that may be used to determine the sample size. These include the use of published tables or the application of formulae. The following formula will be used as described by Krejcie and Morgan (1970:607):

$$S = X^2 NP (1-P) / d^2 (N-1) + X^2 P (1-P)$$

S is the sample size, X^2 the desired confidence level, N the population size, P the population proportion and d is the degree of accuracy expressed as a proportion. Krejcie and Morgan (1970:608) state that when the given population is 100 000, the sample size is 384. The level of precision (e) is 5% to compensate for a survey with sample errors (for example, those questionnaires that are not returned or are incomplete).

Due to the scope and scale of the study (which was global in nature), an estimated sample size of 400 was aimed for. On the closing date (31 July 2016), the final number of respondents of the fully completed online questionnaire was 506. According to the formula given by Krejcie and Morgan (1970:608), the number of questionnaires thus encompasses more than the required number of questionnaires.

1.6.2.3.2 *Development of the questionnaire*

The questionnaire (Annexure C) comprised five sections. Section A contained two sub-questions: the first aimed to measure the leisure aspect of paintball and the second focused on prominent themes associated with the activity theory that help to explain the activity aspect of paintball. Section B focused on themes associated with the adventure sport experience, whereas Section C explored the life domains and life domains overall that were identified for the study and that emerged throughout the interviews. Section D

explored QoL overall and Section E sought to determine the demographic profile of participants.

The questionnaire was designed by the author and the formulation based on a well-tested measuring instrument that is similar to the one that had been used by Sirgy *et al.* (2011:2), but adapted to suit the present study. The questionnaire was further enhanced by making use of available literature on the topic and tested by means of the interviews. Before the questionnaire was made available to participants, it was tested by six individuals who included professional, semi-professional and amateur paintball players as well as second-language English speakers to ensure that the questions were well structured and understood. No issues were identified during the testing of the questionnaire and it was thus kept as is for the main study.

1.6.2.3.3 *Study population*

The survey that took place between 1 July 2016 and 31 July 2016 followed a convenience sampling technique. The study population consisted of paintballers from across the globe who had access to Facebook and belonged to paintball-affiliated Facebook pages or groups. Paintball page groups were identified by a keyword search on Facebook, using 'paintball' and 'country' (e.g., France), which revealed the most visited pages and groups for that designated country. Potential participants were reached by promotion on a dedicated Facebook group page, Global Paintball Research Project (GPRP), which had been established by the researcher. The GPRP served as a direct communication point between the researcher and participants and contained, among other, the purpose, aims and objectives of the study. In order to motivate the participants to become respondents by completing the online survey, the researcher offered several incentives, based on the number of completed surveys, to a random few who completed the online questionnaire and left their email address on the survey.

A web-based questionnaire was designed by making use of Google Forms, from which a short link was generated and made available to potential participants on GPRP. Respondents were encouraged to *share* the link within their social communities in order to generate a snowball effect of potential participation. Those respondents who accessed the link were taken to the welcoming page that contained the main objective and purpose of the study, as well as the terms and conditions of participation (Annexure

D). The ethical clearance of the study was presented to respondents who were assured that their information would be handled confidentially and anonymously according to ethical terms and conditions (Annexure A). Only by selecting yes could a participant gain access to the online questionnaire.

1.6.2.4 Data analysis

Statistical Package for the Social Science (SPSS) was used for data capturing. The Statistical Services of the North-West University on the Potchefstroom Campus assisted in the processing of the data. SPSS 23.0 software (SPSS Inc., 2013) was used to process these data. The data analyses involved, among other, descriptive statistics, exploratory factor analysis (EFA), reliability of constructs, *t*-tests, analysis of variance, confirmatory factor analysis, correlations and a chi-square test. Amos statistical software was used to conduct the structural equation model (SEM). A brief description of each analysis that was used will be given in the next:

1.6.2.4.1 *Descriptive statistics*

Descriptive statistics is a method that is used to present quantitative descriptions in a manageable form (Babbie & Mouton, 2001:459) and to describe basic features of the data in a study. After the data have been captured without errors in the data file, the descriptive phase of the data analysis is conducted (Pallant, 2010:53). According to Babbie *et al.* (2007:423), descriptive statistics is one of the primary types of statistics that are used by social scientists. Pallat (2010:53) explains that descriptive statistics can be used for numerous purposes such as describing the characteristics of the sample (cf.1.6.2.1, 1.6.2.3.2 and 1.6.2.3.3), exploring the variables that address the research question in order to avoid violation, and addressing the specific research questions of a study. Descriptive statistics simply describe what the data are or show (Social research methods, 2006), based on means, standard deviation and frequencies (Bryman & Cramer, 1997:35) that will help to describe sets of data in a more understandable format by making use of graphs and figures. Descriptive statistics were drawn from Sections A to E of the questionnaire (Annexure C).

1.6.2.4.2 *Exploratory factor analysis*

Bandalos and Finney (2010:95) describe two broad classes of factor analysis namely exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). They point out

that both model observed covariation among variables as a function of latent constructs. However the EFA is to identify the latent construct or to generate hypotheses about said construct whereas the CFA is used to evaluate the hypothesized structures of the latent construct and to develop a better understanding thereof. As stated by Bandalos and Finney (2010:97) an EFA is best used in a situation where minimal research has been conducted regarding the structure or construct. As this study seeks to create a first phase theoretical model it is prudent that an EFA be conducted first.

EFA was used in the early stages of the research to gather information about the interrelationship among sets of variables. The EFA is used to reduce large numbers of related variables to a more manageable number prior to using them in other analyses such as multiple regression or multivariate analysis of variance (Pallant, 2010:181). Furthermore, the suitability of the data set needs to be determined for the purpose of conducting a factor analysis (Pallant, 2010:182).

Tabachnick and Fidell (2007) recommend the inspection of the correlation matrix in order to determine the coefficients, which should be greater than 0.3. Two statistical measures were used as described by Tabachnick *et al.* (2007:181) and generated by SPSS, namely the Bartlett's Test of Sphericity (BTS) and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy to determine the adequacy and factorability of the data (Pallant, 2010:183). In order for the data to be determined as suitable for a factor analysis, the BTS should be significant $p \leq 0.05$ (Pallant, 2010:183; Field, 2013:695). The KMO index ranges between 0 and 1, where 0.6 is considered the minimum value required for a good factor analysis (Pallant, 2010:183). Hutcheson and Sofroniou (1999) describe the values of KMO statistics between 0.7 and 0.8 as good, values between 0.8 and 0.9 as great and values over 0.9 as superb. An exploratory factor analysis (EFA) was conducted, based on statements found in Section A to D (QoL overall) of the questionnaire (Annexure C).

Interrelationship among the variables is achieved through correlation between the factors by making use of the principle axis method of factor extraction as well as the Oblimin rotation with Kaiser Normalisation rotation technique in order to identify groups of variables. For the purpose of this study, the eigenvalues exceed 1.0, where all the items with a factor loading greater than 0.3 were considered as contributing to a factor.

Pallant (2010:6) states that determining the reliability of the Likert scale helps to show how free it is from random errors. A Cronbach's alpha (α) is a measure of internal consistency; phrased differently, it is a measure of how closely related a set of items are as a group. The α is regarded as the most commonly used reliability statistic in determining the scale's internal consistency, especially with Likert-scaled questions. A 'high' value of α is often used as proof that the items measure an underlying (or latent) construct. However, a high α does not imply that the measure is unidimensional. The α is not a statistical test but a coefficient of reliability (Institute of Digital Research and Education, 2013). A low α value is often found in shorter scales. According to Pallant (2010:6) and DeVellis (2012:109), a minimum level of 0.7 is recommended. George and Mallery (2003:231) provide the following rules of thumb: > 0.9 = Excellent; > 0.8 = Good; > 0.7 = Acceptable; > 0.6 = Questionable; > 0.5 = Poor; and < 0.5 = Unacceptable. The α was used to test the reliability of the Likert-scaled questions. According to Clark and Watson (1995:309), the optimal mean inter-item correlation values range from 0.15 to 0.55. However, Pallant (2010:6) is of the opinion that when there are few or limited items (e.g., less than 10), the mean-inter-item correlation value will most likely be high and will fall within the range of 0.48 to 0.76. Conversely, the α and mean inter-item correlation should be calculated and interpreted to strengthen the reliability of the extracted factors.

The α and mean inter-item correlation was done on the identified factors that stem from the statements in Sections A to D of the questionnaire (Annexure C) to assess their reliability.

1.6.2.4.3 Chi-square test

The chi-square (χ^2) test belongs to the category of non-parametric tests and is applicable in situations where a researcher wants to examine the relationship or association between two nominal variables. The calculations are based on the two-way cross tabulation of the two variables. It is used to test whether (nominal) variables are independent (no relationship) or dependent (related) (Maree, 2010:247). A p-value is created that indicates the strength of a relationship, which is known as the Pearson correlation coefficient (Pallant, 2010:219). In order for the p-value to be significant, a value of 0.05 or smaller ($p < 0.05$) should be measured. If the p-value is greater than 0.05, there is some significance. As the size of the measured data increases, the

statistical significance tend to lean more towards smaller p-values, which indicates significance (Ellis & Steyn, 2003:51).

Chi-square test were done between Section E (demographic variables) and identified factors that were obtained from statements in Sections A to D of the questionnaire (Annexure C) in testing whether practical significant differences existed.

1.6.2.4.4 *t-test*

The *t*-test compares values of a continuous variable for two groups or on two occasions. An independent-samples *t*-test is used when one wants to compare the mean score of two different groups of individuals or conditions (Pallant, 2010:105). A paired-samples *t*-test is used when one wants to compare the mean scores of the same group of individuals on two different occasions or when there are matched pairs (Pallant, 2010:239). In order for a significant difference to exist between two groups, a p-value (Sig. 2-tailed) of ≤ 0.05 is required (Pallant, 2010:239). If practically significant differences exist in the two groups, guidelines are necessary to interpret the effect sizes and the strength of the differences. If the interaction effect is noteworthy, the effect size may be referred to in order to determine the impact of the variance. Ellis and Steyn (2003:54) provide guidelines for the interpretation of the effect sizes between the mean scores of two different groups as a *d*-value, where:

$d = 0.2$ – small effect

$d = 0.5$ – medium effect

$d = 0.8$ – large effect

Therefore, an effect size of $d \geq 0.8$ is considered as practically significant. A *t*-test was done to determine whether statistically significant differences exist between demographic variables and identified factors that are found in Sections A to D of the questionnaire (Annexure C).

1.6.2.4.5 *Correlations*

Correlations measure the strength of the linear relationship between two quantitative variables; therefore, it can only be done once a linear relationship exists. The analysis will reveal the direction and strength of the relationship and whether there is a

statistically significant difference from zero (Kumar 2011; Maree 2010). In order to understand the strength of the relationships between the r -values, Cohen (1988:79) provides the following guidelines:

$r = 0.10 < 0.29$ – small effect

$r = 0.30 < 0.49$ – medium effect

$r = 0.50 < 1.00$ – large effect

Correlations were done on the strength of relationships between the identified factors found in Sections A to D of the questionnaire (Annexure C).

1.6.2.4.6 *Analysis of variance*

An analysis of variance (ANOVA), sometimes called an F-test, is closely related to the t -test. The major difference is that where the t -test assesses the difference between the means of two groups, an ANOVA assesses the difference between means of two or more groups. The purpose of ANOVA is to test whether there is a statistically significant difference in the population means of more than two groups (Eiselen, *et al.*, 2005:119). The ANOVA furthermore tests for main effects, therefore the overall effect of each independent variable (Pallant, 2010:105). In order for a significant interaction effect to take place, the value (Sig.) must be less or equal to 0.05 (Pallant, 2010:253). As with the t -test, the guidelines of Ellis and Steyn (2003:54) are used to interpret the effect sizes between the mean scores of the different groupings as a d -value, where:

$d = 0.2$ – small effect

$d = 0.5$ – medium effect

$d = 0.8$ – large effect

Therefore, an effect size of $d \geq 0.8$ is considered as practically significant. An ANOVA was conducted between Section E (demographic variables) and identified factors in Sections A to D (QoL overall) of the questionnaire (Annexure C).

1.6.2.4.7 *Structural equation model*

The structural equation model (SEM) for this study was based on the notion that paintball participants' QoL might be influenced by the adventure experience, leisure

activity, activity theory, positive and negative affect in life domains and life domains overall. The SEM consists of the following two parts: a measuring model describing the relationships between latent variables and manifest variables from the factor analysis; and a structural model describing the relationships between the latent variables (Kruger, *et al.*, 2013). According to Byrne (2001), SEM addresses a very important issue, namely model fit. Hancock and Mueller (2010) advise researchers to report multiple-fit directories to maintain a model. Wheaton *et al.* (1977) and Tabachnick *et al.* (2007) suggest an acceptable ratio of the chi-square, divided by its degrees of freedom (χ^2/df), which should range between 2 and 5. According to Hu and Bentler (1999:2), the root mean square error of approximation (RMSEA) and its accompanying 90% confidence interval should fall close to 0.06 or below an upper limit of 0.07 (Steiger, 2007:896). A value of ≥ 0.95 is accepted as being revealing of a good fit for a comparative fit index (CFI) (Hancock & Mueller, 2010; Hu, *et al.*, 1999).

Concerning the standardised regression weights, the beta-value (β -value), the strength of relationship between the underlying and evident variables is statistically significant if the Sig. value is ≤ 0.05 , as it makes a substantial contribution to the prediction. Conversely, if the Sig. value is > 0.05 , the variable does not make a distinctive contribution to the prediction (Pallant, 2010:161).

A structural equation model was applied to the identified factors found in Sections A to D of the questionnaire to test the structural relationship (model fit) between the identified factors.

1.7 DEFINING THE CONCEPTS

The following concepts will be used regularly throughout the dissertation and therefore need to be clarified:

1.7.1 The activity theory

The activity theory is more of a descriptive meta-theory or framework than a predictive theory. It considers an entire work/activity system (including teams and organisations) and not just one actor or user. This theory accounts for the environment, history of the individual, culture, role of the artefact, motivations, complexity of real life action et cetera (Learning theories, 2005).

1.7.2 The bottom-up spillover theory

Sirgy (2012:241) explains that the notion of bottom-up spillover is that positive and negative affect that is housed in psychological domains influences life domains as a direct function of its perceived importance. The life domain affect is likely to influence satisfaction with life, especially if the domain is perceived to be important. Sirgy states that the greater the importance of a life domain, the greater the spillover of affect into overall life. The bottom-up spillover theory states that when satisfaction with a major life domain has occurred, it will spill over into QoL overall (Neal, *et al.*, 2007:154).

1.7.3 Adventure tourism

George (2014:456) states that travellers are increasingly interested in adventure activities and advises that tourism suppliers need to offer packages that cater for such needs. According to Terblanche (2012:iii) adventure tourism involves travel and leisure activities pursued with the expectation that they will produce a rewarding, adventurous experience. Wearing and Neil (2009:2) points out that adventure tourism is part of the broader alternative tourism market. Kuenzi and McNeely (2008:155) point out that adventure tourism may also include an element of physical risks. Beedie (2003:203) characterises adventure tourism as a combination of travel, sport and outdoor recreation. Adventure travel is primarily associated with activities where the purpose is to participate in adventure experiences rather than in sightseeing of traditional tourist attractions (Sung, *et al.*, 1997:2). George (2014:457) emphasises that many tourists are seeking a more intense/extreme experience.

1.7.4 Adventure tourism experience (refers to adventure experience)

The adventure experience does not only refer to a physical challenge within a setting, but also to the psychological challenge (Csikszentmihalyi, 1990:52). Skills may have a physical, cognitive or emotional meaning (Csikszentmihalyi, 1990:210). An adventure experience is associated with fear, stress, distress, abilities and attitude (Priest, 1992:127). As individuals gain experience, their perceptions of risk decrease and perceptions of competence increase (Ewert, 1993; Ewert & Hollanhsorts, 1994; Priest, 1992). The emotional value of an adventure experience that satisfies a participant's needs is the key element to its success or failure (Williams & Soutar, 2009:258).

1.7.5 Adventure sport

Adventure sport is defined as an activity that requires physical effort and risk-taking with an uncertain outcome, and which generally takes place in a natural setting (Beedie, 2003; Krein, 2007; Ryan & Trauer, 2005). According to Roberts (2011:147), the element of competition is critical in defining adventure sport, as physical activity alone does not constitute an adventure sport activity. For specific locations, adventure sport tourism products are a significant part of their total tourism offering (Saayman, 2012:305).

1.7.6 Adventure participant

According to Oxford Dictionaries (2014), a participant is an individual who takes part in something. Therefore, an adventure participant can be defined as an individual who takes part in an adventure-based activity.

1.7.7 Hedonic well-being

The hedonic view of subjective well-being relates well to pleasure and happiness and is seen as a subjectively determined, positive, affective state (McMahan & Estes, 2010; Deci & Ryan, 2008). The underlying assumption is that subjective well-being can be defined by an individual's conscious experiences in terms of hedonic feelings or cognitive satisfactions (Diener & Suh, 1997:191).

1.7.8 Leisure

Leisure is defined by George (2014:591) as the time left after one has completed all one's normal daily functions such as work, sleeping, eating and routines. Therefore, a leisure activity can be applied to any activity undertaken by an individual for the purpose of enjoyment. Mannel *et al.* (1997:55) are of the opinion that leisure has been defined and operationalized as an objective and subjective phenomenon. As an objective phenomenon, it is understood as an activity or set of activities taking place at a specific location over a specified period of time (Parr & Lashua, 2004:2). As a subjective phenomenon, it is understood as a mental experience while being engaged in a leisure activity from which the involved individual derives satisfaction or meaning (Mannell & Kleiber, 1997:55).

1.7.9 Life domains

According to Sirgy *et al.* (2011:7), an action or activity influences an individual's satisfaction through the experience of either positive or negative affect and is expressed within various life domains such as social life, emotional life, health and safety life, financial life, leisure and recreation life, travel life and family life. QoL is influenced by various multidimensional sets of domains that represent our daily life (Hajiran, 2006:31).

1.7.10 Paintball

Venter (2014a:1) explains that paintball is an adventure sport and recreation activity in which players compete in teams or individually to eliminate their opponents by marking them with a breakable capsule containing water-soluble dye (called a paintball) that is propelled at 300 feet per second by a device called a paintball marker (gun). Paintball is composed of opposing teams and fixed objectives, and requires physical activity and fast-paced movement. It is played at local, regional, national and international level tournaments by professional and semi-professional players, as well as casually for recreational purposes. According to Venter (2014a:4), paintball can be categorised into several themes, namely speedball, scenario and MILSIM, each of which features distinctive rules and styles of play. Paintball participants are popularly referred to as 'paintballers'.

1.7.11 Speedball

Popular Mechanics (2011:50) describes speedball as the spectator version of the adventure sport and adds that it has dominated the professional sports leagues for the past 15 years. It is widely broadcast on sport channels in Europe, North America and Asia, and has a large support base. Speedball is also known as 'tournament paintball' and is played on a small, flat, prepared field with prearranged, man-made, inflatable obstacles, also known as doritos (due to their shape) (Popular Mechanics, 2011:50) or bunkers. It is characterised by a fast pace in which participants run, slide, hide and expend large amounts of paintballs in order to outmanoeuvre the opposing team (Venter, 2014a:4). Speedball has dominated the adventure sport of paintball with regard to sponsorship. Professional teams participate worldwide in ranked league matches. In the northern hemisphere, league matches are well sponsored and have cash prizes and professional rankings.

1.7.12 Scenario paintball

Also known as 'bushball' or 'woodsball', scenario paintball is believed to be the most popular form of paintball. Commentators from the online paintball show, Behind the Bunker (2016), have stated that those two names are not sufficient descriptions and can be misleading. According to Venter (2014a:4), participants view each paintball match as a real test of their skills and proficiency in being part of a team and using ingenious tactics. Participants purchase their own equipment (instead of renting it from the paintball field), which they modify to suit their style of play. They often train and participate in well-organised teams with rankings.

According to Popular Mechanics (2011:50), scenario paintball takes place either in natural woodland settings or in mock urban environments, featuring bunkers and trenches. Muhlestein (2012) describes woodsballers as groups of people who go into the woods and play paintball games that are reminiscent of military battles. Scenario paintball, according to Venter (2014a:4), is a larger woodsball game (with dozens or even hundreds of players) that often simulates famous historical battles or involves military-styled objectives such as those played at Oklahoma D-Day Park.

1.7.13 MILSIM paintball

MILSIM is an acronym for 'military simulation'; it is the most realistic form of paintball and measures up to military standards in terms of realism and tactics (Venter, 2014a:4). There have been an increasing (but still small) number of paintball players migrating to this form of paintball; it requires substantial investment in military clothing, apparel, realistic MAGFED markers and formal tactical or military training. Participants most often have a military, law enforcement or tactical background. The increasing demand can be attributed to paintballers seeking a greater challenge and more excitement (Houghton, 2013). For the purpose of this study, MILSIM and speedball will be measured. MILSIM will incorporate scenario/woodsball/recreational paintball under one umbrella, as they share similar features, but speedball will be measured in its own class.

1.7.14 QoL

Defining QoL is difficult due to the multitude of views in early literature (Ngai, 2005:196; Lloyd & Little, 2005:150). It is, however, important to make use of a basic definition for

the purpose of this study in order to better understand the concept. Therefore, QoL can be seen as individuals' perceptions of their position in life in the context of culture and value systems in which they live in relation to their goals, expectations, standards and concerns (Omorou, *et al.*, 2013:2021). Furthermore, QoL is determined with objective factors and also with a subjective perception of factors that influence human life (Brajša-Žganec, *et al.*, 2011:81).

1.8 OUTLINE OF CHAPTERS

This section provides a brief outline of each of the chapters. The thesis will consist of the following six chapters:

Chapter 1 The first chapter includes an introduction and background to the study, a problem statement, goal and objectives, as well as a method of research and definition of imperative key concepts of the study. The chapter aims to give an overview of adventure sport tourism and QoL, as well as the problems faced with regard to the study.

Chapter 2 The second chapter comprises an analysis of popular theoretical frameworks of QoL, leisure and activities related to the study.

Chapter 3 The aim of the third chapter is to analyse QoL in relation to adventure sport by means of a literature review.

Chapter 4 In the fourth chapter, leisure, adventure sport and the adventure sport experience are analysed by means of a literature review.

Chapter 5 The fifth chapter provides the results of the statistical analysis. The descriptive results are used to develop a QoL framework for an adventure-based sport activity by means of a structural equation model.

Chapter 6 In the final chapter, the author draws conclusions, makes necessary recommendations, presents limitations of the study and makes suggestions for future research in terms of the empirical findings.

2

CHAPTER 2

ANALYSING POPULAR THEORETICAL FRAMEWORKS OF QUALITY OF LIFE, LEISURE AND ACTIVITIES RELATED TO THE STUDY

2.1 INTRODUCTION

The term ‘theory’ is derived from the Greek word *theorein*, which means to look upon, observe or consider (Bernath & Vidal, 2007:430). The noun *theoría* means looking at, looking more closely, observation, consideration, insight (Bernath & Vidal, 2007:430) or scientific contemplation (Oxford Dictionaries, 2016a). The purpose of both terms has always been to establish the truth. When examining past theories, it is easy to see that their general goals were to understand reality (Bernath & Vidal, 2007:430).

According to Creswell (2009:49), one of the earliest definitions of theory that is still valid today is Kerlinger’s (1973:9), who stated that theory is “a set of interrelated constructs (variables), definitions and propositions that presents a systematic view of a phenomenon by specifying relations among variables with the purpose of explaining natural phenomena”. According to Foy *et al.* (2011:453), a theory is an organised, coherent and systematic articulation of a set of issues that is communicated as a meaningful whole.

Theories provide complex and comprehensive conceptual understandings of things that cannot be pinned down, for example the way in which society works, organisations operate and why individuals interact in certain ways (Reeves, *et al.*, 2008:631). A theory is a unit of knowledge that comprises facts, assumptions and hypotheses that need to be verified by experiments or by methodological observation (Bernath & Vidal, 2007:430). Theories can be described as lenses through which researchers look at complicated problems or social issues, focusing their attention on different aspects of data and providing a framework within which to conduct their analysis (Creswell, 2009:49; Reeves, *et al.*, 2008:631). There is no single correct way to view or understand a problem or social issue by making use of a theory; different theories should preferably be applied, each focusing on a different aspect of a problem or social issue (Reeves, *et al.*, 2008:631).

In quantitative research, theories are often tested as an explanation for answers to a question, whereas in qualitative studies, a theory may be generated at the end of the study (Creswell, 2009:49). Mixed-methods research may test theories as well as generate them (Creswell, 2009:49). According to Reeves *et al.* (2008:633), theories are most often created deductively from an empirically informed act of creativity before it is empirically verified. Therefore, theories result from an on-going process of deduction and induction. Unlike natural sciences that can predict relations between two or more variables, based on universal laws, social sciences are too complex to consider variables in isolation in order to test their casual relationships (Reeves, *et al.*, 2008:633). Theories in social science are therefore conceptual tools that are used to make sense of a complex social reality (Reeves, *et al.*, 2008:633).

Theories are usually used to help design research questions, guide the selection of relevant data, interpret the data and propose reasons for the underlying causes or effects of the observed phenomena (Reeves, *et al.*, 2008:633).

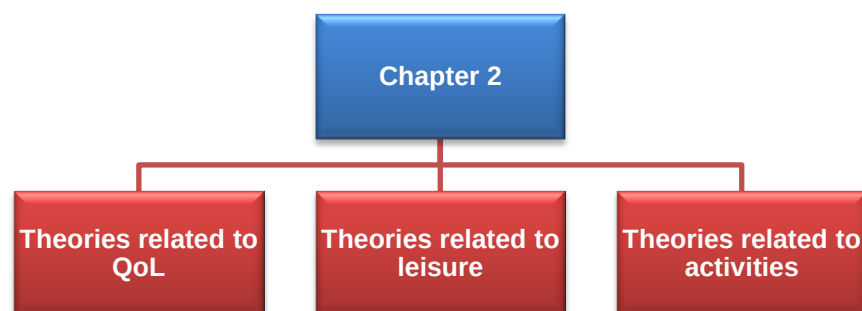


Figure 2.1: Outline of Chapter 2

The purpose of Chapter 2 was to explore the popular theories related to QoL, leisure and activities in literature. This was done by following the structure in Figure 2.1.

2.2 THEORIES RELATED TO QoL

According to Sirgy (2010:246), much of the research conducted in tourism has focused on tourism satisfaction, of which the majority can be categorised. Several major theoretical perspectives related to QoL will be discussed (Figure 2.2), namely QoL theories related to situational theories (e.g. Neal & Gurssoy, 2008; Sirakaya &

Woodside, 2004), dispositional theories (e.g. Kozak & Decrop, 2009; Plog, 2002), interactive theories (Murphy, 2010) and life-domain theories (Sirgy, 2012).

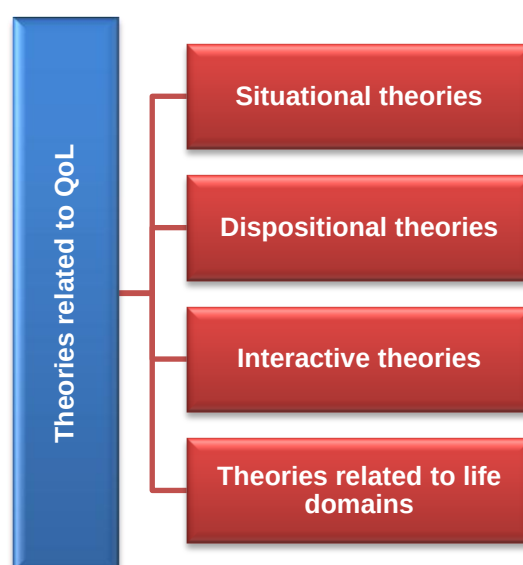


Figure 2.2: Theories related to QoL

Source: Sirgy (2010:246); Sirgy (2012:109); Sirakaya and Woodside (2004:882)

2.2.1 Situational theories

Situational theories of satisfaction focus on identifying satisfaction with specific service facets that make up much of the variation in global measures of tourism-related satisfaction (Neal & Gurssoy, 2008; Sirgy, 2010:246). According to Sirakaya and Woodside (2004:882), the situational variables act more as moderators between intention and the choice. The majority of personality and social psychologists are in agreement that human behaviour can be best explained by theoretical models that take both situational and individual characteristics into account (e.g. Epstein, 1983; Homburg, *et al.*, 2006). A lot of research has been done on satisfaction towards QoL (e.g. Diener, 1984; Diener, *et al.*, 1999; Ezat, *et al.*, 2014; Sirgy, 2001; Sirgy, 2002; Kruger, *et al.*, 2013; Woo, *et al.*, 2015).

2.2.2 Dispositional theories

Dispositional theories of tourism satisfaction focus on the inherent personal characteristics of types of tourists where satisfaction depends on internal motivations (Malkina-Pykh & Pykh, 2014; Plog, 2002; Sirgy, 2010). According to Uysal *et al.*

(2012:669), people travel and participate in activities to meet their intrinsic and extrinsic growth needs that enhance their QoL internally.

2.2.3 Interactive theories

Interactive theories of tourism focus on the interaction between situations and personal facets. According to Sirgy (2010:246), interactive theory of tourism can be subdivided into four distinct theory categories, namely expectancy confirmation theory (Berman, 2005; Sirgy, 2010), norm theory (Neal & Gurssoy, 2008; Sirgy, 2010), equity theory (Grissemann & Stokburger-Sauer, 2012; Sirgy, 2010) and self-congruity theory (Sirgy, 2010) (Figure 2.3).

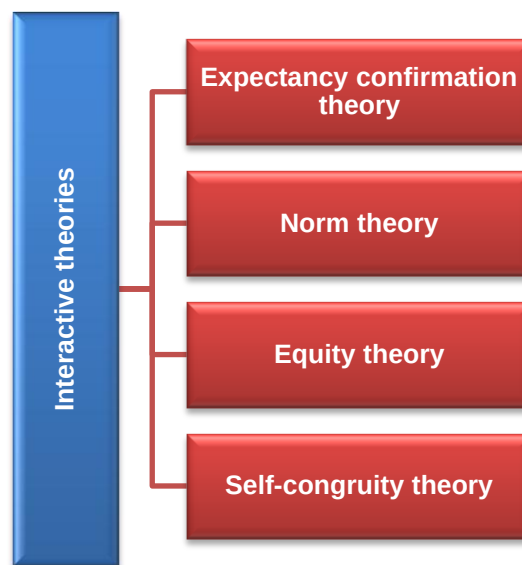


Figure 2.3: Interactive theories

Source: Sirgy (2010:246)

2.2.3.1 Expectancy theory

According to Correia *et al.* (2013:412), satisfaction is one of the most researched topics in the tourism field. Expectancy confirmation/disconfirmation attempts to explain tourist satisfaction in terms of tourists' perception of an experience that is either better or worse than what they have expected, based on factors such as cost (Sirgy, 2010:246). Satisfaction occurs when a satisfier is fulfilled; the higher the fulfilment, the greater the level of tourist satisfaction (Berman, 2005:130). For example, adventure participants (paintballers) who travel a long distance at huge cost might feel highly satisfied if the event that they attend exceeds their expectations and they enjoy their experience. If the perceived experience turns out to be what they have expected it to be, they might

simply feel satisfied, whereas adventure participants might feel dissatisfied if their expectations are not met (Sirgy, 2010:246).

2.2.3.2 Norm theory

Norm theory relies on a norm that serves as a reference point when an individual assesses his or her opinion (Correia, *et al.*, 2013:412). This theory focuses on the type of tourist expectation that is used to evaluate a service (Sirgy, 2010:246). Norm theory categorises norms as, for example, ideal expectations, deserved expectations, desired expectations and predictive expectations that are created by media or other sources (e.g. Chon, 1989; Neal & Gurssoy, 2008; Yoon & Uysal, 2005). The theory serves as a measuring tool that takes different tourist norms into account.

2.2.3.3 Equity theory

According to Grisseman *et al.* (2012:1486), equity theory is a form of justice theory; they explain it as the satisfaction that individuals feel regarding their input and output. Equity theory states that satisfaction is the trade-off between what individual satisfaction is and that which is obtained by the individual (Correia, *et al.*, 2013:412). This theory focuses on explaining satisfaction in terms of tourists' perceived ratio of input versus output (Sirgy, 2010:246).

Satisfaction arises when adventure participants perceive the experience that they received as having exceeded the cost that they had incurred. Dissatisfaction arises when the adventure participants perceive the cost that they had incurred to exceed the experience that they received. Satisfaction and dissatisfaction often occur in paintball. For the purpose of this study, the following example is given: Dissatisfaction might occur when adventure participants spend an entire day playing but score no hits on any opponents during the course of an event. Satisfaction occurs when participants score multiple 'kills' (hits) during a day without getting hit themselves.

2.2.3.4 Self-congruity theory

Self-congruity theory postulates that tourist satisfaction can be increased if the tourist can identify with the service provider (Sirgy, 2010:246). It is an important construct in value creation due to the fact that much research has linked motivational construct such as pre- and post-travel behavioural phenomena (Sirgy, 2014:63). For the purpose of this

study, the example provided by Sirgy (2010:246) will be adapted. Adventure sport participants (paintball players) feel happy with the service that they receive when they perceive that the typical service provider feels similar to how they see things themselves. Many paintball service providers are paintball enthusiasts themselves and associate with their clients, for example the organisers of Oklahoma D-Day (Venter, 2014:4a:6).

In summary it can therefore be argued that the interactive theory is best suited to investigate and extract the QoL aspects found in paintball as an adventure-based sport. According to Sirgy (2010:247), no studies have addressed the comparative efficiency of situational, dispositional and interactive theories in explaining tourist satisfaction, although most researchers agree that the interactive theory is the most effective one. Sirgy (2010:247) argues that interactive theories combine both the situation and the individual, which can explain tourist satisfaction better.

2.2.4 Theories related to life domains

Sirgy (1986:341) explains 'QoL' as a hierarchical level of need satisfaction of the aggregate members of a society. According to the original psychology by Danna and Griffin (1999), life domains involve a hierarchy of concepts that fall into top and middle hierarchy. At the top of the hierarchy, life overall or satisfaction with life can be found. Below this level, the subordinate life domains such as social life, emotional life, health and safety life, financial life, leisure and recreation life, travel life and family life can be found. Each of these life domains houses affective experiences concerning that individual domain (Sirgy, 2002:36); an individual might therefore experience positive affect in social life but negative affect in health and safety. Domain satisfaction/dissatisfaction plays an important role in determining satisfaction with life/dissatisfaction overall (Sirgy, 2002:37).

Domains in which an individual has invested considerable effort to attain a positive affect or eliminate a negative affect are likely to be more hierarchically important than those in which there has been less investment (Sirgy, 2002:38). Domain hierarchy might also be different from individual to individual. Ferrans and Powers (1985) developed the QoL Index.

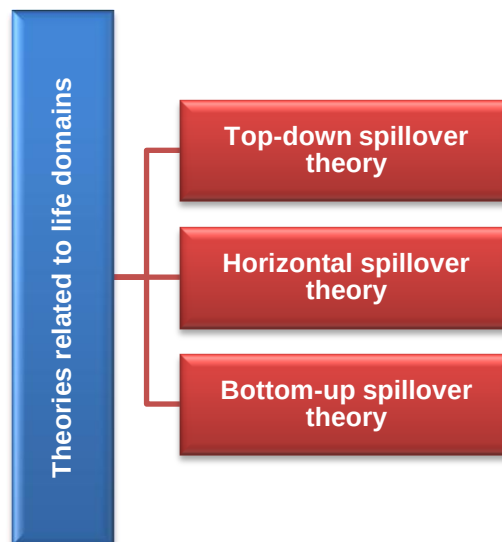


Figure 2.4: Life domain theories

Source: Sirgy (2010:246); Sirgy (2012:109)

According to Sirgy (2012:240), several life domain theories (Figure 2.4) have played a key role in explaining QoL findings; of these theories, the top-down spillover theory, horizontal spillover theory and bottom-up spillover theory will be discussed.

2.2.4.1 Top-down spillover theory

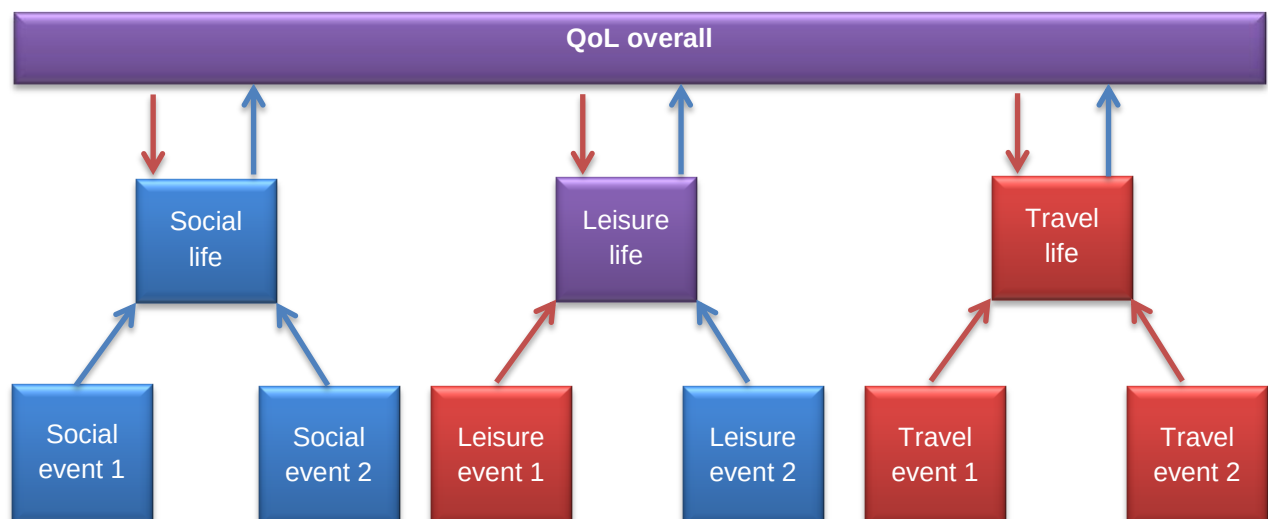


Figure 2.5: The top-down spillover theory when not applied (Note that positive domain and experience is depicted in blue, while negative domain and experience is depicted in red. A combination of both is represented in purple)

Source: Sirgy (2002:71)

The top-down spillover theory suggests that the affect generated by QoL overall filters down into the subordinate domains such as social life, emotional life, health and safety life, financial life, as well as leisure and travel life, and influences their imbedded affects (Rootenberg, 2012:53). For an illustration of this, refer to Figures 2.5 and 2.6.

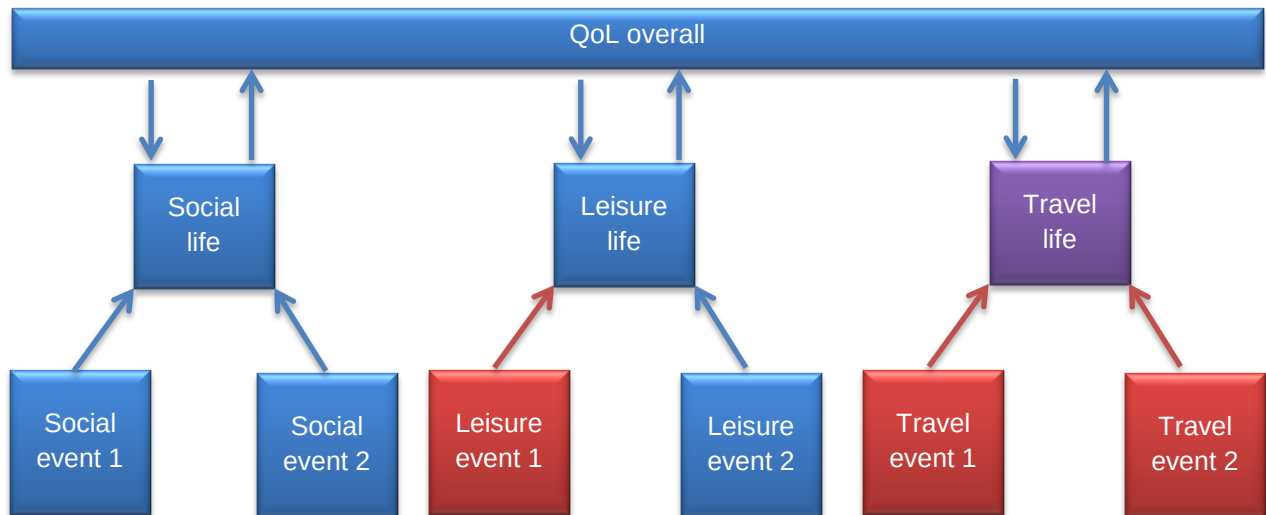


Figure 2.6: The top-down spillover theory when applied (Note that positive domain and experience is depicted in blue, while negative domain and experience is depicted in red. A combination of both is represented in purple.)

Source: Sirgy (2002:71)

The positive affect created by QoL overall influences the affect in the various sub-domains that, in turn, affect the QoL overall again. This positive affect in the QoL overall can mitigate any negative affect generated by a subordinate domain (Sirgy, 2002:72). Sirgy (2002:73) summarises the principle of top-down spillover as follows: Subjective well-being can be increased by allowing spillover of positive affect from overall life to influence important life domains. It should increase positive affect or decrease negative affect in the life domains. Positive affect is created as a direct function of the satisfaction of human developmental needs.

Psychosomatic factors such as personality type and the intensity level of subjective well-being influence the top-down spillover process (Sirgy, 2002:73). The link with adventure sport will therefore be difficult to determine through an empirical survey.

2.2.4.2 Horizontal spillover theory

The horizontal spillover theory refers to the effect of satisfaction or dissatisfaction with one life domain on a neighbouring life domain (Sirgy, 2012:246). For an illustration of this statement, please refer to Figures 2.7 and 2.8. For example, social satisfaction or dissatisfaction spills over into the leisure domain, thus affecting satisfaction or dissatisfaction with leisure life (Figure 2.8).

According to Sirgy (2012:246), there is a lot of evidence in QoL literature suggesting that affect in one life domain does indeed influence affect in another domain that is not a superordinate or subordinate to it, but equal in overall hierarchy of life domains and importance. Horizontal spillover occurs when certain conditions are present, namely overlap, high involvement, skills and abilities, cultural norms and pressure. QoL can therefore be improved by inducing positive affect in a particular domain, for example social life, to spill over horizontally into an adjacent important domain, for example leisure life (Rootenberg, 2012:54). Doing this will allow the positive affect to increase or negative affect to decrease in the neighbouring domain. The result will enhance QoL through a bottom-up spillover theory of positive affect from neighbouring domains to the overall life (Sirgy, 2002:82). The horizontal spillover theory provides a comprehensive view of the functions of QoL, but the psychological view is too complex to establish a link with adventure sport through an empirical survey.

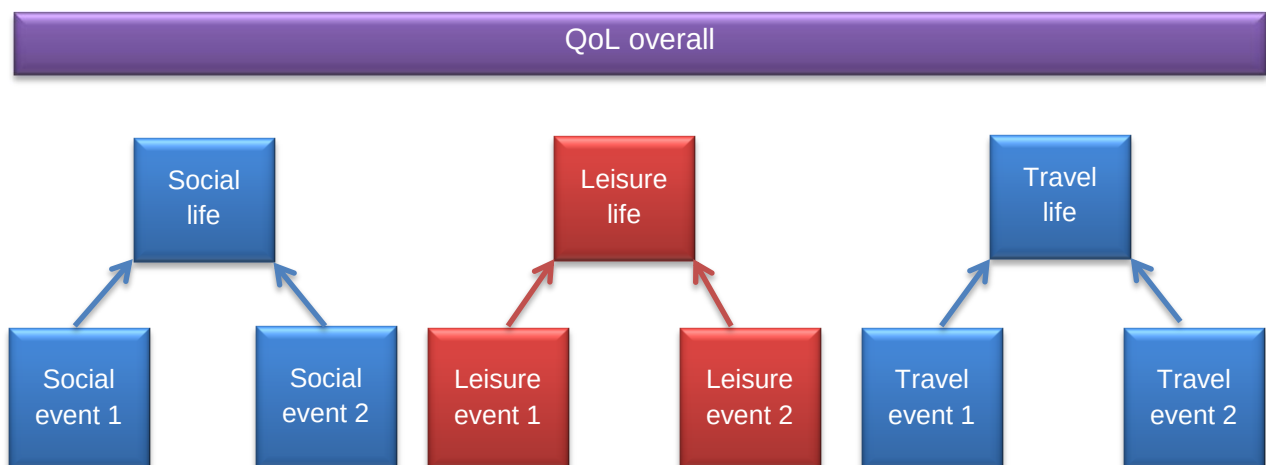


Figure 2.7: Horizontal spillover theory when not applied (Note that positive domain and experience is depicted in blue, while negative domain and experience is depicted in red. A combination of both is represented in purple.)

Source: Sirgy (2002:79)

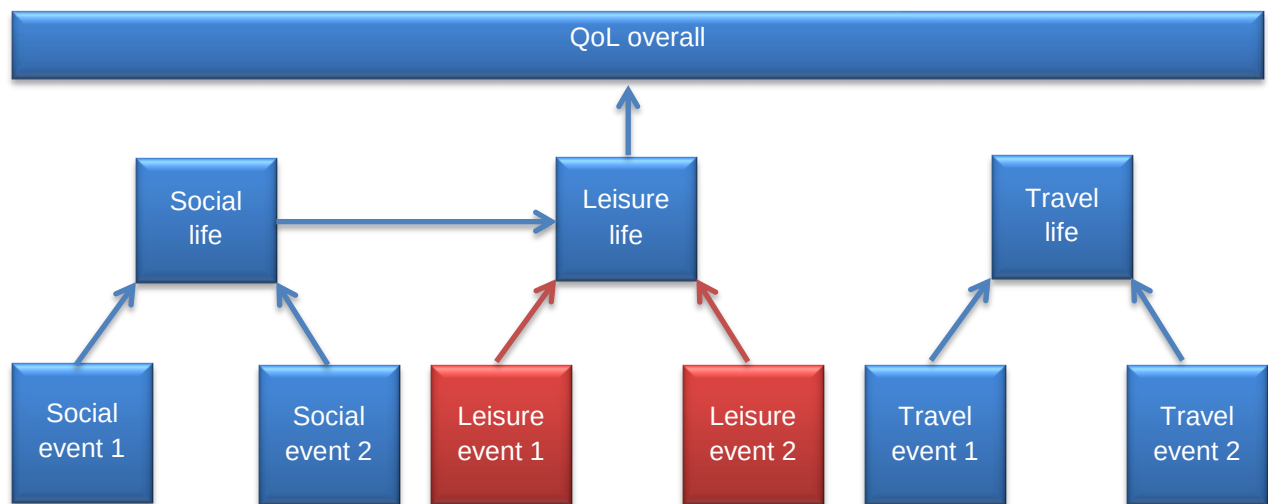


Figure 2.8: Horizontal spillover theory when applied (Note that positive domain and experience is depicted in blue, while negative domain and experience is depicted in red.)

Source: Sirgy (2002:79)

2.2.4.3 Bottom-up spillover theory

The bottom-up spillover theory (Diener, 1984; Diener, *et al.*, 1999; Kruger, *et al.*, 2013; Sirgy, 2002; Sirgy & Lee, 2006) shares the same hierarchical process found in Maslow's hierarchy of needs (Maslow, 1970). The five levels of Maslow's hierarchy can be seen as co-acting in determining an individual's motivational profile (Pearce & Packer, 2013:390). In order for QoL overall to be achieved, the lowest sub-domains need to be satisfied (as illustrated in Figure 2.9). Once the lowest sub-domains are satisfied, spillover will occur into the subordinate life domains (social life, emotional life, health and safety life, financial life, leisure and recreation life, travel life and family life). However, life domains vary, based on the scope of a study as well as the country it is performed in (Sirgy, 2001:80).

Recently, Sirgy *et al.* (2011) conducted an in-depth qualitative interview with tourists to determine the life domains that are most influenced by travel and tourism. The study concluded that the most prominent life domains are social life, leisure and recreation, family life, love life, arts and culture, work life, health and safety, financial life, spiritual life, intellectual life, self, culinary life and travel life. If the spillover is positive (Sirgy, *et al.*, 2011:262) in nature, it will enhance the superordinate life domain, also referred to as 'overall satisfaction with life' (QoL). The greater the level of satisfaction in the various

life domains is, the greater the QoL overall will be, which implies a balance of different life domains (Smith & Puczkó, 2009:7). Phrased differently, feelings of the overall hierarchy of life experience (captured as thoughts) within a given life space spill vertically from bottom (most concrete domain) to top (most abstract domain) (Sirgy, 2012:240).

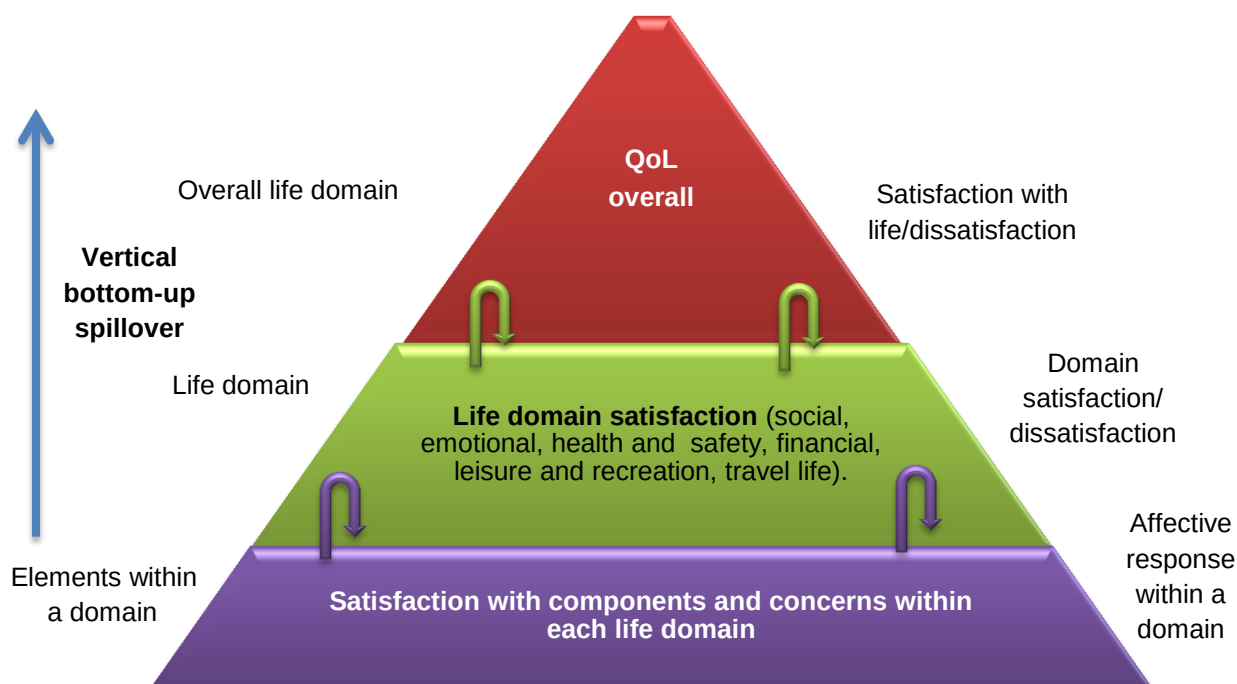


Figure 2.9: Bottom-up spillover theory/Domain hierarchy

Source: Rootenberg (2012:53); Sirgy (2012:543)

In summary, the bottom-up spillover theory recognises that QoL overall is mostly determined by satisfaction with the various life domains. Therefore, the affect within a subordinate domain accumulates and spills over into the superordinate domain, referred to as QoL.

Smith and Puczkó (2009:7) are of the opinion that life domains are (directly or indirectly) connected to and with tourism, including sport tourism and therefore adventure sport. Research in tourism and travel has shown that tourism and travel have a positive impact on QoL (Gilbert & Abdullah, 2004; Smith & Puczkó, 2009). The affect of a selected adventure sport activity experience (paintball) on a participant's QoL could influence various life domains such as social life, emotional life, health and safety life, financial life, leisure and recreation life, travel life and family life, and could consequently determine a participant's QoL overall. Therefore, the bottom-up spillover theory, which

is a very popular tool in measuring QoL in tourism, will be used for the theoretical framework of this study (Kim, *et al.*, 2013; Kruger, *et al.*, 2013; Woo, *et al.*, 2015).

2.2.5 Summary

Human behaviour can be measured and explained best by taking theory models that explain situational and individual characteristics into account (e.g. Homburg, *et al.*, 2006; Rose, 2013). Sirgy (2010:247) states that research in satisfaction has been conducted by personality-social psychologists who are interested in QoL such as Diener, Oishi, *et al.* (2009), Filep (2012), Genç (2012) and Sirgy (2001, 2002), some of whom have been guided by goal theory (e.g. Cantor & Sanderson, 1999:230). Little research in travel and tourism that makes use of the goal theory of subjective well-being has been reported (Sirgy, 2010:247).

Sirgy (2010:247) points out that the following authors' studies are some of those that have been conducted in travel and tourism in an attempt to link subjective well-being (SWB) aspects of QoL such as satisfaction with life: Gilbert and Abdullah (2004) (satisfaction and SWB); Mactavish *et al.* (2007) (QoL); McCabe and Johnson (2013) (QoL and SWB); Neal *et al.* (1999) (QoL and SWB); and Neal *et al.* (2007) (QoL). The following section will explore theories that relate to leisure.

2.3 THEORIES RELATED TO LEISURE

'Leisure' typically refers to the time that is available after one's work is completed and daily responsibilities have been dealt with. Phrased differently, leisure time is calculated as the time spent on nondiscretionary activities (George, 2014:591; Russel, 2013:22; Sirgy, 2012:401; Xiang, *et al.*, 2015). According to Sirgy (2012:401), the origins of leisure's definition are rooted in the traditional economic theory where an individual's time is divided between production, consumption and leisure. Literature searches revealed a close but complex link between leisure well-being and QoL (Iwasaki, 2007; Leung & Lee, 2005; Lloyd & Auld, 2002; Nimrod & Adoni, 2006; Sirgy, 2012; Wei-Chih, 2016). Several of these definitions will now be discussed:

- Satisfaction with leisure life – Andrews and Withey (1976) theorised that leisure well-being consists of the satisfaction that individuals experience with their leisure life.

- Satisfaction with important dimensions of leisure life – Leisure well-being was measured by using five subconstructs, namely (1) the amount of fun one is having; (2) the things that are done with family; (3) the time to do things; (4) spare time activities; and (5) recreation (Andrews & Withey, 1976). All five subconstructs were significant predictors of satisfaction with life (Sirgy, 2012:402).
- Perceived recreation quality – The Recreation Roundtable conceptualised this in 1989 (Sirgy, 2012:403) to establish how Americans spend \$300 billion on outdoor recreation each year. It was recognised that leisure well-being was based on the perceived opportunity for recreation, the extent of participation and satisfaction with the activity.
- Satisfaction with leisure time – This definition was theorised by Eriksson *et al.* (2007), who defined 'leisure time' in terms of how much control individuals have over their leisure time.
- Satisfaction with a specific leisure event – According to Chen *et al.* (2010), satisfaction with a specific leisure event is a more appropriate way to capture the mediating role of leisure well-being between flow experience and satisfaction with life.

A lot of research has been done on the effects of leisure on QoL, concluding that leisure well-being plays an important role in QoL (Andrews & Withey, 1976; Balatasky & Diener, 1993; Campbell, *et al.*, 1976; Chen, *et al.*, 2010; Eriksson, *et al.*, 2007; Haggard, *et al.*, 1995; Kruger, *et al.*, 2013; Lu & Argyle, 1994; Neal, *et al.*, 1999; Norman, *et al.*, 1997; Pyke, *et al.*, 2016; Reich & Zautra, 1981; Rootenberg, 2012; Sirgy, 2012; Sirgy, *et al.*, 2011; Veroff, *et al.*, 1981; Xiang, *et al.*, 2015).

Several major theoretical perspectives linking leisure and QoL will be discussed (Figure 2.10), namely physiology and genetics, social motivation and goal theory.

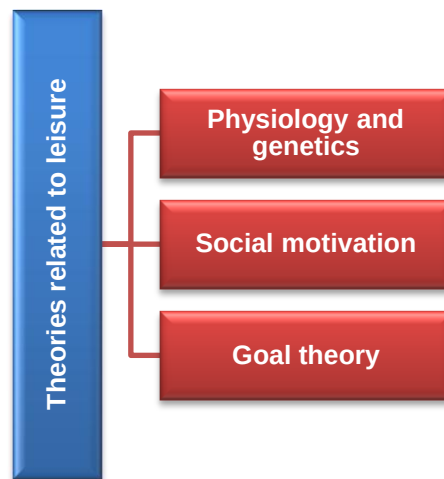


Figure 2.10: Theories related to leisure

Sources: Argyle (2001); Hills *et al.* (2000); Nawijn *et al.* (2010); Rodriguez *et al.* (2008); Sirgy (2012)

2.3.1 Physiology and genetics

In the natural environment, paintball affects the entire biopsychosocial status of a society (Vujko & Plavša, 2011:95); therefore, the activity itself will be one of the best means to remove the negative effects of modern life. Adventure and extreme sports are ways for modern society to combat stress and as such have a positive effect on physical and psychological health conditions, most notably self-esteem, confidence and human biochemical mechanisms (Vujko & Plavša, 2011:96). Boyes (2013:648) states that adventure can take multifarious contexts such as adventure tourism, adventure sport and outdoor pursuits. Engaging in leisure activities that involve strenuous physical activities stimulates endorphins that activate certain brain cells. These cells produce an increase in positive emotions or euphoria that emulates a state that is often compared with the feeling one experiences after making love, when enjoying chocolate et cetera. Furthermore, endorphins reduce the risks of obesity and also help in preventing several chronic diseases, thus extending life (Aaltonen, *et al.*, 2014; Booth, *et al.*, 2012; Brymer & Schweitzer, 2012; Garber, *et al.*, 2011; Sirgy, 2012; Vujko & Plavša, 2011).

A secondary by-product of strenuous physical activity is adrenaline, which is a stress response hormone. Stressful situations such as being shot at in paintball lead to the secretion of adrenaline from the adrenal gland. Adrenaline in the blood reaches almost all organs and causes increased heart rate, which increases the power of the heart, the

constriction of blood vessels of peripheral tissues and the expansion of blood vessels of the heart, brain, muscle and some other important organs (Vujko & Plavša, 2011:96). In other words, one of the main motives for participating in most adventure sports is actually the feeling of euphoria that occurs when the dangerous situation (such as simulated combat when playing paintball) passes.

It is, however, true that many individuals, especially those in developed countries, do not engage in enough physical activities, which is detrimental to their short-term QoL and long-term health (Sánchez, *et al.*, 2009).

Many factors play a role in physical leisure-time activity, for example personal traits, needs and interests, and external factors such as environment and the availability of activities (Aaltonen, *et al.*, 2014:2; Bouchard, *et al.*, 2012:44). Several factors such as age, sex, previous physical activity, self-efficacy and health status also seem to influence the current physical activity level of individuals (Bauman, *et al.*, 2012). According to Aaltonen *et al.* (2014:1), some factors may make it easier or more difficult for individuals to achieve high levels of physical activity; however, it must be noted that environmental and genetic factors always work in conjunction. In their study, Aaltonen *et al.* (2014:6) found evidence for the existence of age-specific genetic and environmental influences on leisure-time activities. Further evidence revealed differences in motivational factors that influence leisure-time activity between consistently active and inactive individuals. The results also indicated that intrinsic motivational factors are very important for engagement in leisure-time activities such as adventure sport (paintball).

2.3.2 Social motivation

Many forms of leisure activity, for example paintball as a team sport (Venter, 2014a:1), involve social interactions that result in satisfaction of various social needs such as social approval, affiliation, belonging, social status, social recognition, cooperation, competition and self-sacrifice (Sirgy, 2012:407). Hills *et al.* (2000) proved a link between leisure activities and satisfaction of social needs, predominantly in activities (sports) that require active team participation and are perceived to have elements of danger.

2.3.3 Goal theory

The goal theory has been researched extensively in the field of personality and social psychology (Sirgy, 2010:247). Examples of key research in the abovementioned fields include the research of Brunstein *et al.* (1998), Cantor and Sanderson (1999), Chen and Petrick (2013), Gollwitzer (1993), Kasser and Ryan (e.g. 1993, 1996), Keyes (2005, 2007), Maehr and Zusho (2009), McGregor and Little (1998) and Sheldon and Kasser (2001). The goal theory as explored in this chapter assumes that adventure sport participants set goals and experience leisure satisfaction as a result of achieving the set goals. In order to reach such goals, participants need to implement actions that could lead to achieving and experiencing those goals (Venter, 2014b:7). Some goals are consciously while others subconsciously. According to Sirgy (2010:247), goal attainment can be achieved by understanding and seeking to achieve the following four major principles (Figure 2.11):

- Selecting and pursuing travel goals, where the achievement will most likely induce high levels of positive affect in the chosen life domains (goal valence).
- Selecting attainable goals that will lead to high levels of positive affect in the chosen life domains (goal expectancy).
- Taking actions to implement leisure travel goals, which will increase the likelihood of goal attainment, thus achieving positive affect in the chosen life domains (goal implementation).
- Achieving the leisure travel goals, thereby ensuring positive affect in the chosen life domains (goal achievement).



Figure 2.11: Major principles of goal theory

Source: Adapted from Sirgy (2010:247) and Venter (2014b:2)

A clear understanding of the various goals could provide adventure sport participants with the opportunity to maximise their chances of achieving a higher sense of subjective well-being and positive emotion. The following section will explore goal valence, expectancy, implementation and achievement in more detail.

2.3.3.1 Goal valence

According to Sirgy (2012:192), goal selection is very important in enhancing subjective well-being. Goal valence implies that QoL is enhanced by choosing to pursue goals where the goal attainment is likely to induce high levels of positive affect in major life domains such as social life, emotional life, health and safety life, financial life, leisure and recreation life, travel life and family life (Sirgy, 2010:248). The bottom-up spillover effect is intertwined with goal theory, specifically adventure participants' expectance of positive and negative feelings in relation to their experience of an activity (McCabe & Johnson, 2013:47; Sirgy, 2010:248). These feelings have a direct impact on an adventure-based sport participant's QoL through leisure well-being and an indirect impact by enhancing subjective well-being in non-leisure life domains such as social life, family life, health and safety life and financial life (Sirgy, 2010:248). Positive affect

gained by experiencing a satisfactory experience will therefore have a direct impact on a variety of life domains, which will in turn impact QoL.

Later on in the chapter, the bottom-up spillover theory will be discussed in detail. By selecting goals related to participant's activities, QoL can be enhanced. Measuring the significance of a goal's impact on QoL after it has been attained is demonstrated by several factors, including intrinsic versus extrinsic goals, abstract versus concrete goals, goals related to basic versus growth needs, goals related to deprived needs, and goals that generate flow and goal autonomy (Sirgy, 2010:248). Each of these goals (Figure 2.12) will now be explained in more detail.

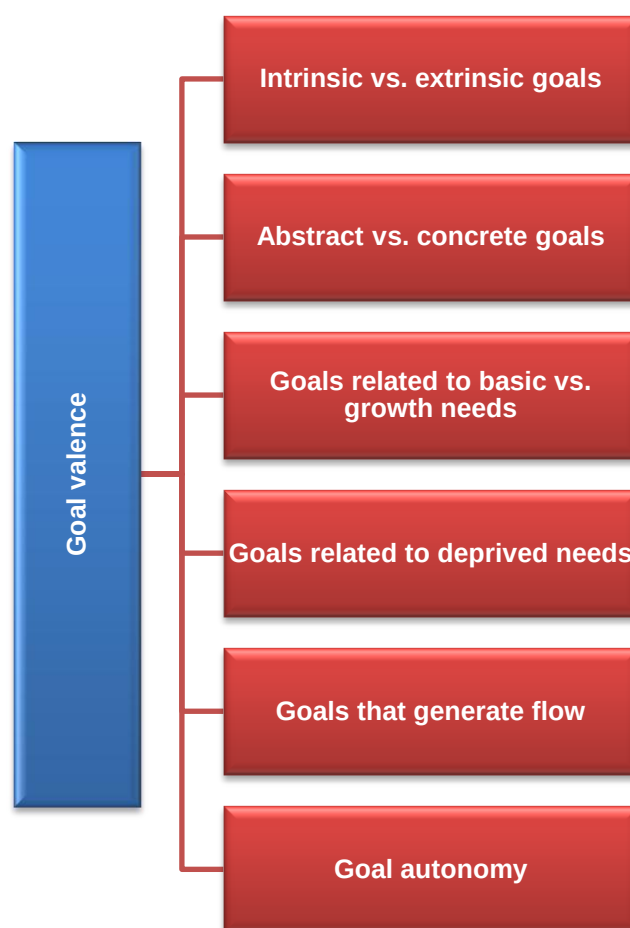


Figure 2.12: Goals that are likely to generate positive affect when they have been achieved

Source: Author's own compilation

2.3.3.1.1 *Intrinsic versus extrinsic goals*

Widely researched goal content distinctions deal with the differentiation between intrinsic and extrinsic aspirations (Kasser & Ryan, 1996). Intrinsic goals are defined as those pursuits that are generally similar with essential psychological needs such as having good social relationships with peers or loved ones, contributing to the community, helping others in need, personal growth, and maintaining good health. Intrinsic motivations are characterised by the highest level of self-determination (Cini, *et al.*, 2012:45). According to Niemiec *et al.* (2009:292), individuals who gain intrinsic goals will experience more well-being in their QoL, because intrinsic goals are more likely to provide satisfaction of their basic psychological needs.

In contrast, extrinsic goals are primarily concerned with obtaining some reward or social praise, as they are typically a means to some other end or compensation for problems in need satisfaction (Deci & Ryan, 1987:1034). Research has shown that individuals who pursue extrinsic goals have more difficulty in fulfilling their needs for competence, relatedness and autonomy, as extrinsic aspirations are unrelated to basic psychological need satisfaction (Niemiec, *et al.*, 2009:304). Examples might include making money, attaining recognition and the desire to control individuals (Sirgy, 1998:227), financial success, image and popularity (Rijavex, *et al.*, 2008:695). Sirgy (2012:193) concludes that intrinsic goals tend to be more life satisfying than extrinsic goals.

2.3.3.1.2 *Abstract (high-level) versus concrete (low-level) goals*

According to Hsiaw (2013:607), goals must be consistent with a rational expectation of what is realistically achievable and should be structured hierarchically. Goals can be categorised as either abstract (strategic goals) or concrete (tactical goals). Sirgy (2012:193) is of the opinion that abstract goals can only be realised if they are transformed into concrete goals. Abstract goals tend to induce more positive affect than concrete goals. This can be attributed to the fact that abstract goals are more related to one's self than is the case with concrete goals. Self-related goals carry more emotional weight than non-self-goals (Sirgy, 2010:249).

For the purpose of this study, an example can be taken from MILSIM paintball (Venter, 2014a:4), which might involve several adventure sport participants who have decided to satisfy an abstract goal such as training to operate to and from a helicopter during an

insertion or extraction at a MILSIM paintball event. Individual 1 might arrange to attend an adventure-based helicopter training course to satisfy his or her abstract goal of becoming helicopter certified and thus gaining a skill that he or she perceives as valuable. Individual 2 might articulate a concrete goal of flying in a helicopter because he or she has never done so before. They might book a commercial helicopter charter and achieve their concrete plan but not link it to their abstract goal (of achieving a lifelong skill). Individual 1 will most likely experience more satisfaction by taking part in helicopter training and becoming certified to operate it than individual 2, who simply wants to experience a helicopter ride. By achieving his or her abstract goal, individual 1 will gain a great deal of positive affect. Individual 2 might experience some satisfaction but only in his or her leisure life, which might not be sufficient to affect his or her QoL.

According to Sirgy (2010:249), the abstract principle of goal selection is that satisfaction with life can be increased by selecting abstract (high-level) rather than concrete (low-level) leisure travel goals. The reason for this is that abstract goals induce a much more positive affect, not only in leisure life but also in other salient life domains, and contribute significantly to QoL.

2.3.3.1.3 Goals related to basic needs versus growth needs

Positive affect and negative affect are two independent dimensions that affect an individual's QoL (Sirgy, 2010:249). The factors that affect satisfaction might be different from factors that affect dissatisfaction; in other words, what affects one individual does not necessarily affect the other individual equally. Factors that affect positive affect are known as 'growth factors or needs', whereas factors that affect negative affect are known as 'hygiene factors or deficiency needs' (Gawel, 1997; Herzberg, *et al.*, 1959; Noltemeyer, *et al.*, 2012). Research shows that positive affect is related to higher-order needs such as social belonging, self-esteem and self-actualisation (Adiele & Abraham, 2013; Maslow, 1970; Pressey, *et al.*, 2013), whereas determinants of negative affect are related to lower-order needs such as food, shelter and safety (Adiele & Abraham, 2013; Ivztan & Moon, 2008; Pressey, *et al.*, 2013; Van den Broeck, *et al.*, 2010).

Consider the following paintball example: Two adventure sport participants travel to attend the Oklahoma D-Day event (Venter, 2014a:2), but they have different goals in terms of basic and growth needs. Individual 1 sets out to learn the history of D-Day by

visiting museums beforehand and participating in strategy discussions and lectures before the event; he does this to enhance his experience and understanding in order to have a better chance of achieving victory. Individual 2 attends the event in order to socialise and relax. The goals of individual 1 are directly related to growth needs, whereas the goals of individual 2 are more related to basic needs. It can be argued that individual 1 will experience a higher degree of satisfaction, as his needs are growth motivated, which produces more positive affect, not only in the leisure life domain but also in self and culture. The lower-order goals of individual 2 will make him feel less bored and somewhat entertained, which might be more skewed, as they will rather reduce negative affect than induce positive affect.

The growth needs principle of goal selection, described by Sirgy (2010:249), states that satisfaction with life can be increased by selecting leisure travel goals that are more related to growth needs than basic needs. Furthermore, Sirgy (2010:249) argues that the attainment of leisure travel growth needs has a substantially higher degree of positive affect (not only in leisure life but also in other salient life domains and well-being) than goals achieved in basic needs.

2.3.3.1.4 Goals related to deprived needs versus non-deprived needs

According to Ahuvia and Friedman (1998:164), economic deprivation plays a strong part in materialism. Individuals who are economically disadvantaged and attain money or material possessions become happy. The reason for this is that economic deprivation increases the need to acquire money and material possessions. This is also true for non-economic needs, where any deprived need heightens the intensity of the need in any life domain, including leisure life (Sirgy, 2010:250). The tendency to place more value on deprived than non-deprived goals is based on the deprivation-joy theory that posits that the greater the deprivation is, the greater the joy will be that one may experience upon need satisfaction (Sirgy, 2012:195).

Consider the following example: Two adventure sport participants are attending the D-Day Oklahoma event (Venter, 2014a:2). Individual 1 is a well-established historian who has attended the event before, whereas individual 2 is attending it for the first time. Individual 2 has looked forward to attend the event for several years, whereas individual 1 is accustomed to the sights, smells and activities. It is likely that individual 2 will

experience a more positive affect that contributes to his QoL than individual 1, because individual 2 is more able to realise his goals related to his deprived need (participating in the event for the first time) than individual 1.

QoL can be increased and dissatisfaction reduced by selecting leisure travel goals that are more related to deprived needs than non-deprived needs (Sirgy, 2010:250). By achieving leisure goals in a deprived need, significantly more positive affect is generated in other life domains and QoL than would be the case if a non-deprived need was achieved.

2.3.3.1.5 Goals that generate flow

Argyle (1999:364) reviewed a lot of evidence of the link between QoL and leisure, and concluded that there is indeed a strong relationship between the two constructs. He added the flow principle to explain how different types of challenging leisure activities such as paintball contribute much more to QoL than passive forms of leisure such as watching sport. Cantor and Sanderson (1999:231) report that mountain climbers describe the sensation of flow (great satisfaction) as one of life's peak experiences (Sirgy, 2012:196).

Sirgy (2012:196) explains that the flow principle is based on individuals' perception that their skills match the challenges presented in a given situation. In other words, adventure participants will experience positive flow when they apply their skill in a challenging task and succeed in it. Should the task be easy to complete, the individuals will feel bored. If the task would require more skill than the individuals perceive they possess, they will become anxious. Should both the challenge and the perceived skill required be low, the individuals will likely feel apathetic. Therefore the flow principle can be applied very successfully in adventure sport. Matching the adventure participant's skill levels with the required skills is of fundamental importance to achieve satisfaction.

Consider the following scenario, consisting of three adventure sport participants in paintball: Individual 1 is a somewhat skilled, semi-professional paintball player (Venter, 2014a:4) and plans to spend a day at a MILSIM paintball event with some friends who are equally skilled. Individual 2 enjoys paintball on occasion, is classified as an amateur (Venter, 2014a:4) and is thus not highly skilled. Individual 3 is a competitive MILSIM

paintballer who has completed tactical/military training and is classified as a professional (Venter, 2014a:4). The question to be answered is the following: Who would enjoy the MILSIM event more? The most probable answer is individual 3, as his skill level matches the challenge presented at a MILSIM event. Individuals 1 and 2 are not likely to experience flow, as their skill level does not match the requirements of a MILSIM event. Individual 1 will most probably be overwhelmed and individual 2 will most probably become anxious.

Phrased differently, QoL can be increased and dissatisfaction decreased by matching the adventure participants' skill levels with activities that fit their skill level. Doing this induces flow that generates positive affect in leisure life that will possibly spill over into other life domains. According to Sirgy (2010:251), this contributes significantly to the improvement of QoL.

2.3.3.1.6 Goal autonomy

QoL is influenced by the extent to which adventure participants can choose their own goals autonomously (Sirgy, 2010:251). According to Cantor and Sanderson (1999:231), QoL should be enhanced when adventure participants are able to pursue their distinct personal goals in such a way that they are valued intrinsically and are freely chosen. Goals that are determined by other individuals are not as likely to be important goals. It can therefore be argued that a greater amount of QoL can be achieved by choosing individual goals that will have greater intrinsic values than goals selected by others. This can have a significant impact on adventure sport.

In other words adventure participants who are allowed to select their own adventure agenda are more likely to experience higher levels of satisfaction with life than participants whose adventure agenda is set by an adventure operator. The result of such autonomous goal attainment is likely to lead to an increase in positive affect that contributes more to well-being than non-autonomous goal attainment. It can therefore be concluded that QoL can be increased and dissatisfaction decreased by selecting adventure sport goals autonomously as opposed to receiving them non-autonomously. By achieving self-autonomous adventure goals, more positive affect is generated in leisure life and possibly other life domains than achieving non-autonomous goals. This could contribute significantly to QoL.

Put differently, it can be interpreted that adventure sport goals that generate strong positive emotions have the ability to bring satisfaction with life to individuals by generating positive affect that contributes to adventure participants' QoL.

Goal valence has shown that it is possible for certain adventure sport goals to pass on satisfaction with life to adventure participants' lives and, by doing so, generate a strong positive emotion. The following section will explore the selection of adventure sport goals that are most likely to be achieved by adventure sport participants.

2.3.3.2 Goal expectancy



Figure 2.13: Goals expectancy

Source: Author's own compilation

In the preceding section, factors were discussed that can assist adventure sport participants in selecting goals that are capable of enhancing their satisfaction with life if attained during their adventure sport activities. Goal expectancy (Figure 2.13) explores the selection of adventure goals that are most likely to be achieved by participants. These goals (as highlighted by Sirgy, 2010:252) are goal-motive congruence, goal-cultural value congruence, goal-resource congruence and goal conflict.

By selecting goals that have a high probability of success, an individual experiences greater satisfaction than selecting those goals that are not realistic or feasible and are known as 'goal expectancy' (Vallacher & Wegner, 1989:665). The expectancy is defined

by Chiang *et al.* (2008:314) as the perceived probability that effort will lead to good performance that can be influenced by factors such as self-efficacy, goal difficulty and perceived control. Most participants select low-level goals that are more likely to be realised than those that are harder to achieve. Sirgy (2010:252) points out that some participants select goals that are consistent with their own motives, resources and cultural norms, and not conflicting with their other life goals. The goal expectancy principle applies well in adventure sport as the second major principle of QoL, stating that leisure travel satisfaction is enhanced by selecting leisure travel goals that are likely to be obtained (Sirgy, 2010:252). Goal attainment therefore leads to high levels of positive affect, also known as goal expectancy.

2.3.3.2.1 *Goal-motive congruence*

According to Brunstein *et al.* (1998:495), QoL does not only depend on goal attainment but also on the extent to which the achieved goals are consistent or inconsistent with participants' motives. Furthermore, the authors found that commitment to motives that are inconsistent with participants' goals leads to a reduction in QoL.

Consider the following adventure sport scenario: Participants travel with their children to take part in an adventure-based sport activity, but the children do not share their parents' enthusiasm for their vacation goals. The parents set out to achieve a specific goal such as competing together but are not able to, as one or the other needs to look after the children and see to their needs.

Therefore, QoL can be increased and dissatisfaction decreased by selecting leisure travel goals consistent with strong needs. Goals that are consistent with adventure participants' strong needs are more likely to be reached than inconsistent goals, thereby contributing significantly to QoL.

2.3.3.2.2 *Goal-cultural value congruence*

Conditioning, instrumental learning and imitation effects have a direct influence on a participant's QoL (Malatesta, *et al.*, 1986:316). Sirgy (2012:199) states that goals will most likely be attained if they are congruent with culture and cultural norms. By learning what is acceptable and what is unacceptable behaviour in a foreign society, participants can experience an increase in positive affect and a proportional decrease in negative

affect. Thus, by conforming to the host society's norms, adventure participants should feel more accepted. By attaining the desired goal of conforming to the host society's acceptable behaviour, adventure participants make a systematic and incremental contribution to their QoL.

Therefore, QoL can be increased and dissatisfaction decreased by selecting leisure travel goals that are consistent with the cultural values of the host destination. Choosing goals that are more consistent with the host destination are more likely to be attained than incongruent goals, thereby contributing significantly to the adventure participant's QoL.

2.3.3.2.3 Goal-resource congruence

Cantor and Sanderson (1999:234) explain that the scope in terms of resources is not limited to finances but includes three spheres, namely personal resources (health, traits, strategies and abilities), social resources (friendship network and social support) and material resources (money, power and status). According to Cantor and Sanderson (1999:235), QoL is not only dependent on achieving one's goals but includes the extent to which the goals that are realised are consistent or inconsistent with one's own personal resources. Those whose resources match their goals are more likely to achieve their goals and therefore experience higher levels of QoL than those who lack resources.

The research results of Diener and Fujita (1995:935) match the findings of Cantor and Sanderson (1999:237); they found that available resources forecast that QoL will be higher when goals and resources were matched than if they were not matched. The goal-resource congruence principle is of particular importance for predicting leisure travel goal attainment. If participants' resources match their adventure goal, the outcome for them to achieve success is far more likely.

Consider the following adventure sport scenario in paintball: An individual from Gauteng, South Africa wishes to attend the Tippmann Challenge event in Cape Town. His social resources are in place, as his friends will also attend the event. However, he suffers from a twisted ankle that will take several months to heal. Should he attend,

there is a possibility that his personal resources (health) will cause him frustration, as he will not be able to achieve his adventure goals in full.

Therefore, QoL can be increased and dissatisfaction decreased by selecting leisure travel goals that are consistent with one's available resources. Achievable goals that are consistent with the adventure participant's available resources are more likely to be attained than goals that are inconsistent, thereby contributing significantly to the participant's QoL.

2.3.3.2.4 Goal conflict

According to Hofer and Chasiotis (2003:254), satisfaction with life as part of QoL is likely to reflect the fulfilment and personal values and goals that involve the search for meaningfulness in one's life. Furthermore, the importance of goals relate positively to an individual's perceived QoL according to the authors. The greater the consistency among all the various life goals is, the greater the satisfaction with life overall will be. It has been argued (Cantor & Sanderson, 1999) that individuals who attempt multiple conflicting goals are more than likely to fail in achieving all of them and will thereby reduce their QoL overall, as none of the goals will be obtained. Evidence is available that is consistent with the above argument (Sirgy, 2010:254). Furthermore, goal conflict is associated with negative affect, neurosis, depression, stress, psychosomatic complaints and life dissatisfaction (e.g. Sheldon & Kasser, 1995:533).

Consider the following adventure-based sport scenario: A participant has a scheduled event that he is going to attend. The bookings were made several months in advance and he has been looking forward to attend the event. Two weeks before departure, the individual is informed that the deadline for a work assignment that needs to be completed has been moved forward by two weeks, which is in conflict with the event he is going to attend. The individual now experiences a conflict in goals, as he needs to adhere to the work assignment deadline and at the same time attend the event and enjoy the experience. He will most likely not enjoy the event, thereby not achieving his adventure goal.

In their words, QoL can be increased and dissatisfaction decreased by selecting leisure travel goals that do not conflict with other important goals. Important goals that do not

conflict with other goals are more likely to be achieved than goals that are in conflict with other goals, thereby contributing to QoL.

The following section will explore the importance of developing effective strategies to achieve desired goals.

2.3.3.3 Goal implementation principle

According to Locke and Latham (1994:25), individuals who achieve their goals are more satisfied with life. Adventure participants who develop strategies for increasing the chances of goal attainment tend to experience higher levels of subjective well-being than those with less effective strategies. It can therefore be argued that the most prominent determinant of QoL for all adventure sport participants is the attainment of their individual goals.

The third major principle of Sirgy's (2010:253) theory is that leisure travel can be enhanced by taking active measures to ensure that goals are implemented (Figure 2.14). Goal implementation increases the likelihood that a goal will be achieved and that positive affect will be experienced in targeted life domains. Two principles, namely goal concreteness and goal commitment, will now be discussed in more detail.

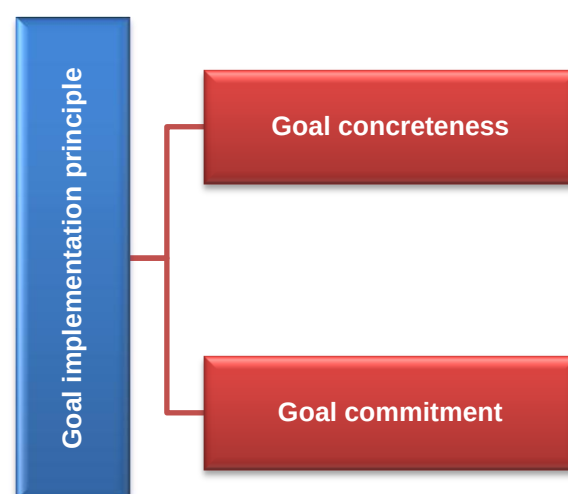


Figure 2.14: Goal implementation principle

Source: Author's own compilation

2.3.3.3.1 *Goal concreteness*

Sirgy (2010:253) states that individuals do not know how to implement abstract goals if they are not translated in terms of a specific set of concrete goals. 'Concrete thinking' is a term used by social psychologists and can be described as thinking in exact, measurable terms. Concrete thinkers are conscious of measurable aspects of their abstract goals and translate them effectively into a set of concrete goals that need to be implemented. When concrete thinking is done, life becomes more meaningful and therefore worthwhile (Lindeman & Verkasalo, 1996:668). The goal concreteness can be applied to adventure sport. Individuals who fulfil their goals are successful in breaking down abstract goals in terms of a planned approach to achieve them (Sirgy, 2010:254).

Consider the following adventure sport scenario: A MILSIM paintball participant wishes to be inserted by helicopter into an event such as Oklahoma D-Day (D-day Adventure Park, 2013). To achieve the abstract goal, the individual needs helicopter assault certification, thereby becoming qualified to operate from a helicopter (a concrete task). Achieving the concrete tasks leads to the realisation of the abstract goal.

In the same vein, QoL can be increased and dissatisfaction decreased by setting concrete goals that lead to the achievement of abstract goals. By implementing concrete goals, goal attainment can be increased and can thereby contribute to QoL.

2.3.3.3.2 *Goal commitment*

According to Sirgy (2012:204), satisfaction experience in a particular life domain is dependent on goal commitment; in other words, goal attainment is dependent on how committed individuals are in obtaining their set goal. This requires the allocation of various resources such as time, money and physical energy in an attempt to achieve their goals. Individuals who are committed to important goals are more likely to achieve their goals than those who are not committed (Sirgy, 2010:255).

Continuing from the previous example given (cf. 2.3.3.3.1), it can be said that helicopter assault training for a MILSIM paintball player costs a significant amount of financial resources, physical fitness, lead time to organise and attendance of the course to pass. If the individual is not committed to achieve the goal of becoming helicopter assault

qualified, he is more than likely unable to achieve his goal and will thereby experience negative affect.

Stated differently, QoL can be increased and dissatisfaction decreased through goal commitment. Goal commitment leads to goal implementation and goal attainment, thereby contributing significantly to QoL.

2.3.3.4 The goal attainment principle

Sirgy (2010:255) asserts that leisure travel satisfaction can be increased by attainment of one's leisure travel goals, thereby ensuring the experience of positive affect in the targeted life domains and reducing negative affect. Several principles play a role in goal obtainment (Figure 2.15), all of which will be discussed next.

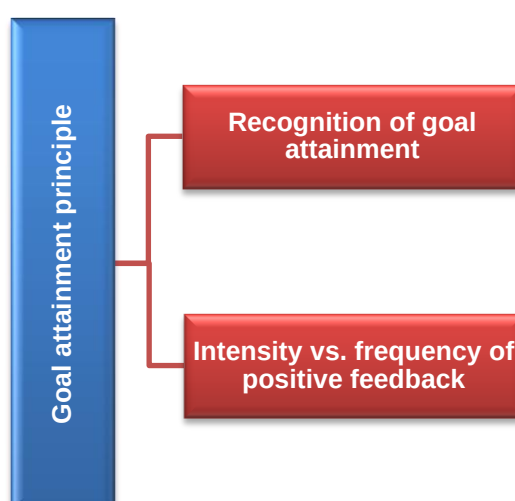


Figure 2.15: The goal attainment principle

Source: Author's own compilation

2.3.3.4.1 *Recognition of goal attainment*

Goal bearers' recognition that they attained their desired goal contributes more to QoL than goal attainment itself. The emphasis therefore falls on recognition that the goal has been obtained. According to Sirgy (2010:255), goal attainment only contributes to QoL if and when the adventure participants recognise it. In the context of adventure sport, many participants use action video cameras such as Go Pro to record their exploits in order to relive and share their experiences after achieving their goals.

Expressed differently, QoL can be increased and dissatisfaction decreased through explicit recognition of the attainment of leisure travel goals. This can be done by repeat efforts at remembering the actual events that reflect the realisation of leisure travel goals. The process facilitates the experience of goal attainment and thus contributes significantly to QoL.

2.3.3.4.2 Intensity versus frequency of positive feedback

According to Diener, Sandvik *et al.* (2009:229), it is more beneficial to receive frequent but small doses of reward than less frequent but large doses. These researchers found that intense and frequent positive experiences are related to QoL, as they induce strong memory when adventure participants are asked to evaluate their life. However, frequent and positive experiences play a more prominent role in long-term QoL compared to intense positive experiences (Diener, Sandvik, *et al.*, 2009:214). Sirgy (2010:256) argues that individuals avoid intense positive experiences because of their associated costs that involve intense negative affect and lower positive affect of future positive experiences. Diener, Sandvik *et al.* (2009:121) state that the intensity of affect is more difficult for individuals to encode, as no natural system exists to define or label emotional intensity.

Positive affect that is generated from intense positive experiences is counterbalanced by the negative affect that is generated from intense negative experiences (Diener, Sandvik, *et al.*, 2009:214). Intense positive experiences often diminish future smaller positive experiences (Diener, Sandvik, *et al.*, 2009:229). Adventure participants compare future experiences with what they have experienced in the past; in other words, the bar is either set higher or lower, based on previous experiences. An intense positive experience thus raises the bar for the next expected positive experience. The higher the bar is set, the more likely a future event will be judged as less satisfying.

2.3.3.5 Goal implementation and attainment summary

Sirgy (2012:202) comments that it is critical to determine how facilitators and inhibitors may affect goal implementation and attainment. Satisfaction in any life domain is achieved through goal consumption that involves the setting of goals by individuals. The goals are either achieved, which leads to a feeling of satisfaction, or not achieved, which leads to dissatisfaction. Etienne *et al.* (2011) developed a theory of QoL based on

systems theory notions of cybernetics and control (Figure 2.16). The theory explains the process of implementing a goal and achieving it, and is based on the principle that all human activities are goal orientated, which reflects a hierarchy of control mechanism. The end goal for any adventure participant is to achieve satisfaction with life, which is derived from achieving a set goal.

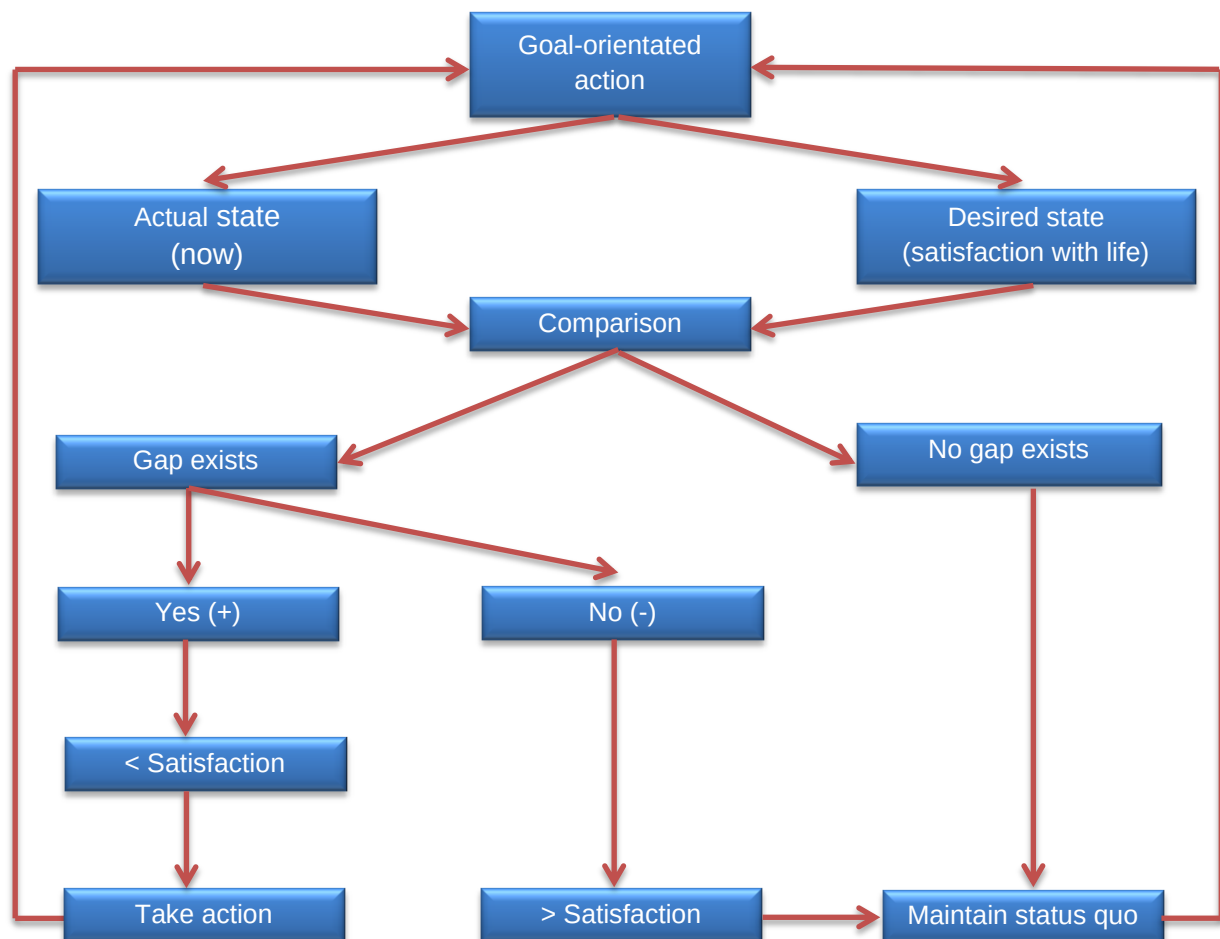


Figure 2.16: Cybernetic/control model of QoL

Source: Sirgy (2012:203)

Figure 2.16 illustrates the basic control mechanism of QoL. Goal-orientated action (behavioural outcome) is designed to reduce the gap between individuals' actual state (how they feel right now) and their desired state (how they want to feel). Individuals compare their actual state with their desired state and conclude that either a gap exists (they receive a positive feedback response) or that no gap exists (they receive a negative feedback response). On receiving a positive feedback, individuals' experience heightened stress, as their satisfaction level is lower than they would like it to be. When receiving a negative response, individuals feel more satisfied and maintain the status

quo. It is therefore critical that any adventure sport participant should identify and choose realisable goals in their life domains.

The purpose of the goal theory (as described by Sirgy, 2010:247) is to foster research that not only explains participant satisfaction better but also explains the circumstances that link satisfaction with adventure sport related services and satisfaction with life that contribute to the QoL of a participant. Sirgy (2010:247) observes that the benefits of such a theoretical perspective on the management of adventure sport activities may lead to adventure participants' loyalty, repeat patronage and positive word of mouth. According to him, any research that has a direct impact on the success of the tourism industry is considered "healthy", as its outcome will have real-world benefits for service providers. Service providers will develop and market adventure sport activities, which will enhance adventure participants' QoL.

The following section will explore the psychological dynamics related to domain satisfaction with specific focus on the life domain theories as described by Sirgy (2012:240).

2.4 THEORIES RELATED TO ACTIVITIES

According to Sirgy (2012:109), there are several theories that help us better understand how activities enhance or detract from an individual's leisure experience, namely classical conditioning (Diener, 2009), activity (Diener, *et al.*, 1999; Hardman, 2008; Kahneman, *et al.*, 2004; Roberts, 2008), flow (Csikszentmihalyi 2014; Seifert & Hedderson, 2010) and personal expressiveness (Waterman, *et al.*, 2008).

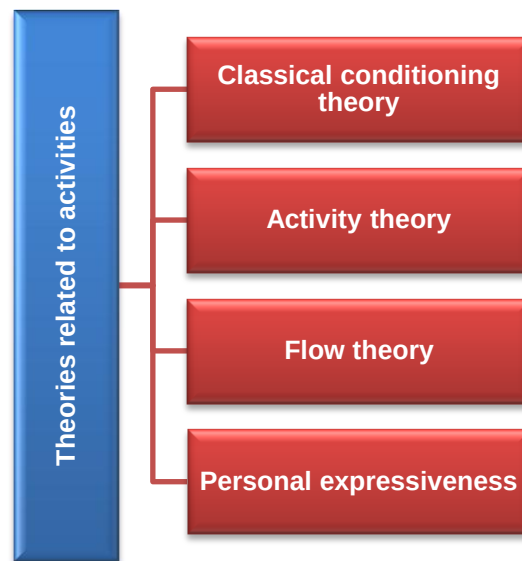


Figure 2.17: Theories related to activities

Source: Author's own compilation

2.4.1 Classical conditioning theory

The roots of classical conditioning theory can be found in mainstream psychology and can be used to address, in particular, questions on how tourists think, feel and behave based on external and internal stimuli that are either positive or negative (Pearce & Packer, 2013:386). Classical conditioning posits that the pairing of a conditioned stimulus (activity) with an unconditioned stimulus (having fun) will change individuals' attitude towards the activity (Redondo, 2012:716). According to Diener (2009:12), classical conditioning consists of individuals who have experienced many positive activities associated with a large number of environmental stimuli that produce positive affect; in other words, a happy individual participates in activities that are rewarding in nature and in doing so, learn to react habitually on a daily basis.

The tourism industry relies on the intense scrutiny of human behaviour and experiences, which is a resource-intensive undertaking (Pearce & Packer, 2013:386). It has been suggested by Zimbardo and Boyd (2008:45) that individuals who seek a positive sense of subjective well-being adopt a particular kind of balance in the way they see the past, live in the present and expect the future to be. Most often, it is the positive experiences that are remembered and less frequently the negative experiences (Pearce & Packer, 2013:402). This attitude change is most often attributed to direct affect transfer, which is explained as a mechanism by which positive affect is elicited by

unconditioned stimulus that is automatically transferred to conditioned stimulus (Redondo, 2012:716). Therefore, the more an individual experiences positive pairings, the greater the association between an unconditioned and conditioned stimulus will be (Grohs & Reisinger, 2014:1019).

Pearce and Packer (2013:403) urge the careful use and application of historical core ideas in psychology such as classical conditioning, which was pioneered by Pavlov (1927). The authors are of the opinion that core ideas in psychology are most often too loosely applied to the field of tourism, generalising the concept to fields and settings that they do not properly apply to. According to them, reward and punishment may have relevance to certain behaviour and operant conditioning prevails, but much interest in tourism is social and involves rich cognitive mechanisms that require the careful transplanting and management of ideas.

2.4.2 Activity theory

According to Bakhurst (2009:198), activity theory was developed partly in response to behaviourism and the shortcomings of stimulus-response (S-R)-driven notions of human behaviour. Vygotsky and Cole (1978) are of the opinion that activities are mediated through active participation, referred to as 'complex mediating action'. Furthermore such form of mediation is described through the relations between three basic components of any activity, namely a subject (the one who performs the action), an object (the purpose of the action), and an artifact (the mediating tool/means through which the action is performed). Activity theory is based on the structure of human activity (Leont'ev, 1978) and consists of internal and external activities that are similar in structure.

Engeström (1987:88) says that Leont'ev organised the theory as an activity system and stressed that its elements function as variables that can be defined as parts of any system. Activity is structured in levels such as activity, actions and operations (Engeström, *et al.*, 1999) and will be explained next.

2.4.2.1 Activity that originated from a need and a motive

All activities derive from a need, whether biological or cultural. The purpose of an activity is to satisfy the need. According to Vieira and Kelly (2014:2696), the object that fills one's need evokes and directs activity towards itself. The object could be material or

ideal and is called the motive of one's activity. The motive provides orientation for an activity and serves as the motor for all actions that transpire from the activity.

2.4.2.2 Action that is related to the isolation of a conscious goal

To accomplish a single activity, individuals may resort to different actions that lead to the satisfaction of a need of one individual or a group of individuals (Vieira & Kelly, 2014:2696). According to Leont'ev (1978:12), one's actions are related to the isolation of one conscious goal that only exists in human activity. It involves the process of division of labour and established agreement through negotiation among those involved in the social activity. This leads the operation aspect that covers how the goal can be achieved, which is determined by the conditions of the goal. These considerations lead to the operational level.

2.4.2.3 Operation that is related to conditions and methods

Leont'ev (1978:8) says that one action can be accomplished by different operations, depending on the immediate conditions. Furthermore, the same operation can be accomplished by different actions. Operations are often unconscious. An individual may originally form operations through conscious processes. As time passes, these processes begin to build more complex chains of actions. This leads the individual to execute the processes automatically in order to achieve the operation. By doing so, the individual learns to perform the operation without the need to think. The activity, actions and operations are mutually constitutive and not additive: When a tangible event is developed from the point of view of its motive, it becomes a human activity. At the same time, such an activity only exists due to the actions that are concerned with the individual's goals. These actions are achieved by operations (methods) that are linked to the conditions of action accomplishment.

Research that was done by Diener *et al.* (1999) found a substantial link between being active and an individual's QoL, although factors such as health and socio-economic status influence the frequency of participation. Activity theory is an established theory in gerontology that links active involvement with satisfaction of life among the elderly (Sirgy, 2012:110). Such activities can include things such as socialising, engaging in physical activities, practising hobbies and volunteering.

2.4.3 Flow theory (cf. 2.3.3.1.5)

Flow consists of pleasurable challenges that are matched with an individual's skill (Csikszentmihalyi, 1997). A lot of evidence exists that connects flow with sport (e.g. Jackson, *et al.*, 2008) and leisure activities (e.g. Chen, *et al.*, 2010; Jones, *et al.*, 2000; Seifert & Hedderson, 2010; Sirgy, 2012). The flow principle is founded on an individual's view that his or her abilities match the challenges presented in a given situation. Csikszentmihalyi (1997:22) states that satisfaction with life does not necessarily lead to an excellent life, which requires that individuals should engage in activities that help them grow and fulfil their potential. Furthermore, Csikszentmihalyi (1997:22) argues that it is just as important to focus on what an individual does to be happy. This can only be done by setting measurable goals that give meaning to one's existence.

2.4.4 Personal expressiveness

According to Waterman *et al.* (2008:41), personal expressiveness consists of individuals identifying what they are best at and choosing activities that help express themselves and achieve their potential. The individuals' expressive feelings reinforce the motivation that they feel to continue engaging in their chosen activity. Consider the following example (adapted from Sirgy, 2012:111): Adventure participants may train for an event, not only because it improves their level of fitness and health, but also primarily for intrinsic experiential reward that makes them feel alive and more involved. By engaging in such activities, the adventure participants move to a state of eudaimonia, which is a goal of subjective well-being (QoL).

Sirgy (2012:112) states that the personal expressiveness theory distinguishes between two different types of activities, namely those that lead to hedonic enjoyment alone and those that lead to personal expressiveness. He (2012:121) argues that activities containing hedonic enjoyment and personal expressiveness are more likely to be followed in a sustained manner, which then leads to self-realisation.

2.5 CONCLUSION

The purpose of this chapter was to undertake an in-depth literature review of the most popular theoretical frameworks that are used in QoL, leisure and activities. This was done to gain a better overall understanding of the different theoretical frameworks

available, thereby allowing better conceptualisation of the theoretical framework that is used for the purpose of this study.

In order to achieve the latter comprehensively, the theoretical framework of QoL was analysed first, considering the interpretations and working thereof. The bottom-up spillover theory was found to be the most suitable one to measure adventure sport. This was determined because the affect of a selected adventure sport activity experience (paintball) on a participant's QoL could influence various life domains such as social, emotional, health and safety, financial, leisure and travel life and could consequently determine a participant's QoL overall.

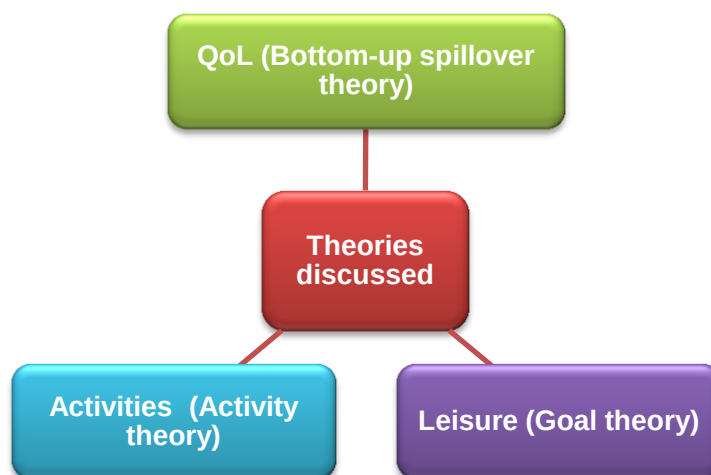


Figure 2.18: Theories discussed

Source: Author's own compilation

Second, another theoretical framework that is related to leisure well-being, the goal theory, demonstrated that individuals make use of a variety of ways to set their goals, based on their goal valance. Individuals also set goals that are more likely to be met and make use of strategies and tactics that maximise their chances of achieving their goals, resulting in subjective well-being that in turn leads to satisfaction with leisure well-being and QoL. For the purpose of this study, the goal theory will not be incorporated, as the relationship between QoL and leisure has been established adequately (cf. 3.4) to contribute to and enhance the overall study.

Third, a theoretical framework of activities was analysed in which the activity theory demonstrated a substantial link between individuals' level of activeness and their QoL overall.

Therefore, the theoretical framework for the study was derived from the bottom-up spillover theory and the activity theory (as illustrated in Figure 2.18). The framework postulates that the affect of an adventure-based sport experience (paintball) on a participant's QoL could influence various life domains such as social, emotional, health and safety, financial, leisure and travel life and family life which could consequently determine a participant's QoL overall.

The following chapter will seek to analyse QoL in relation to adventure sport.

3

CHAPTER 3

ANALYSING QUALITY OF LIFE IN RELATION TO ADVENTURE SPORT

3.1 INTRODUCTION

QoL is generally recognised as a complex concept with no precise definition or standardised means of measurement in literature (Rootenberg, 2012:101). Scholars do not agree on an exact definition of QoL (cf. 1.2), of which there are quite a few (Bramston, *et al.*, 2002; Cummins, 1998; Dissart, *et al.*, 2000; Massam, 2002; Michalos, 2003; Sirgy, 2012; Smith & Puczkó, 2009; Veenhoven, 2000).

Literature searches have shown that QoL research that focuses on the following topics is steadily increasing in number and complexity: tourism and travel (Andereck & Nyaupane, 2011; Andereck, *et al.*, 2007; Benckendorff, *et al.*, 2009; Dolnicar, *et al.*, 2013; Moscardo, 2009); leisure (Frey, *et al.*, 2007; Kruger, *et al.*, 2013; Michalos & Kahlke, 2010a; Sirgy, 2012); sport (Caddick & Smith, 2014; Carless & Douglas, 2010; Carless, *et al.*, 2014; Day, 2013; Hefferon, *et al.*, 2013; Omorou, *et al.*, 2013:2021; Smith, 2013); and adventure activities (Asbury, *et al.*, 2006; Brown & Kasser, 2005; Carnicelli-Filho, *et al.*, 2010; Tsaur, *et al.*, 2015; Veenhoven, 2005; Vuori, 2007).

QoL focuses mostly on individuals' health with regard to sport, be it physical or psychological injuries and conditions. To the best of the author's knowledge, based on literature searches, no QoL studies with specific reference to adventure sport have been done before.

The purpose of this chapter was to analyse QoL in general and the relation thereof to adventure sport. First, the QoL concept will be explored in detail to gain a better understanding thereof. Second, there will be a discussion of life domains that are applicable to this study. Third, QoL in relation to leisure will be discussed, followed by sport and, lastly, adventure sport. The chapter will be structured as shown in Figure 3.1.

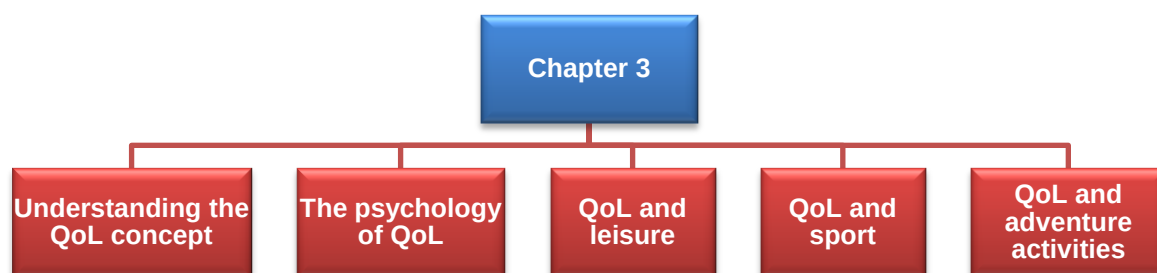


Figure 3.1: Outline of Chapter 3

3.2 UNDERSTANDING THE QOL CONCEPT

Aristotle (384-322 BC) viewed QoL as the focus on satisfaction with life through eudaimonia, which is expressed as flourishing, subjective well-being, success or the opportunity to lead a purposeful and meaningful life (Sirgy, 2012:7). According to Maditinosa *et al.* (2014:522), satisfaction with life is considered a desirable goal that has its roots in the Aristotelian ethical model of eudaimonism or eudaimonia, which is the Greek word for 'happiness'. Sheldon (2016:534) state that eudaimonia literally means "the state of having good indwelling spirit, a good genius". Accordingly, QoL is viewed by these authors as a long-term, highly subjective state that is linked with attitude, motivation, integration, community participation, perceived level of control and personal aims in life.

According to Sirgy (2012:5), QoL is founded on the foundation of philosophical concepts such as positive and negative affect in life domains, emotional well-being, satisfaction with life, subjective well-being, perceived QoL, psychological well-being and eudaimonia. Sirgy mentions that Jeremy Bentham (1748-1832), who is considered the founder of moral philosophy in utilitarianism, viewed satisfaction with life as a result of choice among different courses of action. In essence, satisfaction with life is a state of being that people experience as a result of actions by themselves or others.

Uysal *et al.* (2016:244) look at QoL as a field of study in the social, behavioural, environmental and policy sciences that has been emerging over the past three decades. It is thought to be an offshoot of the social indicators movement during the 1960s (Kim, 2002:47; Rapley, 2003:5; Sirgy, 2002), originating from economics and sociology. Sirgy (2002) asserts that the motivation behind the social indicators movement is based on

the belief that traditional economic measures of societal development cannot be linked with the more important indicators of development that capture subjective well-being, which consists of need satisfaction, satisfaction with life, perceived QoL and life fulfilment.

Andereck and Nyaupane, 2011 (2011:248), Smith and Puczkó, (2009:43) and Woo *et al.* (2015:87) state that QoL has more than 100 definitions and models. Scholars in the field of QoL use 'QoL', 'subjective well-being' and 'satisfaction with life' interchangeably (Uysal, *et al.*, 2016:245). Benckendorff *et al.* (2009:172) also mention the interchangeable terms used to describe QoL such as 'satisfaction with life' and 'subjective well-being'. According to Kim-Prieto and Diener (2005:403), QoL often refers to the degree to which an individual's life is desirable versus undesirable, often highlighting external components that include environmental factors such as access to schooling, health care, basic services and income. In the fields of leisure and recreation that include sport and adventure sport (cf. 1.2), various studies have explored leisure life and its relation to subjective well-being and satisfaction with life (e.g. Cini, *et al.*, 2012; Eriksson, *et al.*, 2007; Ibrahim & Corder, 2008; Kruger, *et al.*, 2013; Manning, 2010; Michalos and Kahlke, 2010b; Uysal, *et al.*, 2016; Wang & Wong, 2014). Table 3.1 illustrates some of the most relevant literature that has been consulted in order to gain comprehensive insight into life domains that are applicable to this study.

Table 3.1: Literature that has been consulted on life domains

Life domain	Authors	Title of article
Social life	Burk and Utley (2013)	Climbing towards recovery: Investigating physically injured combat veterans' psychosocial responses to scaling Mt. Kilimanjaro
	Carless <i>et al.</i> (2013)	Psychosocial outcomes of an inclusive adapted sport and adventurous training course for military personnel
	Kruger <i>et al.</i> (2013)	Examining the influence of the Wine Festival experience on tourists' quality of life
Emotional life	Jepson and Sharpley (2015)	Exploring the emotional dimension of rural tourism experience
	Sato <i>et al.</i> (2014)	The role of physically active leisure for enhancing quality of life
	Kim <i>et al.</i> (2013)	How does tourism in a community impact the quality of life of community residents?
Health and safety life	Uysal <i>et al.</i> (2016)	Quality of life (QoL) and well-being research in tourism
	Yazicioglu <i>et al.</i> (2012)	Influence of adapted sports on quality of life and life satisfaction in sport participants and non-sport participants with physical disabilities
	Sirgy <i>et al.</i> 2011	How does a travel trip affect tourists' life satisfaction?

Financial life	Sato <i>et al.</i> (2014)	The role of physically active leisure for enhancing quality of life
	Shim <i>et al.</i> (2012)	The ant and the grasshopper revisited: The present psychological benefits of saving and future-oriented financial behaviours
	Sirgy <i>et al.</i> (2011)	How does a travel trip affect tourists' life satisfaction?
Leisure and recreation life	Sato <i>et al.</i> (2014)	The role of physically active leisure for enhancing quality of life
	Mackenzie <i>et al.</i> (2013)	The multiphasic and dynamic nature of flow in adventure experience
	Dolnicar <i>et al.</i> (2012)	The contribution of vacations to quality of life
Travel life	Kruger <i>et al.</i> (2014)	The influence of travel motives on visitors' happiness attending a wedding expo
	Kruger <i>et al.</i> (2013)	Examining the influence of the Wine Festival experience on tourists' quality of life
	Sirgy <i>et al.</i> (2011)	How does a travel trip affect tourists' life satisfaction?
Family life	McCabe and Johnson (2013)	The happiness factor in tourism: Subjective well-being and social tourism
	Sato <i>et al.</i> (2014)	The role of physically active leisure for enhancing quality of life
	Sirgy (2010)	Towards a quality-of-life theory of leisure travel satisfaction

Kruger *et al.* (2014:649) found that QoL is more affected by camaraderie when a shared passion is pursued. Lee *et al.* (2007:369) argue that individuals engage in adventure (sport) activities because they perceive the activity as challenging. Satisfaction is achieved when the participants' expectation of the challenge is satisfied by the adventure (sport) activity (Duman & Mattila, 2005:321). The associated thrill and challenge have a positive affect on participants' level of satisfaction, psychological well-being (Tsaur, *et al.*, 2015:326) and ultimately their QoL. According to Sato *et al.*, (2014:293), physically active leisure and (adventure) sport events have increased in the last decade.

Funk *et al.* (2011) concluded that mass participant sport events (such as paintball) represent a population-based intervention that has the capacity to increase physical activity; they are therefore catalysts to improve participants' QoL. Sato *et al.* (2014:293) point out that relatively few research studies on the contribution of mass participant sport events have been done. QoL isn't just based on one life domain but rather on a combination of various life domains (Kruger, *et al.*, 2013:1; Page & Connel, 2010:29; Rootenberg, 2012:103). For the purpose of this study, the life domains as shown in Table 3.1 will be used, because they are most relevant based on the literature that has been consulted.

The following section will explore the various concepts that are found in QoL as identified by Sirgy (2012:37) and illustrated in Figure 3.2.

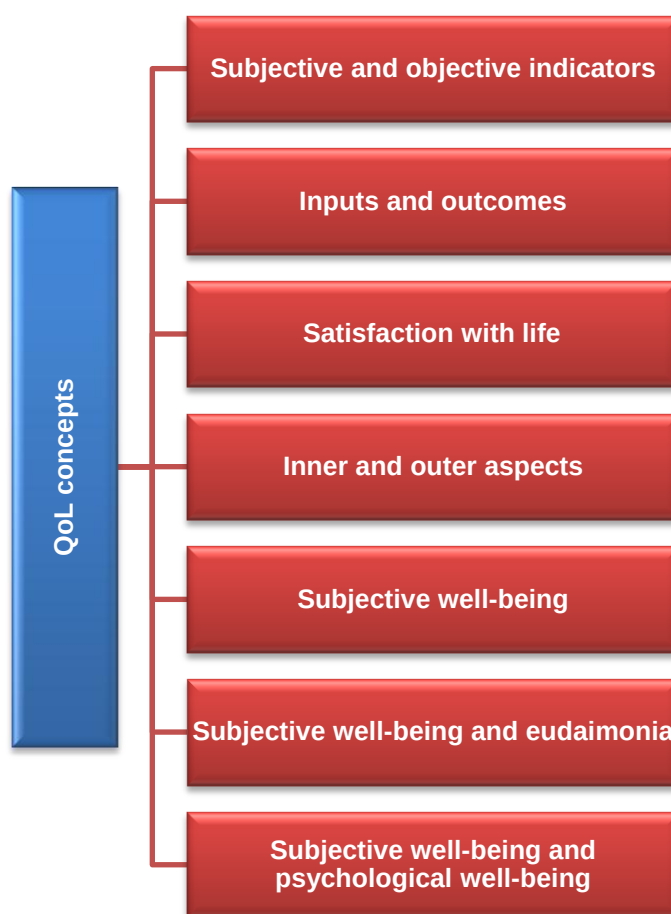


Figure 3.2: QoL concepts

Source: Adapted from Sirgy (2012:37)

3.2.1 Subjective and objective indicators

According to Sirgy (2012:31), the social science community concerned with QoL is divided on how subjective well-being should be treated based on indicators. When QoL or subjective well-being is discussed, the discussion is most often based on objective dimensions (Uysal, *et al.*, 2016:245), subjective dimensions (Sirgy, 2012:32) or a combination of both. Sato *et al.* (2014:294) state that people's QoL depends on objective dimensions (e.g. social, economic and health indicators) and subjective dimensions (e.g. subjective well-being or satisfaction with life). Some researchers only make use of objective indicators, as illustrated in Table 3.2. According to Uysal *et al.* (2016:245), QoL and subjective well-being consist of objective and subjective dimensions that are revealed through indicators.

Table 3.2: Objective indicators and examples

Objective indicators	Authors	Examples
Economic well-being	Reimers (2006); Sirgy (2012)	Household income, unemployment, quality of jobs, state subsidy holders, and resources dedicated to economic development
Social well-being	Caddick and Smith (2014); Sirgy (2012)	Crime rate, number of people in prison, illiteracy, educational attainment, student dropout, teenage pregnancy, suicides, and resources spend on law enforcement
Health and well-being	Caddick and Smith (2014); Sirgy (2012)	Prominence of cardiovascular disease, diabetes and cancer; number of people in psychiatric facilities, doctors per capita, and immunisation
Environmental well-being	Sirgy (2012); Tuljapurkar (2016)	Pollution on land, air and water, noise pollution, and resources dedicated to conservation of wildlife and landscape

Source: Adapted from Caddick and Smith (2014), Reimers (2006), Sirgy (2012) and Tuljapurkar (2016)

Sumner (1996) is of the opinion that objective indicators of subjective well-being require a point of view that is independent from that of an individual whose QoL is being assessed. Objective indicators describe the circumstances of individuals' lives rather than their reaction to those circumstances (Kim-Prieto & Diener, 2005:403). Uysal *et al.* (2016:245) provide examples of objective dimension such as economic well-being (e.g. household income), leisure well-being (e.g. number of recreation facilities per capita), environmental well-being (e.g. CO₂ emissions) and health well-being (e.g. average life expectancy).

On the other side of the coin, researchers also make use of subjective indicators (Table 3.2) that include satisfaction with life and satisfaction with various life domains, for example social life, emotional life, health and safety life, financial life, leisure and recreation life, travel life and family life (cf. 1.2); positive and negative affect (cf. 1.2); and psychological well-being (Sirgy, 2012:31). Sumner (1996) argues that subjective indicators of well-being rely on individuals' bias, based on their values, attitudes, beliefs, motives, personalities and emotional state, which all contribute to the individuals' state of mind. Subjective dimension of QoL and well-being encompass psychological constructs such as subjective well-being, satisfaction with life, perceived QoL, domain satisfaction, hedonic well-being, and positive and negative affect in life domains (Uysal, *et al.*, 2016:245).

Table 3.3: Subjective indicators and definition

Subjective indicators	Authors	Definition
Values	Oxford Dictionaries (2016b)	Principles or standards of behaviour; one's judgement of what is important in life
Attitudes	Oxford Dictionaries (2016c)	A settled way of thinking or feeling about something or a particular mental state such as despair
Beliefs	Oxford Dictionaries (2016d)	Something one accepts as true or real; a firmly held opinion. An acceptance that something exists or is true, especially one without proof
Motives	Oxford Dictionaries (2016e)	A reason for doing something
Personality type	Oxford Dictionaries (2016f)	Introvert – An individual predominantly concerned with his/her own thoughts and feelings rather than with external things
	Oxford Dictionaries (2016g)	Extrovert - An individual predominantly concerned with external things or objective considerations
	Oxford Dictionaries (2016h)	Ambivert – An individual who has a balance of extrovert and introvert features in his/her personality
Emotional state	thefreedictionary.com (2016)	The state of a person's emotions, especially with regard to pleasure or dejection
Satisfaction with life	Sirgy (2012:31); Uysal <i>et al.</i> (2016:245)	A cognitive concept that involves an individual's evaluation of his/her life or life accomplishments against those of other people whom he/she considers to be his/her equals
Life domains	Sirgy (2012:31); Uysal <i>et al.</i> (2016:245)	Social life, emotional life, health and safety life, financial life, leisure and recreation life, travel life and family life
Positive and negative affect	Sirgy (2012:31); Uysal <i>et al.</i> (2016:245)	Positive affect includes feelings such as enthusiasm, interest, determination, excitement; being inspired, alert, active, strong, proud and attentive. Negative affect includes feelings such as being scared, afraid, upset, distressed, jittery, nervous, ashamed, guilty, irritated and hostile.
Psychological well-being	Sirgy (2012:31); Uysal <i>et al.</i> (2016:245)	Effective functioning that consists of individuals' development potential, control over life circumstances, their view of life as having meaning and that they have a purpose in life, as well as positive emotions towards other people

Source: Adapted from Oxford Dictionaries (2016b-h), Sirgy (2012:31) and Uysal *et al.* (2016:245)

According to Sirgy (2012:32), objective and subjective indicators of subjective well-being are equally important in order to determine QoL where public policy needs to be determined, for example with the regulation of an adventure-based sport such as paintball. Sirgy (2012:32) argues that in such a case, objective indicators can be used to capture dimensions such as economic well-being, social well-being, health well-being and environmental well-being.

On its own, objective indicators are not sufficient to determine and understand a study population's subjective well-being (QoL). They require the investigation of the population's subjective perspectives and an evaluation of their living conditions (Liao, 2009:108), which can be captured by measuring life domains such as social life, emotional life, health and safety life, financial life, leisure and recreation life, travel life and family life (cf. 1.2). Sirgy (2012:32) points out that subjective and objective indicators may not always be compatible and might yield different results; for example, many community members might view paintball as a violent extreme sport that might require strict government regulations, whereas it is, in actual fact, a soft adventure sport that does not pose a threat to life and limb, in which case the divergence needs to be reconciled. Kahneman (1999:4) states that objective 'satisfaction with life' is rooted in the subjective experiences. Conversely, this study will only focus on the subjective indicators as they relate to adventure sport (paintball).

3.2.2 Inputs and outcomes

Veenhoven (2000:5) pointed out the distinction between life chances and life results, which Sirgy (2012:33) considers as the inputs and outcomes of subjective well-being. Inputs are described as opportunities to achieve a good life, whereas outputs are considered the good life itself. QoL researchers often refer to concepts and measures of satisfaction with life and perceived QoL that are outcome conceptualisations and measures of subjective well-being. Inputs, on the other hand, take the form of opportunities or determinants of satisfaction with life and other global aspects of subjective well-being. Proposed determinants and opportunities are shown in Table 3.4.

According to Sirgy (2012:33), the distinction is important to QoL researchers, because they tend to develop numerous subjective well-being directories as formation indicators by grouping the indicators of subjective well-being into either inputs or outcomes. This has led to many directories that can be criticised for mixing the inputs and outcomes incorrectly. Therefore, subjective well-being directories have to be specific in terms of their goals as either subjective well-being outcomes or subjective well-being determinants. Furthermore Sirgy argues that as yet, a comprehensive directory of input and outcomes still needs to be developed.

Table 3.4: Opportunities and determinants of satisfaction with life and perceived QoL

Opportunities and determinants	Examples
Social conditions	Support from family and friends
Financial conditions	Income and wealth
Intellectual conditions	Education, work experience, professional skills and ability
Emotional conditions	Emotional intelligence, coping tactics and positive thoughts
Personal conditions	Self-esteem, optimism, personality type (extrovert/introvert) and internal locus of control
Work conditions	Job opportunities, transportation, access and affordability of education and training programmes
Leisure conditions	Access to and affordability of sports and recreation facilities
Health conditions	Access to and affordability of health-care facilities
Environmental conditions	Pollution on land, air and water, noise pollution and beautification initiatives
Political conditions	Freedom of speech, religion and assembly, government corruption and trust in political institutions

Source: Adapted from Sirgy (2012:33)

3.2.3 Satisfaction with life

Satisfaction with life has been a popular research topic in social sciences (Chen, 2016:579). According to Chamberlain (1988) and Sirgy (2012), satisfaction with life is a distinct cognitive concept based on elements of satisfaction with life. Satisfaction with life is defined as the outcome of evaluation of one's current life situations or accomplishments against certain standards of comparisons such as one's ideal life, expectations of personal utility, individual goals, values, needs, opulence and the lives of significant others (Mohit, 2014:657). The affect of satisfaction with life is closely associated with life domains, for example social life, emotional life, health and safety life, financial life, leisure and recreation life, travel life and family life (cf. 1.2). Erdogan *et al.* (2012:1038) found that individuals with greater satisfaction with life feel better psychologically about their lives than people with low satisfaction with life.

3.2.4 Inner and outer aspects

Based on inputs versus outcomes, which is the focus of the previous section, Veenhoven (2000:35) asserts that inner well-being can be conceptualised in terms of input conditions such as the ability to live a fulfilling life versus the actual outcome itself, commonly referred to as satisfaction with life and perceived QoL. In the context of input conditions of subjective well-being, outer aspects of QoL can be characterised in terms of the liveability of the environment, which promotes personal subjective well-being,

including satisfaction with life, perceived QoL and overall subjective well-being (Sirgy, 2012:34).

Inner well-being in relation to internal input conditions is internal to the individual and consists of personal capabilities and characteristics that help individuals to take advantage of their situation in such a way that they achieve satisfaction in various life domains as well as in life overall. Examples of outer and inner aspects of subjective well-being with regard to input well-being can be found in Table 3.5.

Table 3.5: Inner and outer aspects of QoL with regard to input well-being

	Outer well-being	Inner well-being
Input well-being	Quality of education, research, teaching environment, family, economy, public transport, and government at local and national level	<i>Personal characteristics</i> such as being an extrovert, genetic leaning towards positive affect, high self-esteem and optimism. <i>Financial assets</i> such as a high income, financial inheritances, investments and savings, and ownership of property. <i>Socio-economic characteristics</i> such as personal associations with the upper class, living in an upscale neighbourhood, a high level of education and a prestigious occupation.

Source: Adapted from Edwards and Jensen (2014), Sirgy (2012:34) and Veenhoven (2000)

In the context of outcome conditions of subjective well-being, outer aspects of QoL can be characterised in terms of the behaviour that individuals engage in to contribute to society. The inner conditions of subjective well-being can be viewed as the ultimate dependent variable in that all the conditions of subjective well-being are determinants to inner well-being. Examples of outer and inner aspects of subjective well-being with regard to outcome well-being are listed in Table 3.6.

Table 3.6: Inner and outer aspects of QoL with regard to outcome well-being

	Outer well-being	Inner well-being
Outcome well-being	Acts of charity, money donated to charity and the amount of work devoted to eldercare, childcare and the disabled	Satisfaction with life, perceived QoL, absence of ill-being, positive affect, eudaimonia, subjective well-being, psychological well-being and overall well-being

Source: Adapted from Edwards and Jensen (2014), Sirgy (2012:34) and Veenhoven (2000)

3.2.5 Subjective well-being

McCabe and Johnson (2013:42) state that it is only in recent times that concepts of well-being have been extended beyond objective measures of wealth and material circumstances into the realm of subjective well-being. In the same vein, Layard (2006) confirms that the interest in subjective well-being came about due to the weak linkage between objective well-being and the levels of satisfaction with life. According to Diener *et al.* (1999:278), subjective well-being encompasses a broad grouping of phenomena, including individuals' emotional responses, domain satisfactions and judgement of satisfaction with life. These authors advise that each of the phenomena should be studied individually. However, Busseri *et al.* (2007:414) point out that the mentioned phenomena often correlate substantially, indicating the existence of a higher-order construct.

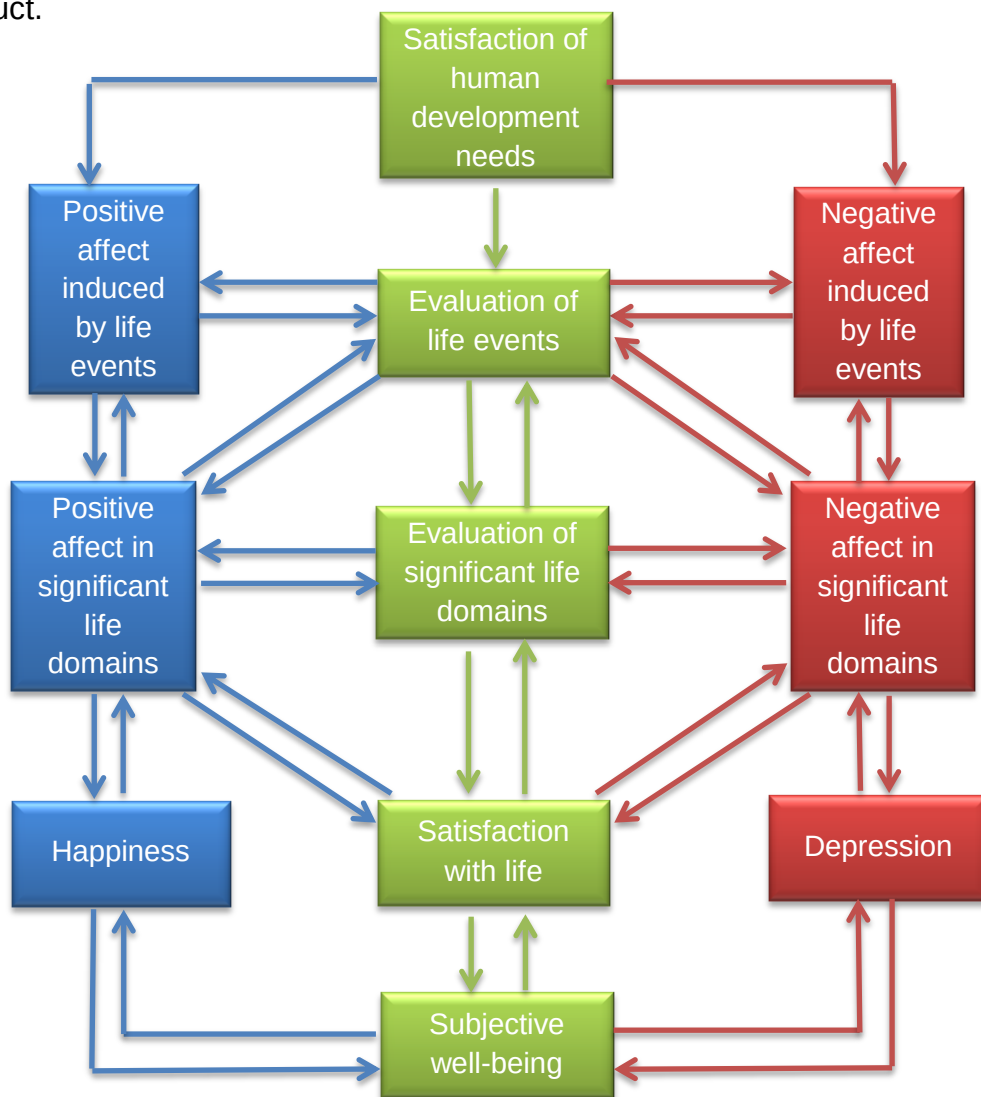


Figure 3.3: Elements of subjective well-being

Source: Adapted from Sirgy (2012:37)

Kozma and Stones (1992:139) are of the opinion that satisfaction with life can be categorised into two psychological states, namely short-term and long-term states. The short-term state is an affective state that involves positive and negative affect, predominantly influenced by environmental factors, whereas the long-term state is dispositional and less affected by environmental factors (Kozma, 1996). Sirgy (2012:36) proposed a framework (Figure 3.2) that integrates the abovementioned concepts and reflects the general consensus among QoL researchers regarding subjective well-being.

Subjective well-being is defined by Sirgy (2012:36) as a long-term affective state that consists of a mixture of the following three components (Figure 3.3):

- An actual experience of satisfaction with life or a totally positive affect such as joy, affection or pride in significant life domains.
- An actual experience of depression or a totally negative affect such as sadness, anger, guilt or anxiety in significant life domains.
- An evaluation of one's life overall or an evaluation of significant life domains.

Sirgy (2012:37) confirms that one's actual experience of satisfaction with life relies on the accumulation of pleasant feelings over time in the significant life domains where each pleasant feeling is determined by a positive life event. Likewise, one's actual experience of depression is determined by an accumulation of unpleasant feelings over time in the significant life domains where each unpleasant feeling is determined by a negative life event. Satisfaction with life consists of the cognitive evaluation of life overall and the significant life domains such as social life, emotional life, health and safety life, financial life, leisure and recreation life, travel life and family life or the recollection of a previous evaluation of those memories. The evaluation of each life domain is determined by multiple evaluations of events in each domain or, put differently, the assessment of overall positive and negative affect in each domain. Sirgy (2012:38) highlights two underlying constructs found in subjective well-being, namely cognitive and affective aspects, positive and negative affect constructs. Each construct will subsequently be discussed in more detail.

3.2.5.1 Cognitive and affective aspects

According to Sirgy (2012:38), being able to distinguish between cognitive and affective aspects is important, as they measure different constructs. Happiness relates to affective aspects, whereas satisfaction with life relates to cognitive aspects (McCabe & Johnson, 2013; Sato, *et al.*, 2014; Schimmack, *et al.*, 2008). Cognitive aspects (satisfaction with life) comprise the global assessment given by individuals of major life events and how they conceptualise their QoL. Affective aspects comprise the summary of both positive and negative experiences, divided by the specific period that is measured. An example might be that of paintball participants who needed to socialise and were satisfied (positive) during their last paintball game, but the cheating (negative) of some of the opponents detracted from the overall experience.

3.2.5.2 Positive and negative affect

The possible link between subjective well-being and positive and negative affect was observed as early as the 1960s. Very importantly, Bradburn and Caplovits (1965) pointed out that positive and negative affect are not necessarily opposite polar extremes and are influenced by different factors; in other words, the absence of factors that cause positive affect do not necessarily cause negative affect and vice versa. Sirgy (2012:39) provides two examples:

- Expressing culture and arts might enhance positive affect (satisfaction with life), but the lack of arts and culture will not necessarily lead to negative affect (dissatisfaction with life).
- Marital abuse may cause a spouse to experience negative affect (depressed), but not being abused will not necessarily lead to a positive affect (satisfaction with life).

Since the 1960s, QoL researchers (Bradburn, 1969; Diener & Emmons, 1984; Diener, *et al.*, 1995; Lucas, *et al.*, 1996; Sirgy, 2012) have developed an index of positive and negative affect factors as research into the field of QoL expanded.

According to Sirgy (2012:39), QoL research has shown that certain life domains such as social life, emotional life, health and safety life, financial life, leisure and recreation life, travel life and family life often generate more satisfaction than dissatisfaction and vice

versa. For example, the leisure and recreation life domain by Herzberg (1966) showed that evaluating one's leisure and recreation life positively may produce high levels of satisfaction. On the other hand, evaluating one's leisure and recreation life negatively may produce little dissatisfaction. Sirgy (2012:39) notes that when individuals evaluate their lives, they reflect on the most significant life domains that affect their QoL. Huppert (2009:145) made an assessment of the factors that influence positive and negative affect and came to the following conclusion:

- Personality factors of subjective well-being such as extraversion tend to be different from personality factors of ill-being such as neuroticism.
- Demographic factors such as age, gender and marital status tend to lean differently towards subjective well-being than towards ill-being.
- Socio-economic factors such as income, education and status are differently connected with subjective well-being compared to ill-being.
- Psychographic factors such as interests and activities are also differently connected with subjective well-being compared to ill-being.

3.2.6 Subjective well-being and eudaimonia

Kesebir and Diener (2009:119) are of the opinion that eudaimonia, also known as 'psychological well-being', cannot be grouped with other concepts of subjective well-being, positive and negative affect, satisfaction with life, perceived QoL and domain satisfaction. However, they do agree that subjective well-being is sufficiently close to eudaimonia to use as a substitute for well-being. Sanjuán (2011:376) hypothesised that there is an interrelationship between eudaimonia, subjective well-being and hedonic well-being in which hedonic well-being acts offer a mediating effect through affect balancing. Therefore, eudaimonia often induces positive affect that influences QoL.

3.2.7 Subjective well-being and psychological well-being

Caddick and Smith (2014:9) state that subjective well-being involves individuals' balance of positive and negative emotions over a period of time and their satisfaction with life. According to Huppert (2009:137), psychological well-being can be summarised as 'life going well'. Psychological well-being includes effective functioning, consisting of individuals' development potential, control over life circumstances and view of life as having meaning, as well as the fact that they have a purpose in life and positive

emotions towards others. Subjective well-being often focuses only on an individual's positive emotions. Psychological well-being includes the view that negative emotions can have a positive role in satisfaction with life in the sense that individuals need to learn how to manage their negative emotions in order to enhance their positive emotions. Positive emotions not only include satisfaction with life and contentment but also interest, engagement, confidence and affection (Sirgy, 2012:41).

3.3 THE PSYCHOLOGY OF QOL

According to Rootenberg (2012:104), Sirgy is widely regarded as an authority in the field of QoL, with numerous publications as sole author (Sirgy, 1986; Sirgy 1998; Sirgy 2002; Sirgy, 2010; Sirgy, 2012; Sirgy, 2014), lead author (Sirgy & Lee, 2006; Sirgy, *et al.*, 1995; Sirgy, *et al.*, 2011) and co-author (Kim, *et al.*, 2013; Neal, *et al.*, 1999; Neal, *et al.*, 2007; Uysal, *et al.*, 2016; Uysal, *et al.*, 2012), in these publications, the complex concept of QoL is addressed. Of particular note is his first attempt to unify the different concepts under a theoretical umbrella, entitled "Psychology of QoL" (Sirgy, 2002). In a latter work, Sirgy (2012:540) defines subjective QoL as the "satisfaction of developmental needs through participation in salient (significant) life domains and reflected in a value-laden belief about the totality of one's life". He elaborates on several key concepts, namely satisfaction of development needs, significant life domains and life domains.

3.3.1 Satisfaction of development needs

This satisfaction is based on the belief that individuals have a variety of needs that they seek to fulfil. The more those needs are satisfied, the more they feel good about their lives. Sirgy (2012:540) reiterates:

The assumption is that those who are more successful in satisfying their developmental needs are likely to experience greater satisfaction with life than those who are less successful.

According to Maditinos *et al.* (2014:521) there are many potential determinants of satisfaction which includes personality, social expectations, socioeconomic factors, relationships, physical and psychological health, accommodation, employment and problems with authority. Sirgy (2012:540) argued that an individual's success is based on successful organising and participation in the manageable domains such as social

life, emotional life, health and safety life, financial life, and leisure and recreation life. By doing so, the individual generates satisfaction in the present and future.

According to Sirgy (2012:540) events related to participating in manageable life domains are stored as memories, allowing the individual to reflect on their affective experience; for example, when paintball participants are asked about their social experience, they will probably reflect on their experience with their friends and other participants while engaging in the adventure sport. The benefit of such management through experiences have been highlighted by Kruger *et al.* (2014). Of note is that although life domains are arranged around a central set of needs such as safety, social and health needs, they affect other needs as well (such as the need for creativity).

In summary, individuals are driven to satisfy their developmental needs by engaging in activities that result in positive or negative memories in a specific life domain. The memory results in either a happy or an unhappy perception of their life with regard to the specific life domain, which in turn determines their feeling of the life domain (e.g. a sense of subjective well-being in social life, emotional life, health and safety life, financial life, and leisure and recreation life).

3.3.2 Significant life domains

According to Sirgy (2012:541), there is some correlation between domain hierarchy and domain significance; in other words, domains in which individuals have invested significant emotional effort to generate positive affect or reduce negative affect tend to be of greater hierarchical significance than those domains with less emotional investment. Therefore, domain significance varies according to individuals' emotional investment. It can thus be argued that members of certain social groups such as paintballers will provide similar feedback regarding the significance in their leisure and recreation life domain.

3.3.3 Life domains

Subjective QoL involves a belief system that is reflected in a hierarchy of psychological perceptions (Sirgy, 2012:541). Satisfaction with life (cf. 2.2.4.3, Figure 2.9) is located at the top of the hierarchy, followed by domain satisfaction in the middle and satisfaction with components and concerns of a particular life domain at the bottom. The

aforementioned is also stated by Kruger *et al.* (2013:439). Life domains are cognitively structured with affective experiences segmented within, for example health, leisure, friends and family.

According to Sirgy *et al.* (2011:270) QoL studies measuring life domains rely on respondent's recollection from memories their experiences. Sirgy (2012:541) surmises that an individual's memories, whether conscious, subconscious or unconscious, are divided into life domains, each with deep-seated perceptions reflecting affective experiences within. The domains are organised into memories in terms of their importance in the domain hierarchy. First, each of these domains serves as affective experience where individuals reflect on their overall feelings, be it positive or negative. Second, each domain contains a cognitive element whereby individuals evaluate the respective domain overall; this evaluation is stored in memory. Individuals make use of both to form an overall opinion of the life domain (either satisfaction or dissatisfaction) that in turn carries over to determine their opinion of life overall. The following section will explore the link between QoL and leisure.

3.4 QOL AND LEISURE

Coleman (2003:548) states that QoL consists of the multi-dimensional capacity of individuals to function at full capacity, as well as the extent of satisfaction with their functioning. According to Page and Connel (2010:29), QoL comprises various dimensions such as social life (Kruger, *et al.*, 2013), emotional life (Kim, *et al.*, 2013), health and safety life (Sirgy, *et al.*, 2011), financial life (Shim, *et al.*, 2012), leisure and recreational life (Dolnicar, *et al.*, 2012), travel life domain (Kruger, *et al.*, 2013) and family life domain (McCabe & Johnson, 2013). Social scientists can view QoL objectively and subjectively, based on:

- The psychology of leisure and QoL that both focus on the concept of satisfaction with life, enjoyment, pleasure and positive benefits (hedonism).
- The psychology of leisure that focuses on self-growth and QoL by achieving self-actualisation.

According to Rodriguez *et al.* (2008:163), much of the focus of QoL studies has been on determining why some people have higher QoL than others. By determining the 'why?',

researchers can more easily apply the methods to those who need to improve their QoL. Page and Connel (2010:27) are of the opinion that to understand the importance of leisure and its link with QoL, it is useful to consider the types of everyday lives, working experiences and trends in modern-day society that are concerning governments and policy makers.

Pretty *et al.* (2005:320) mention that around 80% of people living in urban areas suffer hectic daily lives, cluttered by stresses such as commuting, work and life responsibilities and, in some cases, their living environment. Pretty *et al.* (2005:321) point out that QoL in the home environment and place of work is an important determinant of emotional health. Leisure thus becomes even more important in modern society to combat modern health problems (Vujko & Plavša, 2011:96). According to the Henley Centre for Forecasting (2000), modern lifestyles are very unhealthy, which has led to changes in how individuals enjoy leisure and QoL. The following are some examples:

- People have a very high expectation of their leisure time, even if it is a shallow and fleeting experience.
- The growing gaps in society have created different expectations of what leisure is, what its value is and where leisure time is spent.
- Modern demands of work life have shaped the way in which leisure fits around employment, which has led to spontaneity via technology and social networking.
- More emphasis has been placed on small leisure experiences, leading to one-night breaks alongside the traditionally planned leisure holidays and daytrips.

Stress is evident in every domain of contemporary life, work, family and home (MacBride-King & Bachmann, 1999; Shields, 2004). In modern times, the diverse demands of juggling various responsibilities on a daily basis leave people stressed, which has a substantial impact on their health and QoL (Greenhaus & Parasuraman, 1999; Hobfoll, 1998; Vujko & Plavša, 2011). According to Gottlieb (1997:95) and Lazarus (1999:65), people seek methods, consciously and unconsciously, to cope with or relieve the build-up stresses. Stress and coping with it are key determinants of health and QoL (Alla, *et al.*, 2007:91).

Research into the relation between leisure, stress and coping has determined that engaging in leisure activities has a profoundly positive effect on diminishing stress

(Coleman & Iso-Ahola, 1993; Hutchinson, *et al.*, 2003; Iwasaki, 2002; Iwasaki & Mannel, 2000; Kimball & Freysinger, 2003; Klitzing, 2003; Schuster, *et al.*, 2003; Vujko & Plavša, 2011; Wei-Chih, 2016). Leisure is therefore a recognised method of managing stress but also of deflecting high stress before it can manifest. Various authors (Driver, *et al.*, 1991; Frey, *et al.*, 2007; Kruger, *et al.*, 2013; Michalos and Kahlke 2010a; Sirgy, 2012; Vujko & Plavša, 2011) have highlighted some of the positive effects of leisure on health and QoL (Figure 3.4). Of note is that in a leisure-QoL relationship, one or more benefits might be occurring at the same time and a positive benefit might be counteracted by a negative leisure event. Participation in leisure activities is considered to have a positive affect on QoL (Lloyd & Auld, 2002) and contributes to people's physical and mental well-being (Cini, *et al.*, 2012).

Research has proven that a positive link exists between QoL and the participation in physical leisure activities such as sport (Leung & Lee, 2005; Melin, *et al.*, 2003; Menec, 2003; Schnohr, *et al.*, 2005; Vujko & Plavša, 2011), exercising (Menec & Chipfield, 1997) and activities in general (Fernández-Ballesteros, *et al.*, 2001). According to Page and Connel (2010:29), the key element that shapes the relationship between leisure and QoL is the way in which it is consumed by individuals and groups, especially in the social context of family, friends or groups, but also on one's own.

McCabe and Johnson (2013:46) report that there is a growing interest in the relationship between tourism, which forms part of the leisure domain, and subjective well-being. Dolnicar, *et al.* (2012:59) state that it is as yet unclear whether vacations (as opposed to leisure time at home) contribute to people's QoL, to what extent they contribute, and whether people differ regarding the vacations that contribute to QoL. According to Sirgy (2010:248), the importance of tourism to QoL depends on the worth individuals attach to their tourism-related goals that drive their decisions, known as the goal valence principle (cf. 2.3.3). Omorou *et al.* (2013:2022) identified sport as a specific domain of physical activity engaged in during leisure time.

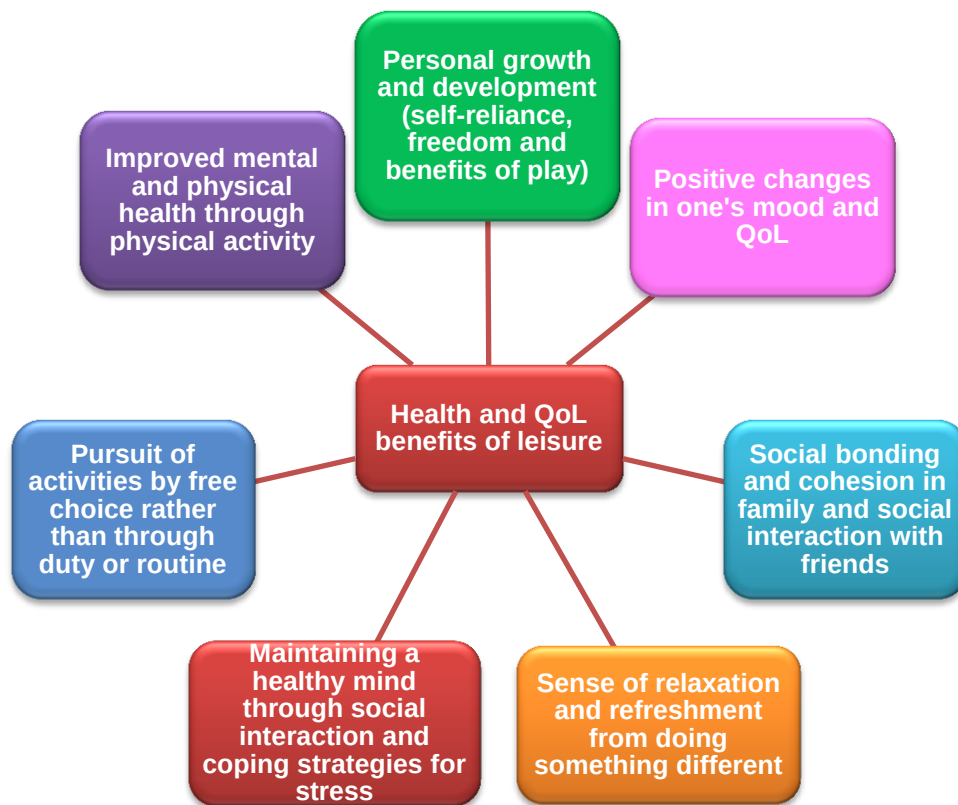


Figure 3.4: Health and QoL benefits of leisure

Source: Adapted from Driver *et al.* (1991), Frey *et al.* (2007), Kruger *et al.* (2013), Michalos and Kahlke (2010a), Sirgy (2012) and Vujko and Plavša (2011)

3.5 QOL AND SPORT

It has been found that individuals who engage in physically active leisure activities such as sport experience an enhanced QoL (Lloyd & Little, 2010; Maher, *et al.*, 2013; Walker, *et al.*, 2011). According to Meyer and Meyer (2016:853), participation in sport could lead to improved satisfaction with life.

Caddick & Smith (2014:9) point out that in recent years, research has shown the value of both sport and physical activity for enhancing an individual's psycho-social health and subjective well-being (Cater, 2013; Day, 2013; Martin, *et al.*, 2012; Monson, *et al.*, 2009; Smith, 2013; Vujko & Plavša, 2011; Yazicioglu, *et al.*, 2012). According to Sato *et al.* (2014:293), physically active leisure and sport have increased in the last decade. Funk *et al.* (2011) state that sport (such as paintball) represents a population-based intervention that has the capacity to increase physical activity and is therefore a catalyst

to improve participants' QoL. Sato *et al.* (2014:293) mention that relatively few research studies on the contribution of mass participant sport events have been done.

There is a growing body of evidence (Lloyd & Little, 2010; Maher, *et al.*, 2013; Parry 2007; Walker, *et al.*, 2011) that supports the positive affect of physically active leisure and sport on QoL (Sato, *et al.*, 2014:293); however, little is understood of how physically active leisure and sport enhance participants' QoL, because there is a lack of theoretical basis (Gill, *et al.*, 2013; Rodríguez, *et al.*, 2008).

According to Ryan and Deci (2001), subjective well-being is an important indicator of an individual's psychological, subjective and positive health. Monson *et al.* (2009:125) and Day (2013) refer to the extensive literature that documents the positive effects of physical activity and sport on mental and psychological well-being. In a study on the effect of sport and physical activity on soldiers with post-traumatic stress disorder (PTSD), Caddick and Smith (2014:16) identified various benefits for participants' subjective and psychological well-being, as shown in Table 3.7.

Table 3.7: Benefits of sport and physical activity on subjective and psychological well-being

Psychological well-being	Subjective well-being
Determination and inner strength (Burke & Utley, 2013; Lundberg, <i>et al.</i> , 2011)	Assists in managing and reducing stress (Brittain & Green, 2012; Dustin, <i>et al.</i> , 2011; Otter & Curry, 2004)
Ability to broaden horizons (Brittain & Green, 2012; Hawkins, <i>et al.</i> , 2011; Spörner, <i>et al.</i> , 2009)	Positive effect experience (Brittain & Green, 2012; Lundberg, <i>et al.</i> , 2011; Mowatt & Bennett, 2011; Otter & Curry, 2004)
Foster identity and self-concept (Brittain & Green 2012; Burke & Utley, 2013; Carless, <i>et al.</i> , 2013)	Ecotherapeutic impact of nature-based activity (Dustin, <i>et al.</i> , 2011; Mowatt & Bennett, 2011)
Contribute to positive self-identity (Brittain & Green, 2012; Burke & Utley, 2013; Cordova, <i>et al.</i> , 1998).	Enhances QoL (Hawkins, <i>et al.</i> , 2011; Lundberg, <i>et al.</i> , 2011; Spörner, <i>et al.</i> , 2009).
Sense of achievement (Brittain & Green, 2012; Burke & Utley, 2013; Hawkins, <i>et al.</i> , 2011; Lundberg, <i>et al.</i> , 2011)	
Ecotherapeutic impact of nature-based activity (Dustin, <i>et al.</i> , 2011; Mowatt & Bennett, 2011)	
Improves social well-being (Carless, <i>et al.</i> , 2013; Hawkins, <i>et al.</i> , 2011; Monson, <i>et al.</i> , 2009; Mowatt & Bennett, 2011; Spörner, <i>et al.</i> , 2009)	
Source of motivation (Burke & Utley, 2013; Carless, <i>et al.</i> , 2013; Hawkins, <i>et al.</i> , 2011; Otter & Curry, 2004)	

Source: Adapted from Caddick and Smith (2014)

A review of 11 studies regarding the impact of different sports and physical activities on participants' subjective and psychological well-being revealed that said activities have a positive influence on participants' subjective and psychological well-being (Caddick & Smith, 2014:15). This not only takes the form of enjoyment and a pleasurable experience but also assists in personal growth and development of the participant. Omorou *et al.* (2013:2021) found that the association between sport and QoL was more prominent in cases of low- and high-intensity physical activity than in cases of moderate physical activity. They concluded that sport nearly always had a positive impact on participants' QoL (physical and psychological health), especially on those with low- and high-intensity physical activity levels.

3.6 QOL AND ADVENTURE ACTIVITIES

A progressive shift in society from economic achievement to enhancement of QoL can be seen as one of the driving forces for growth in adventure (sport) activities worldwide (Govindasamy, 2012:47). Participating in adventure (sport) activities offers a wide range of experiences that are different from the daily routine, for example danger, terror, anxiety but also the thrill of success, elation and excitement (Swarbrooke, *et al.*, 2003).

According to Burr *et al.* (2013:1311), evolutionary theory suggests that humans developed fear as a mechanism to protect themselves from injury until they had sufficient mastery of a situation to cope with the effects that are induced (fear, anxiety and stress). Society has faced a decline in QoL (Veenhoven, 2005) ever since the industrial revolution, which led human beings away from nature (Carnicelli-Filho, *et al.*, 2010:953). Cater (2013:8) argues that the challenges experienced during adventure activities (fear, anxiety and stress) are closely linked to what our prehistoric ancestors experienced in order to survive. The author tries to make sense of it all by affirming the need for adventure (sport) activities as part of our being and says that although the method and form have changed, the elements of risk have been a constant throughout human history. The decline has led to a decrease in physiological (Vuori, 2007) and psychological (Asbury, *et al.*, 2006) well-being.

Carnicelli-Filho *et al.* (2010:953) and Brown and Kasser (2005) are of the opinion that urbanisation has led to a sedentary lifestyle that has triggered a renewed drive by humans to engage in adventure (sport) activities in order to connect to nature.

According to Cater (2013:9), adventure (sport) activities have an underlying masculinity imperative that varies according to culture. He points out that the concept of adventure and its subsequent experiences for males can be found in history; war, although not always voluntary, but duty bound, has always served as an external motivator. Furthermore, Cater states that it is undeniable that many of the concepts found in both physical and psychological adventure activities are closely entwined with internal psychological conflicts that are experienced, for example travelling away from home, discarding traditional life and receiving the glory and heroism on return.

Modern life has become too civilised, controlled, routine, risk free and secure, resulting in needs that are only satisfied by adventure (sport) activities; this tendency can be seen as opposition and protest against modern society (Breivik, 2010:260). Adventure (sport) activities allow young people to develop by meeting challenges they do not face every day and experiencing a sense of achievement when they overcome a challenge (Health and Safety Executive, 2003). Burr *et al.* (2013:1312) observe that participants who are inadequately challenged by an activity lose interest and drop out.

In an adventure sport activity, all participants create their own experience based on their history, values, attitudes and principles brought to the activity (Knutson, *et al.*, 2007). According to Weber (2001), individuals' subjective adventure experiences may be inconsistent with traditional research classifications and may require a greater exploration of the psychological aspects of the adventure sport activities, how the psychological experiences are managed and the impact on the overall experience quality. Mackenzie, *et al.* (2013:228) argue that adventure (sport) activities should be measured subjectively by making use of motivational states and emotions. Breivik (2010:260) says that in order to experience an adventure (sport) activity, skill is required, not only in body but also in mind, as individuals need to be able to cope with fear, anxiety and stress. The associated thrill and challenge have a positive affect on participants' level of satisfaction, subjective and psychological well-being (Tsaur, *et al.*, 2015:326) and ultimately their QoL.

3.7 CONCLUSION

The purpose of this chapter was to analyse QoL in relation to adventure sport by means of a literature review. This was done by first seeking to understand the QoL concept

through its historic origins and thereafter identifying by means of a literature review the life domains that are most appropriate for adventure sport. In addition, QoL concepts found in literature were compared, namely subjective and objective indicators; inputs and outcomes; satisfaction with life; inner and outer aspects; subjective well-being; subjective well-being and eudaimonia; and subjective well-being and psychological well-being. The psychology of QoL explored four key concepts, namely satisfaction of development needs; significant life domains; life domains; and value-laden belief about the totality of one's life.

Although QoL is a complex concept with various definitions, the author of this study proposes a more universal approach and defines it in the following way:

QoL is a predominantly subjective state with objective elements whereby individuals perceive their lives based on the combined positive and negative experiences in life domains that are significant to them.

Concerning the relationship between QoL and leisure, the positive linkage that is driven by modern living and the associated stresses of day-to-day life was explored. The relationship between QoL and sport showed that individuals who partake in physical activities such as sport experience a positive effect on their QoL overall. Unfortunately, there is a lack of theoretical knowledge on how adventure sport enhances participants' QoL overall. It is therefore of great significance to test empirically how adventure sport affects participants' QoL. However, before that can be done, a thorough literature analysis of leisure, adventure sport and the adventure sport experience must be performed. This will take place in the following chapter.

4

CHAPTER 4

ANALYSING LEISURE, ADVENTURE SPORT AND THE ADVENTURE SPORT EXPERIENCE

4.1 INTRODUCTION

Buckley (2010:217) states that throughout history, there have been adventurous travellers who visited far-flung places and needed transport, accommodation, food and guides during their journey. Some travelled for religious, military or commercial reasons but some out of curiosity (Buckley, 2010:217). To have leisure time is one of the earliest goals of human beings in order to pursue their dreams, spend time meaningfully and in a pleasurable way, and to live in a state of grace (Godbey, 2008:1).

According to Beckers and Mommas (1996:210), leisure studies exists as one of the oldest topics in social science research and attempts to conceptualise leisure have a long tradition (Esteve, *et al.*, 1999:79). Patmore (1983:5) and Russell (2013:10) state that the traditional concept of leisure comes from the Greek concept σχολή, which translates as 'scholē', which in turn is connected to the Latin *licentia* and *licere*, the associated French *loisir* and the English 'leisure and school'. The Greeks viewed scholarship, for example reading, thinking, debating, discussion or studying, as the ideal leisure pastime. Modern leisure consists of activities such as adventure tourism and adventure sport that individuals undertake in their leisure time (Cooper, *et al.*, 1995; George, 2014; Hall & Page, 2006; Leitner & Leitner, 2012; Xiang, *et al.*, 2015).

Williams and Soutar (2005:247) predicted an explosive growth in adventure-based tourism and by 2009, adventure tourism was estimated to contribute at least one trillion US dollars to the international tourism economy, comprising around a fifth of the global tourism industry (Buckley, 2010; Williams & Soutar, 2009).

According to Taylor *et al.* (2013:8), the need to seek out and take part in adventure activities is part of human nature and although its form has changed in terms of participation, risk and place, adventure has been and still is a factor in human development. Breivik (2010:260) observes that there has been a steady increase in adventure sport since the 1970s and that this can be seen as opposition to and protest

against certain aspects such as daily routines, uniformity, rules and norms of modern societies. Cashmore (2000) states that adventure sport has become important because it represents a deep human need to break away from the overemphasis on routine and control in modern society. According to Saayman (2012:302), adventure sport does not only defy the boundaries of acceptable behaviour but is perceived as being unsafe and against the norm. Benckendorff *et al.* (2009:172) is of the opinion that experience is internally produced and therefore unique to each individual. The theme 'adventure sport experience' is scarce in literature, with no proper definition. Therefore, there is a need to combine key constructs, obtained in literature, in defining the adventure sport experience. The author of this study will present various themes found in literature in order to better understand leisure, adventure sport and the adventure sport experience.

The purpose of this chapter was to analyse leisure, adventure sport and the adventure sport experience by means of a literature review. This will be done by following the structure as shown in Figure 4.1.



Figure 4.1: Outline of Chapter 4

4.2 LEISURE

According to McLean *et al.* (2015:2), leisure theorists struggle to agree on the concept of leisure. Page and Connell (2014:19) mention that leisure historians have debated the significance of leisure as a phenomenon throughout the earliest recorded history. Most of the debate has revolved around the following two interrelated viewpoints (Page & Connel 2010:42):

- Leisure as a concept has changed during the course of time; therefore, the meaning of leisure might not be the same throughout the different periods of history (Borsay, 2006:8).
- The allocation of leisure into distinguishable timeframes and characteristics periods throughout history are not agreed upon by historians (Page & Connel, 2010:42).

Leisure research was propelled to the forefront of academia with the emergence of modern Western States in Europe and North America and these countries' interest in the welfare of their populations, which affected their policy choices and decisions on how to use leisure to assist the well-being of their population (Page & Connel, 2010:40). One of the first attempts to define leisure was made by Veblen (1899), who described it as the non-productive consumption of time and a visible symbol of upper-class status. The most important catalysts for modern leisure, according to Beckers and Mommas (1996), were the following public policy changes that were implemented in the early and mid-20th century:

- 1919 to 1935 – Workers were seeking an eight-hour working day, allowing eight hours for sleep and eight hours for leisure.
- 1950s to 1960s – A systematic democratisation of leisure as government policy developed.
- 1960s and 1970s –A consumer society arose with welfare policies on leisure at its peak.
- 1980s and 1990s –The state's role in leisure provision was restructured and the individualisation of leisure grew. The provision of leisure as a collectivist activity by the state was replaced by individualism, consumerism and the establishment of a firm private sector to cater for the public's leisure needs.

As mentioned before (cf. 4.1), the earliest conceptualisation of leisure and its significance were debated by Greek philosophers who were also the founders of Western world ideologies and concepts such as 'leisure' and 'democracy'. As will be shown in the next section, many changes in leisure were fuelled by societal changes in the Western world.

4.2.1 History of leisure in a westernised world

Page and Connel (2010:2) and Russell (2013:20) stated that leisure in developed countries has set the pattern of development for developing countries, hence the focus on leisure in the Western world. Watson (1998:16) points out that leisure historians were primarily concerned with explaining the causes and effects of historical developments instead of the past histories of leisure during specific periods. Much of the modern interest in leisure was generated by leisure's resurgence in the late 1960s

and 1970s (e.g. Bailey, 1989; Cunningham, 1980; Walton & Walvin, 1983). Page and Connel (2010:42) point out that the historical analysis of leisure does not only survive in written text but can also be better understood by analysing oral history and living traditions of leisure. This encompasses not only how people remember history but how leisure gives meaning to a culture. Early studies of leisure history focused on Greek traditions and evolution of the Christian ideal of leisure throughout the Middle Ages, Puritans and Industrial era (Woody, 1957).

Through time, leisure studies has shown extraordinary differences, from one historical period to the next, in the amount of leisure people had, how they spent it and what they believed they should spend it on (Argyle, 1996:31). According to Page and Connel (2014:21), it is impossible to pinpoint exactly when leisure tourism began, as it evolved through time, building on the needs, compunctions and desires of society and the opportunities that were presented. Lubbe (2003:14) points out that people have travelled for centuries for various reasons such as education, pilgrimages, trade and adventure. Gamble (1989) asserts that travel clearly shows people's desire to seek new experiences and visit foreign places.

Argyle (1996:31) highlights several primary philosophical influences that shaped the evolution of leisure:

- The Greek philosopher, Aristotle, saw leisure as an important component of moral and spiritual education as well as of growth in virtue and wisdom.
- Ancient Romans saw leisure as a means to promote fitness for health and military purposes.
- Many Christian groups viewed leisure as a way to prepare for the afterlife.
- The Middle Ages and subsequent periods produced leisure classes that were able to spend more leisure time, because they had the opportunity and means to do so.
- During the Industrial Revolution, the middle classes enjoyed rational recreation to improve themselves and others via education, exercise and commercial recreation approved by society.
- The transportation revolution in the 20th century changed the way people travel (by rail, car and airplane), how far they travel and the speed they travel at.

- Technologies such as the radio, television (TV), cinema and internet changed the shape of leisure activities and the behaviour of society.

Based on the primary philosophical influences of leisure, it has been deemed suitable to provide a lengthy literature review of this concept.

4.2.2 Defining leisure

According to McLean *et al.* (2015:14), leisure is a unique, desirable component of the human experience that was first articulated by the ancient Greeks. Russell (2013:23) states that leisure is a complex concept with a contextual meaning depending on the place, time and people. The author is of the opinion that leisure is often associated with literature, art and music as inherited from previous societies. He observes that a contemporary meaning of leisure includes free time, recreational activities and travel. The modern philosophies of leisure have descended from the classical Greek view that leisure occurs mostly in time that is not allocated to work (McLean, *et al.*, 2015:15).

According to Bull *et al.* (2003:32), leisure can be defined in four ways, namely as a time-based approach, an activity-based approach, attitude-based approach and a quality-based approach. In addition, Page and Connel (2010:19) added a fifth way, namely leisure as a way of living, as can be seen in Figure 4.2.

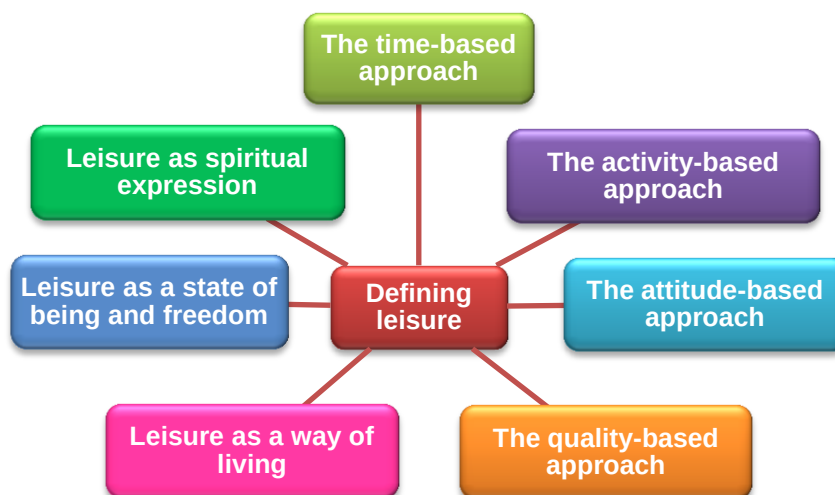


Figure 4.2: Ways of defining leisure

Source: Bull *et al.* (2003); Leitner and Leitner (2012); McLean *et al.* (2015); Page and Connel (2010)

4.2.2.1 The time-based approach

McLean *et al.* (2015:16) state that the most common approach to leisure is unobligated or discretionary time. According to Hall *et al.* (2006:3), leisure can be viewed as the time when an individual is not at work and comprises the free time or unoccupied time when all daily obligations have been met. Leitner and Leitner (2012:3) define leisure as free or unobligated time (Figure 4.2) that does not involve work or performing other life-sustaining functions. McLean *et al.* (2015:16) point out that this view of leisure is most popular with economists, sociologists and feminists who find the definition useful in the study of constraints faced by working adults in modern society. These authors, as well as Page and Connel (2010:16), mention numerous shortfalls regarding leisure that is based purely on time:

- If leisure is defined as ‘freedom from obligations’, it does not necessarily imply the same as ‘freedom to do’, as one’s obligations may impact on that time. Stated differently, individuals might not be at work, but it does not imply that their time will not be filled by other responsibilities (Page & Connel, 2010:16) such as serving on a school board or fulfilling a civic responsibility (McLean, *et al.*, 2015:16).
- The amount of time individuals have available might depend on their status within the family life cycle (e.g. young couple, new parents or empty nest). It is not just the amount of time that is important but also the quality and how the time is spent (Page & Connel, 2010:16).
- Individuals face structured determinants that affect the amount of time available for leisure such as gender, age, ethnicity and social status (Page & Connel, 2010:16).
- McLean *et al.* (2015:16) pose the question of whether it is at all possible to state that any time is totally free of obligation, compulsion or some extrinsic purpose; for example, an individual might read a book or article related to their work purely to improve their work proficiency.
- For many people, leisure time is confined to certain times of the day such as returning home after work at 17:00. The private sector in Europe and North America allows for a dedicated leisure period of two weeks. Another period associated with leisure time is the weekend. However, this has been largely

eroded by commercial operations during the weekend for those people who are working (Page & Connel, 2010:16).

- Enforced leisure brought on by illness or injury where the individual can no longer work also fits into the leisure time definition, which reinforces the notion that leisure time is not necessarily free time (Page & Connel, 2010:16).

4.2.2.2 The activity-based approach

According to McLean *et al.* (2015:16), an activity-based approach consists of the activities that people engage in during their free time. The activity-based approach (Figure 4.2) (as discussed by McLean, *et al.*, 2015:16, Leitner & Leitner, 2012:5 and Page & Connel, 2010:17) consists of leisure activities that are pursued on a daily basis and selected out of free will, for example:

- Rest (e.g. watching TV, going to a museum, reading a book and sleep).
- Amusement (e.g. watching a comedy).
- Education (e.g. undertaking adult learning).
- Participation in/play (e.g. a sport activity such as paintball).

McLean *et al.* (2015:16) point out that the activity-based definition does not address individuals' view on particular activities and provide an example where some individuals might view making a meal as a satisfying activity in order to express themselves, whereas others might view it as a repetitive domestic obligation. Of note is the concept of free will when choosing an activity (Leitner & Leitner, 2012:5; Page & Connel, 2010:17). Individuals might feel obligated to watch TV with someone else, study further because it is expected of them or participate in an activity such as paintball because of peer pressure.

4.2.2.3 The attitude-based approach

Individuals' attitude towards leisure is influenced by their conceptualisation, attitude, lifestyle and understanding thereof. Participation in leisure often takes place to set one apart from others or to conform to the societal or class norms. According to Page and Connel (2010:18), the attitude-based approach (Figure 4.2) was developed by social psychology researchers who recognised that leisure is a complex, spiritual concept based on individuals' motivation. Stated differently, the meaning associated with leisure

is based on individuals' preference of the activity during their personal leisure time. Consequently, leisure is what an individual defines it to be and is not based on time or activity. Therefore, according to the attitude-based approach, leisure is intrinsic to each individual.

4.2.2.4 The quality-based approach

Bull *et al.* (2003:14) state that the quality-based approach is derived from the work in psychology that emphasises the importance of quality free time and that it includes many of the aspects previously mentioned. The quality-based approach (Figure 4.2) deals with individuals and their view of an activity as either leisure or not leisure (Page & Connel, 2010:18). This approach focuses on whether the time deemed to be regarded as leisure matches the individual's attitude or not. In addition, the approach emphasises the quality of the free time and the opportunity that this quality time offers for relaxation and rest from daily life. Therefore, the quality-based approach focuses on an individual's level of pleasure, where an activity is not just time-filling.

4.2.2.5 Leisure as a way of living

In a growing body of literature, leisure as a way of living (Figure 4.2) is based on the assumption that certain careers may create a leisure-based lifestyle (Page & Connel, 2010:18). According to this approach, leisure is not a commodity based on time or a state of mind, but a way of life where the productive activities of the lifestyle may follow a personal hobby as a career, for example a professional paintball player. McLean *et al.* (2015:16) are of the opinion that the end result of leisure is more important than the leisure activity itself.

4.2.2.6 Leisure as a state of being and freedom

This view of leisure (Figure 4.2) puts emphasis on individuals' perceived freedom to choose and participate in activities, thereby achieving personal fulfilment and self-enrichment (McLean, *et al.*, 2015:17). According to McLean *et al.* (2015:16), the concept of leisure implies an all-inclusive lifestyle that includes family, religion, work and free time in which individuals explore their capabilities, develop enriching experiences with others and seek self-actualisation. McLean *et al.* (2015:17) highlight the fact that that contemporary leisure theorists emphasise the need for true leisure experiences that generate a sense of freedom and an absence of any form of obligation. Realistically,

there are many instances where an individual is pressured to participate in an activity and/or where the activity reduces the individual's freedom and intrinsic motivation (McLean, *et al.*, 2015:17).

4.2.2.7 Leisure as spiritual expression

McLean *et al.* (2015:17) point out that today, leisure can be viewed in terms of spiritual expression, religious values and inner peace. This involves understanding the values that drive individuals and the meaning they assign to living. Spiritual leisure is most commonly found in outdoor and natural activities such as walking through the woods, sitting on a mountain top and admiring the view or paddling a canoe across a calm lake, practising yoga or relaxing and doing meditative exercises (McLean, *et al.*, 2015:17).

One might ask what the purpose is of defining leisure to such a scientific extent. According to Parr and Lashua (2004:1), the hermeneutics of leisure might appear superficial and purely for academic exploration but, as Ellis and Witt (1991) pointed out, the definitions of leisure impact the way the role players in the leisure, recreation and tourism industry conceptualise and ultimately implement their services. Page and Connel (2010:21) state that social scientists have begun to seek more theoretical explanations of leisure in society, which will be discussed next.

4.2.3 A theoretical approach to leisure in society

The words 'play', 'leisure' and 'recreation' are often used interchangeably as if they hold the same meaning, but each of these concepts has distinctively different meanings (McLean, *et al.*, 2015:7). Page and Connel (2010:21) stress that the relationship between recreation (physical activity), leisure and play is often overlooked. According to McLean, *et al.*, the word 'play' originates from the Anglo-Saxon *plega*, which means a game or sport, but also a skirmish, fight or battle. *Plega* is also closely related to the Latin *plaga*, meaning blow, strike or thrust. The authors emphasise that clarifying and distinguishing the conceptual understanding are critical in order to develop a sound philosophy for leisure, recreation and play, which in turn can assist in interpreting leisure-service goals and the needs of the society at large. McLean *et al.* (2015:7) point out that it is difficult to define play due to its many forms and contexts but, none the less, offer the following general definition:

Play as a form of human or animal activity or behavioural style is self-motivated and carries on for intrinsic rather than external purposes. It is generally pleasurable and is often marked by elements of competition, humour, creative exploration, problem solving, and mimicking role playing.

Furthermore the authors McLean *et al.* (2015:8) state that play is typically marked by freedom and lack of structure but may involve rules and prescribed actions, as with sports and games.

McLean *et al.* (2015:11) report that over the past several decades, numerous experts in the fields of psychology and psychoanalysis have examined the role of play in personality development and psychoanalytical perspectives, and play as creative exploration and related areas. The theoretical foundation of play has a long history in literature with little agreement on the overall theory of play (McLean, *et al.*, 2015:12).

The past 40 years have seen a notable increase in research on the benefits of play, with the psychological aspects thereof being the most prominent in research papers (McLean, *et al.*, 2015:12). The recognition of the importance of play in society has developed significantly since the 1930s and can be seen in the facilities provided by states, for example playgrounds. Play is an important part of the emotional development, which translates into confidence building, self-discipline and self-worth (Bull, *et al.*, 2003).

It is traditionally assumed that play is an activity for children, but adults also take part in play (McLean, *et al.*, 2015:7). Play also instils an understanding of competitiveness in children that is found in adulthood (Torkildsen, 1999) and promotes cooperation, sharing and conflict-resolution through activities (McLean, *et al.*, 2015:12). Page and Connel (2010:22) state that the psychological and cognitive benefits of play help in developing humans, from childhood right through to adulthood.

Play allows self-expression, creativity, imagination and the building of self-confidence (McLean, *et al.*, 2015:12). According to Page and Connel (2010:22), personal interaction that is derived from play helps in building the concept of teamwork, sharing ideas, exploring feelings and building relationships with others, which lead to skills such

as leadership, teamwork, empathy and insight, as well as planning and coordinating activities with others.

Page and Connel (2010:22) observe that play can be explained as the ability to express oneself spontaneously while gaining personal enjoyment, usually during leisure time. Leisure can be a major source of happiness as well as mental and physical health (Argyle, 1996:1). There is also an element of chance in some forms of play, for example competitive games with rules in the form of sports such as paintball. Play enables individuals and groups to pursue their fantasies and to become distant from work and everyday obligations while seeking pleasure in their leisure time (Page & Connel, 2010:22). According to McLean *et al.* (2015:12), personality is shaped by play, which also stimulates enjoyment, freedom and fun. Play promotes the development of one's physical, emotional and social abilities and helps to explain the levels of participation in (adventure) sport and its importance in modern society (Page & Connel, 2010:26). The following section will investigate the approaches that can be used to define leisure.

4.2.4 Approaches that are used to define leisure

Page and Connel (2010:5) point out that, simply put; leisure is what one does in one's non-work or free time. Considering what was said in the previous section, some pause is required. What is leisure and what is not leisure? The answer to this question depends on the historical context in which a society views an activity. Bull *et al.* (2003:14) conclude that leisure is a continuous term with a variety of meanings: leisure might be regarded as time free from obligations, a collection of specific activities (e.g. sport, recreation, tourism, art or entertainment) or simply a state of mind; it can be defined as whatever people's perception of it is. According to Russell (2013:4), leisure is a complex concept with different meanings, based on people, place and time. There are, however, key elements that are shared by the approaches, for example freedom from constraints, the opportunity to choose, time left over after work, and the opposite of work (George, 2014; Page & Connel, 2010; Pearsall, 2002). According to Page and Connel (2010:10), leisure studies is not just an academic discipline in its own right but a subject area that arose from multiple disciplines viewing it from different angles.

Stockdale (1985:13) identifies the following four approaches to leisure (as illustrated in Figure 4.3):

- Period of time – an activity or state of mind in which choice is the dominant feature. Leisure can thus be viewed as a form of free time for an individual.
- Objective – where leisure is viewed as the opposite of work; in other words, leisure is seen as non-work or time left over after all obligations have been met.
- Subjective – where leisure is viewed as a qualitative notion in which the leisure activity takes meaning in relation to the perception and belief system of individuals. These activities can be done at any time and in any context.
- Choice – where leisure is viewed as an individual exercise in which the individuals decide when they are able to undertake activities in a voluntary manner, free from constraints.

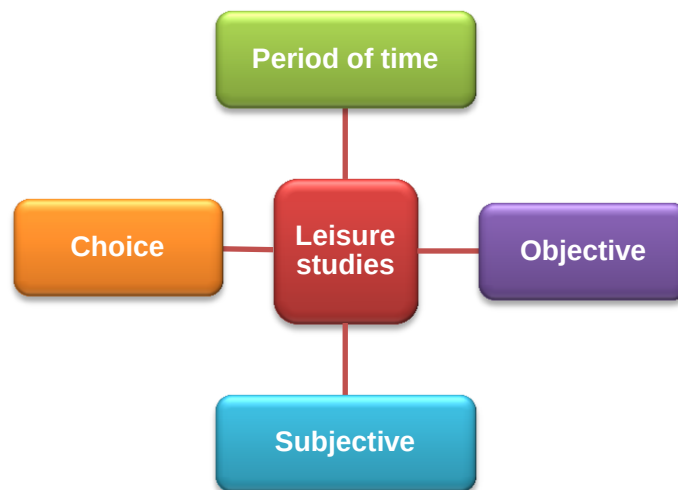


Figure 4.3: Four approaches to leisure

Source: Stockdale (1985:13)

Page and Connel (2010:11) summarise the issues (according to Herbert [1988] and Stockdale [1985]) that should be taken into account when defining leisure as follows:

- The role of time.
- Freedom from constraint or obligations.
- An individual's state of mind and perception of leisure.
- The significance of work and non-work.
- The lifestyle of the individual.

Free time does not necessarily mean that an individual can engage in leisure. According to Page and Connel (2010:11), 'free time' refers to a way of calculating a special kind of time, while 'leisure' is a state of being (De Grazia, 1962:5). Therefore, free time is

required to engage in leisure, but free time in itself is not leisure. Page and Connel (2010:12) mention that there is a growing recognition in advanced industrial societies of the fact that free time is necessary to protect people's emotional QoL and that many middle-class workers are increasingly spending their leisure time working, making them cash rich but time poor. According to Zuzanek (2006:185), time and leisure research indicates that it is easier to operationalise leisure as discretionary time, socially defined activity/people's participation in leisure or experience of leisure. These viewpoints have never been merged and are only viewed individually, which makes an all-encompassing viewpoint elusive as yet (Page & Connel, 2010:12). The next section will look at leisure as a modern phenomenon.

4.2.5 Leisure as a modern phenomenon

Leisure is a complex phenomenon that consists of three principle elements, namely free time, occupation and experience (Craik & Pieris, 2006; Lobo, 1998; McLean, *et al.*, 2015; Suto, 1998). In our modern industrial societies, leisure has become a defining feature of the way that one lives, works and spends one's free time (Page & Connel, 2010:1). Leisure has evolved into a complex phenomenon that has various meanings for different people and groups.

Thompson *et al.* (2002:125) are of the opinion that different factors influence leisure at different stages in people's lives and note that by midlife, some leisure behaviours may be long-term habits, whereas others become adjusted in relation to changes experienced in the various life domains. According to Page and Connel (2010:1), it is increasingly being associated with well-being where the activities pursued during leisure time provide personal enjoyment, relaxation, personal fulfilment and a sense of pleasure to complete and fulfil us as human beings. Leisure serves as an outlet to break the routine of daily living.

According to McLean *et al.* (2015:2), Page and Connel (2010:2) and Russell (2013:20), leisure is increasing in significance in modern society. The writers reflect on the following considerations:

- Leisure is a discretionary activity (Page and Connel, 2010:2; Russell, 2013:21).

- Leisure activities are key economic drivers for the global, national and local economies, especially in the service sector, and provide new employment opportunities (McLean, *et al.*, 2015:2; Page & Connel, 2010:2).
- Governments' leisure spending on their population has grown in importance (McLean, *et al.*, 2015:2; Page & Connel, 2010:2).
- Governments and international agencies are increasingly associating leisure activities and enjoyment of leisure time with QoL, because they offer opportunities to escape from the stress, strain and perceived monotony of daily routines (McLean, *et al.*, 2015:2; Page & Connel, 2010:2; Russell, 2013:21).
- Leisure time, expressed through employment and non-work time such as annual holidays, is seen as a basic right of all employees in advanced, developed countries (Page & Connel, 2010:2; Russell, 2013:21).
- Leisure activities and leisure time are defining features of non-work for those who are employed. Those who are not employed regard these features as new opportunities and challenges (Page & Connel, 2010:2).
- Leisure also defines social groups' status amongst one another where status is determined by how often one travels and the ways of travel (Page & Connel, 2010:3).
- Leisure goods (e.g. colour TVs) and services (e.g. world cruises) have become widely available, which resulted in a change in the definition of luxury. What was once viewed as unobtainable is now widely available (McLean, *et al.*, 2015:2; Page & Connel, 2010:3).
- Leisure activities in the home have seen a major transformation over the past two decades. The home is viewed as a site for passive pursuits (e.g. watching TV), as new technologies have brought about home cinemas, high-quality computer games and digital media (Page & Connel, 2010:3).
- Leisure activities outside the home, especially in the periods after World War II, are associated with greater access to personal mobility (e.g. a family car) and growth in leisure travel (Page & Connel, 2010:3).
- Rapid global communication and digital media popularisation of leisure sport brands and leisure habits and aspirations have trans-pollinated world cultures. The Disney Company, for example, established homogenous parks across the world, offering the same branded leisure experiences (Page & Connel, 2010:3).

- In the changing dimension of luxury in leisure consumption, there is greater emphasis on quality experiences (Page & Connel, 2010:3).
- The type and nature of the leisure experience has also gone through changes, as new social norms came into existence, for example one-parent families and an aging population. Each of these changes created new constraints and opportunities for the leisure industry (Page & Connel, 2010:3).
- Leisure has taken on new meanings of recreation, adventure, risk and excitement (McLean, *et al.*, 2015:2).

According to Page and Connel (2010:4) and Russell (2013:20), the abovementioned considerations provide a respectable overview of insights into why leisure has become such a powerful phenomenon on a global scale in modern society. Leisure plays a key role in shaping people's lives worldwide, irrespective of development status. McLean *et al.* (2015:2) state that leisure and recreation represent without question a potentially rewarding and important human experience. Furthermore, there is a universal acceptance of the value of play, recreation and leisure. Mclean *et al.* (2015:3) point out that people often think of recreation primarily in terms of sports; however, it also includes an extremely broad range of leisure pursuits, including tourism. The following section will explore the relationship between leisure, recreation and tourism.

4.2.6 The relationship between leisure, recreation and tourism

Parker (1999:12) asserts that the study of leisure as a whole reveals the relationship between leisure, recreation and tourism in a society; the latter isn't just made up of groups that participate in a single leisure activity, for example sport players, TV viewers or tourists, but of people that may do all these things. Russell (2013:22) is of the opinion that today, leisure is based on participation in non-work activities such as riding a bike or playing video games. Hall *et al.* (2006:3) explain (Figure 4.4) that play, recreation and tourism make up the broader sub definition of leisure where the boundaries between these elements overlap.

According to McLean *et al.* (2015:17), 'recreation' originates from the Latin word *otium*, which means to refresh or restore. They are of the opinion that recreation consists of a mixture of play and leisure; furthermore, although work is distinct from leisure, there is a

degree of overlap when people travel for business-related purposes, as they do not travel for leisure per se; business-related travel is thus distinct from leisure-related travel. McLean *et al.* (2015:4) state that recreation can take many forms in order to meet a wide range of individual needs and interests. Recreational activities can create enjoyment and a good QoL (Lin, *et al.*, 2013:180), for example participating in an adventure sport (Hardiman & Burgin, 2011:1324).

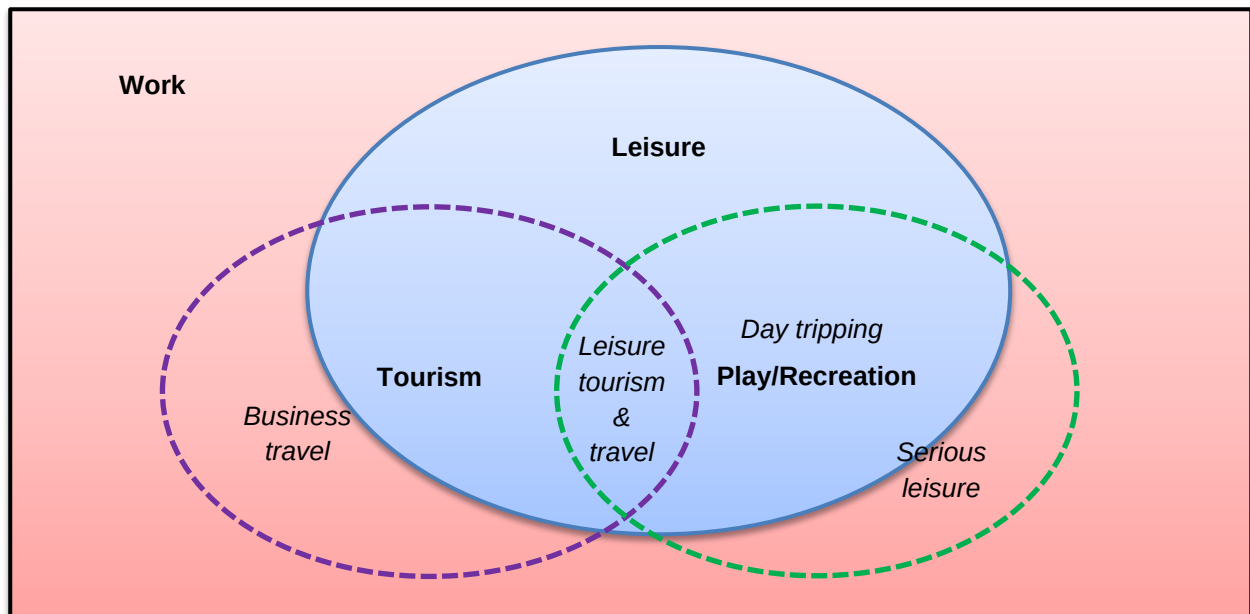


Figure 4.4: The relationship between leisure, play/recreation and tourism

(Note: Figure boarder represents extent of work)

Source: Adapted from Hall *et al.* (2006:5), McLean *et al.* (2015:2) and Page and Connel (2010:14)

McLean *et al.* (2015:4) are of the opinion that many individuals take part in recreation as a form of relaxation and release from work stress and pressure. They propose a modern definition of recreation (2015:18) that includes the following:

- Recreation is an activity (physically, mentally, socially and emotionally) in contrast to sheer idleness or complete rest. Activities can take the form of sport, games, craft, performing arts, fine arts, music, travel, hobbies or social activities. These activities can be engaged in by individuals or groups and may involve once-off, reoccurring or staggered participation throughout an individual's life.

- The choice to participate is up to the individual and free of compulsion or obligation.
- Participation is fuelled by internal motivation and a desire to achieve personal satisfaction rather than by extrinsic goals or rewards.
- Participation is dependent on the participants' state of mind or attitude, where the motivation for participating, as well as their feelings about the activity, is most important.
- Motivation for participation can include pleasure-seeking, intellectual, physical or social stimulation based on the need for satisfaction. The fun factor could also be replaced by a serious degree of leisure that requires commitment and self-discipline. Serious leisure, according to Stebbins (2007), requires significant personal effort and perseverance and when performed to the full, may lead to durable lasting benefits such as a career in professional sport.

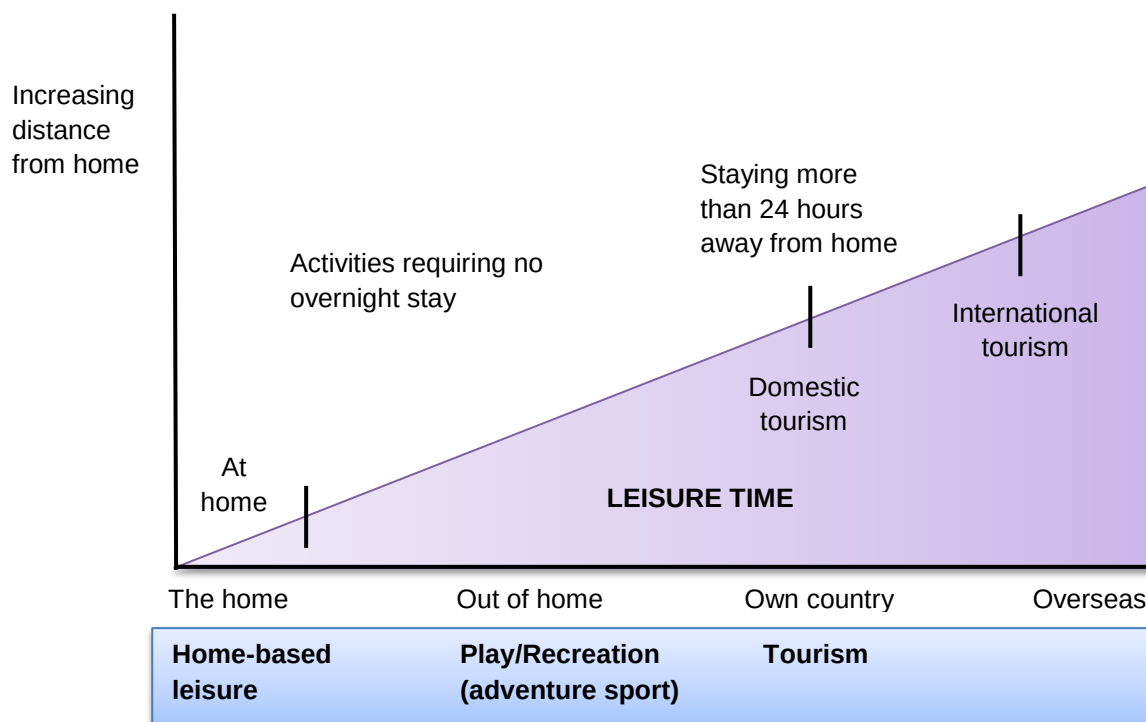


Figure 4.5: The leisure spectrum

Source: Adapted from Page and Connel (2014:7)

More money is spent on a day-to-day basis on leisure activities than on tourism; these activities influence people's identity, personal traits and many aspects of their daily lives (Page & Connel, 2010:4). Hall *et al.* (2006:5) observe that, although the boundaries are

still artificial, a leisure spectrum exists with travel serving to differentiate between the activities (Figure 4.4). According to Page and Connel (2010:15), many researchers overlap the boundaries of leisure, recreation and tourism. Numerous traditional definitions view leisure as a non-commercialised pursuit in contrast to tourism, which is predominantly private-sector and profit driven. This status quo of leisure has systematically started to cross the tourism boundary, as more leisure activities are becoming commercialised (Hall, *et al.*, 2006:5).

When looking at a definition for tourism and how it relates to leisure, the most important argument is to consider the amount of time that people have to be travellers, tourists or participants, as illustrated in Figure 4.5 (Page & Connel, 2014:6).

Various researchers (Hall, *et al.*, 2006; Leitner & Leitner, 2012; McLean, *et al.*, 2015; Page & Connel, 2014) have proposed the following definitions for leisure, recreation and tourism:

- Leisure is the time, activities and experience derived, characterised by freedom.
- Play/Recreation consists of the activities undertaken voluntarily during leisure time for the purpose of fun, personal satisfaction, revitalisation and regeneration, leading to internal reward such as participating in an adventure sport activity (Hardiman & Burgin, 2011:1324).
- Tourism is travelling to a destination for a period of more than 24 hours, requiring overnight stay and incorporating leisure and recreational activities.

Adventure sport forms part of play and recreation, which in turn falls under the umbrella of leisure time, as shown in Figure 4.5. The author defines leisure as:

a period in which an individual can engage in an activity or non-activity out of free will which they deem as being leisurely and where the end result of such leisure is characterised by personal fulfilment and self-improvement either physically, emotionally or spiritually.

In the following section, the author will unpack adventure sport based on the literature that has been consulted in order to gain a better understanding of this concept/terminology.

4.3 ADVENTURE SPORT

According to Smith *et al.* (2010:165), adventure sport is the active, passive or nostalgic engagement with sports-related activities while away from one's normal place of residence. Adventure activities and adventure sport activities take place mostly in the outdoors (nature); they consist of physical activities that challenge the participant's skills and are associated with some elements of risk (Venter, 2014a:5).

Beedie (2008:179) is of the opinion that the perception of adventure (sport) is fundamentally located in an individual's understanding of what adventure (sport) is. Of note is the observation by Cater (2013:9), who concludes that what is adventurous for one individual may be a mere backyard stroll for another individual. An example is described in Sharpe's (2005) ethnography study of white-water rafting that compared the experiences of skilled guides to those of the novice paying clients; the study found that experienced guides were less thrilled compared to the novice clients. To illustrate the difference in perception and engagement, the study will refer to Greenwood and Yeoman (2007:10) and Venter (2014a:3), who devised criteria for adventure sport participants (Figure 4.6).

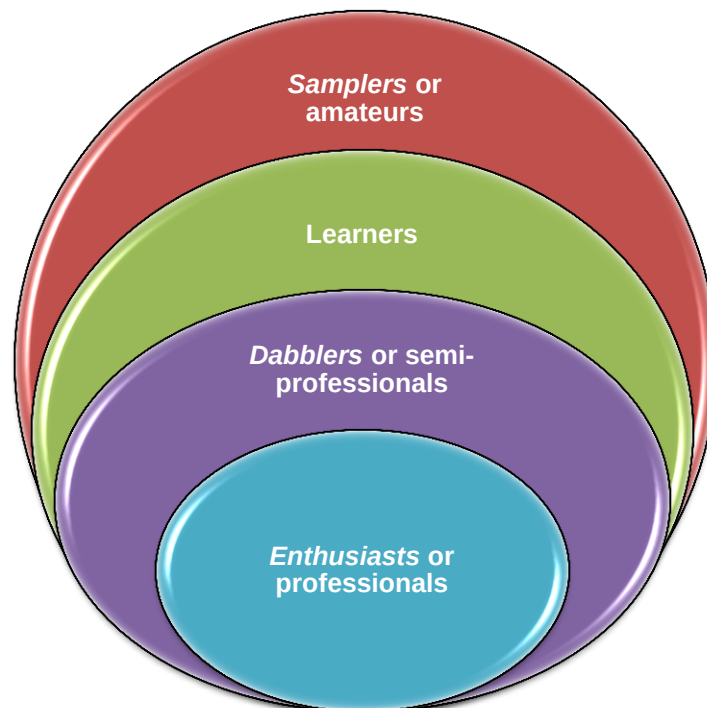


Figure 4.6: Adventure sport market: participant classification and market volume comparison

Source: Adapted from Greenwood and Yeoman (2007:10) and Venter (2014a:3)

Venter (2014a:3) classified paintball participants into the following three segments (Figure 4.6):

- Amateurs – These players participate in paintball only on special occasions such as bachelor parties, birthdays and corporate team building events. They will not participate if they are not motivated. Participants rent equipment from the paintball field and prefer quick matches for the sake of fun and enjoyment. They spend a small amount of money a year on travel and paintball expenses. Amateurs represent the public at large and do not actively seek out paintball as an adventure-based sport activity.
- Semi-professionals – These participants compete annually between 6 and 15 times in local or regional events. They are interested in well-organised events (ranked or non-ranking) for the adventure experience and are willing to travel long distances to participate. The semi-professionals spend an average of R4 000 to R12 000 a year on accommodation, travel and paintball expenses. They form the core of the adventure sport and will play in any environment. These participants are motivated, seek to socialise with their peers and enjoy the challenges associated with participating in organised events.
- Professionals – These participants are members of structured paintball leagues and travel nationally and internationally to attend sporting events with cash prizes and sports titles. They spend on average between R30 000 to R50 000 a year on accommodation, travel and paintball expenses. Prize money at tournaments is substantial.

According to Greenwood and Yeoman (2007:10), the adventure sport market can be classified into the following four segments (Figure 4.6):

- Samplers – These participants try adventure sport activity for the first time or on occasional basis, for example corporate groups and attendees to bachelor or birthday parties.
- Learners – These participants are learning an adventure-based sport activity or are seeking to improve their skills, for example training groups.
- Dabblers – These participants take part in adventure sport occasionally as part of their leisure time. They have some knowledge and skill but do not often

participate. Holidays provide the primary opportunity to participate with friends in the adventure sport.

- Enthusiasts – These participants take part in adventure sport activity regularly and are keen to do so. They are experts in the adventure sport and have the required skills and knowledge.

Although the terminology that they use is different, Greenwood and Yeoman (2007) and Venter (2014a) view adventure sport participant segments (Figure 4.6) in a relatively similar manner.

Research has shown the need to investigate the linkages between adventure, sport and tourism (Hudson, 2003:18). As discussed previously (cf. 1.1), there is a mutually beneficial relationship between tourism and sport that has ultimately led to adventure sport as a growing niche in the tourism industry. According to Beedie (2003:203) and Buckley (2010:221), adventure sport combines travel, sport and outdoor recreation, which is also known as adventure tourism. Based on the observations of Beedie and Buckley, the author of this study surmises that adventure sport has grown out of adventure tourism, adventure travel and sport tourism, as illustrated in Figure 4.7.

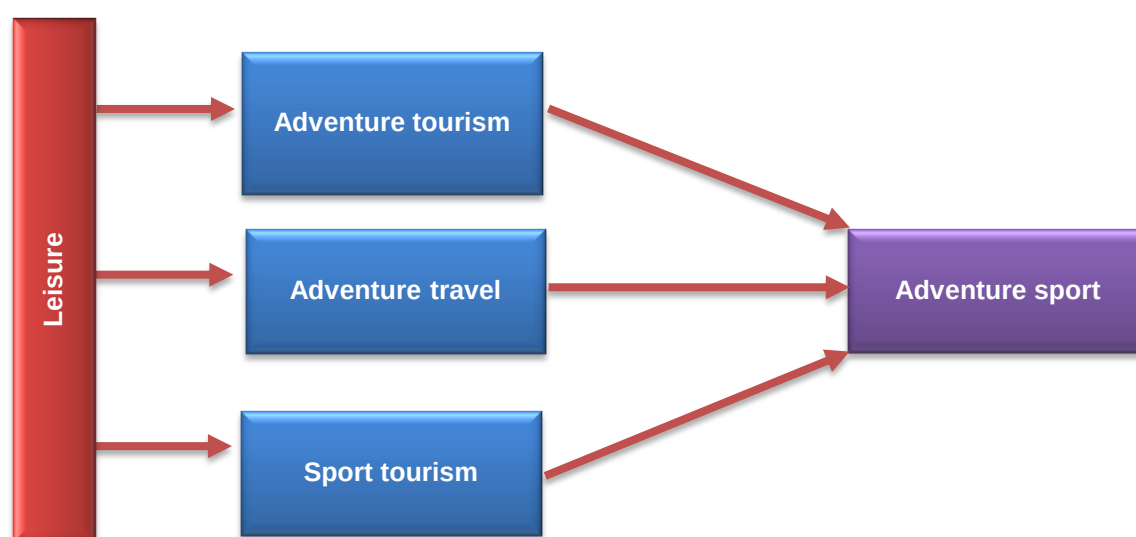


Figure 4.7: Sectors that contribute to adventure sport

Source: Adapted from Beedie (2003:203) and Buckley (2010:221)

The following sections will elaborate on adventure tourism, adventure travel and sport tourism, and will ultimately clarify and explain adventure sport.

4.3.1 Adventure tourism

The term 'adventure' is derived from the original Latin words *ad venjo*, which mean 'whatever comes' (Beedie, 2008:178), indicating an expected level of uncertainty (Dickson, 2004:49). Taylor *et al.* (2013:9) acknowledge that, due to the complexity and diversity of cultures and their accompanying history, it is difficult to define what is included by the term 'adventure'. According to ATTA (ATDI, 2015:5), adventure tourism is a trip (travelling outside an individual's normal environment for more than 24 hours and not for more than two consecutive years) that includes at least two of the following three elements: physical activity, natural environment, and cultural immersion. Defining the boundaries of adventure tourism is highly contested (McKay, 2013:32) and has emerged as a distinctive, complex field in academia (Beedie, 2008; Buckley, 2010; Swarbrooke, *et al.*, 2003).

Buckley (2010:217) explains that commercial adventure tourism seems to have had multiple beginnings through history as equipment advanced, opportunities became available and demand for different types of adventure arose at different times and places. Addison (1999:417) observes that early commercial adventure tourism was more a by-product of exploration than something sought after, as elite travellers experienced difficult conditions and obstacles (Millington, *et al.*, 2001:69).

The first decade of the 21st century has seen renewed growth in adventure tourism destinations, events and the larger, more complex multi-activity portfolios and combo products, more upscale luxury products and a growing number of expeditions and explanatory marketed as tours (Buckley, 2010:215). With the advent of global transportation, telecommunication and technology, travel is much easier than it was 100 years ago (Beedie, 2008:178). Buckley (2010:220) points out that a significant proportion of global adventure tourism involves international travel.

Tourists are increasingly looking for a more authentic travel experience (Patterson, 2002:6) that emphasises action, sensory stimulation, physical challenge and the ability to participate with their own bodies (Moeran, 1983:93). McKay (2013:36) states that the distinguishing feature of adventure tourism as a whole is the issue of risk versus safety. Mackenzie and Ker (2012:127) adds that adventure can be experienced across any domain in which risk and uncertainty are present.

Adventure tourism suggests activity that engages risk and exploration, generating excitement (Beedie, 2008:174), because in an explored world where everything is planned and managed, the excitement of the unknown has been watered down (Beedie, 2008:177).

Adventure tourism sets itself apart from other forms of tourism, as tourists deliberately seek out adventure and adrenalin-rush activity, usually in exotic or outdoor destinations (McKay, 2013; Williams & Soutar, 2005). Authors such as Beedie (2008), Kane (2010) and Weber (2001) argue that without risk, there is no element of adventure. However, McKay (2013:36) states that the adventure experience cannot truly be described as real adventure, because there are sets of rules and operating procedures that manage the risks so that the potential injury and mortality are kept within an acceptable range. Of particular note is Mortlock (1984) observation that adventure is located in the participant's understanding of the activity and that participants have different thresholds; activities as well as places will also have an effect on how a participant perceives the adventure experience.

Saayman's definition (2012:303), namely that adventure tourism consists of guided commercial tours in which the principle attractions are outdoor activities that feature natural terrain, requiring specialised equipment and perceived as exciting, gives credit to McKay's view (2013:36) of adventure tourism. According to Govindasamy (2012:47), the growth of adventure tourism can be attributed to the shift from economic success to a QoL lifestyle.

Buckley (2010:215) and Cater (2013:9) state that it is useful to divide adventure tourism trends into the following three major catalysts:

- Adventure activities that are made possible due to the development of new or improved equipment.
- External global trends such as climate change and economic distribution that impact the adventure tourism sector.
- Social trends that arise within the adventure tourism industry itself.

Cater (2013:7) observes that adventure tourism includes a great diversity of activities, from those with little risk to those who pose significant challenges. Buckley (2010:4) states that adventure tourism is a broad term that encompasses all types of commercial outdoor tourism and recreation with significant elements of excitement. The author (2010:221) describes the growing number of tourism destinations of various scales that are reinventing their image to attract adventure participants by hosting events that are not necessarily competitive in nature. Adventure tourism can take the form of independent travel for adventure purposes, including fully packaged, guided commercial adventure tours such as white-water rafting, and fixed-site adventure sport activities such as skiing (Buckley, 2010:9).

Buckley (2010:9) is of the opinion that adventure tourism is best described by its scope rather than by precise wording or a definition. Buckley (2010:9) describes the four major components that overlap (as depicted in Figure 4.8) in the following way:

- Independent travel qualifies as tourism in the traditional economic sense and involves transport, accommodation and activities that the participant considers to be adventurous, for example self-guided hiking holidays (Swarbrooke, *et al.*, 2003:19).
- Fully packaged commercial adventure tours departing at scheduled dates and fixed times. Examples of packaged tours include embarking on camping trips and hiking on gradually changing terrain (Swarbrooke, *et al.*, 2003:65).
- Fixed-site adventure activities that are accessible to tourists and locals but predominantly used by tourists. Examples include mountain skiing at a ski resort (Buckley, 2010:9) or paintball venues (Venter, 2014a:2).
- Ancillary business supporting the adventure tourism. Examples include businesses hiring out recreational equipment and adventure-branded clothing (Buckley, 2010:9).

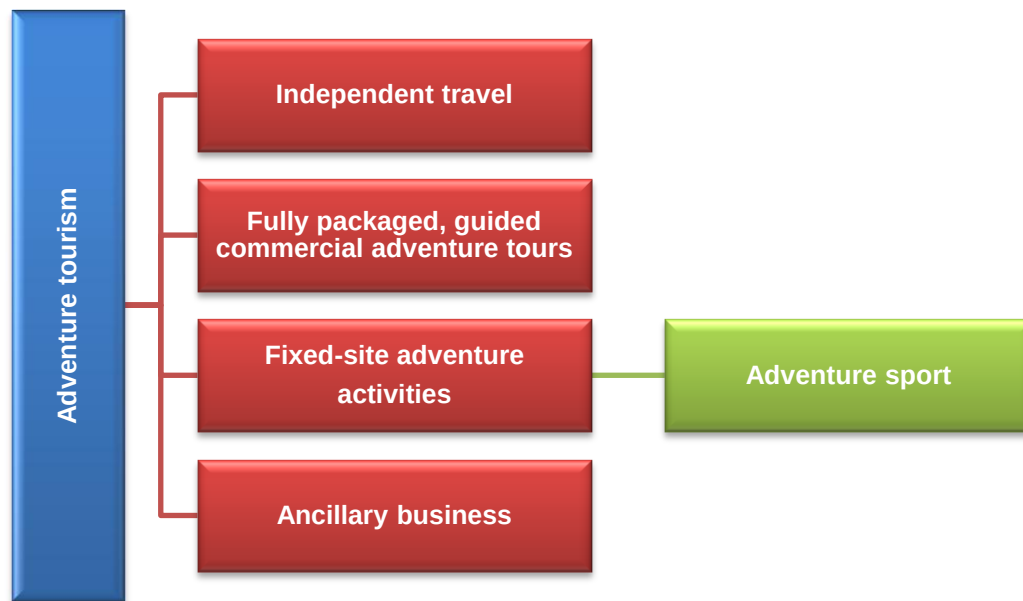


Figure 4.8: Major components of adventure tourism

Source: Adapted from Buckley (2010:9)

Beedie (2008:182) makes the following observations with regard to adventure tourism:

- It is subjective and personalised for the type of engagement a participant undertakes.
- Any adventure activity is physically demanding and requires the necessary set of skills to complete.
- Abundant and easily accessible knowledge and information promote the adventure activity but ultimately diminish the individual's experience, as the outcome is stated and not uncertain.
- It comprises a broad spectrum of activities that are difficult to generalise as one activity.

4.3.2 Adventure travel

As mentioned previously (cf. 1.2), adventure travel seems to have developed out of traditional outdoor and wilderness recreation during the 20th century (Saayman & Uys, 2012:303). According to ATTA (2013), adventure travel is the deliberate pursuit of either a hard or soft adventure activity. Adventure travel is primarily associated with activities in which the purpose is to participate in an adventure experience where the 'setting' provides the primary activity and purpose of the trip rather than traditional sightseeing (Sung *et al.*, 1997:2). Participants are often faced with increasing levels of risk or

personal threat and injury (Hall, 1992). Therefore, adventure travel focuses on the deliberate pursuit of risk and uncertainty as its primary form of appeal to participants.

4.3.3 Sport tourism

Sport tourism is one of the oldest forms of tourism with its roots dating back to ancient times, for example the ancient Olympic Games, Roman gladiator contests and Circus Maximus (Page & Connel, 2010:49; Russell, 2013:10; Saayman, 2012:42). Kim (2004:58) states that sport tourism has emerged as a subfield of travel and leisure. Sport tourism consists of a union between sport activities, events and the tourism industry on a global scale, providing accommodation and transport (Brown, *et al.*, 2010:59; Page & Connel, 2010:50; Preuss, 2005:281; Preuss, *et al.*, 2007:5; Saayman, 2012:3; Saayman & Uys, 2003:293). Saayman (2012:303) explains that sport tourism is the active or passive participation at a competitive event and in leisure-based travel that takes people temporarily outside their home environment to participate in physical activities, watch physical activities or admire attractions associated with physical activities. Sport tourism means using all types of sport to improve tourism with the aim of serving the interests of sport and the community (Saayman & Uys, 2003:293).

4.3.4 Adventure sport

George (2015:429) points out that there has been much development with regards to various niche fields in sport tourism of which adventure sport is one. Saayman (2012:302) states that adventure sport is central to the adventure tourism industry because the activities are often practiced at specific, dedicated venues that cannot be moved. Adventure sport is in many ways seen as the opposition and alternative to traditional sport (Breivik, 2010:260). Palmer (2004:56) argues that participants in adventure sport may be seen as “weekend warriors”. Saayman (2012:302) points out that adventure sport can be practiced on land, in water and in air and are practiced globally by millions of people. As mentioned previously (cf. 1.1), adventure sport is increasingly viewed as a discipline in its own right (Hudson, 2003:8; Saayman, 2012:304).

Key characteristics of adventure sport have been identified by Saayman (2012:302), including individuality, achieving high levels of satisfaction, having fun, excitement, gravity, ingenuity, and technology. Adventure sport features physical activity with

elements of risk and an uncertain outcome in a natural setting (Beedie, 2003:203; George, 2014:216; Krein, 2007:80; Ryan & Trauer, 2005:143). Due to the nature of adventure sport, its remote setting and external factors such as the weather, it is impossible to remove all risks from the activity (Krein, 2007:80). Mei-Dan and Carmont (2013:11) state that adventure sport contains elements of increased risk and is usually performed in beautiful, exciting and often remote locations. Adventure sport, although not free from risk of physical injury, is less likely to be fatal when an accident does occur (Venter, 2014a:5) compared to extreme sports in which the most likely outcome of a mistake or accident is death (Brymer, 2005:70). Table 4.1 provides examples of hard and soft adventure sport activities.

Table 4.1: Characteristics of hard and soft adventure sport activities

Extreme/Hard adventure sport activities	Soft adventure sport activities
High level of <i>actual</i> risk	High level of <i>perceived</i> risk
Advanced skills and previous experience	Low level of actual risk
Major physical challenge	No need for prior experience or proficiency
Adrenaline rush	Novelty
Participant in good physical condition	Challenge
	Danger
	Managed activity

Source: Adapted from George (2014:216) and Saayman (2012:306)

According to Hudson (2003:18), the adventure sport market is generally split into two categories, namely extreme/hard adventure and soft adventure sport activities. George (2014:215) and Swarbrooke *et al.* (2003:32) argue that many tourists seek a more intensive and extreme leisure experience; these authors distinguish between the characteristics of hard and soft adventure sport activities (Table, 4.1) such as climbing, caving, abseiling, sea kayaking, white-water kayaking, rafting, diving, snorkelling, skiing, snowboarding, surfing, sailboarding, sailing, ballooning, skydiving, parapenting, horse riding, mountain biking, snowmobiling and off-road driving (Saayman, 2012:303). Table 4.2 provides a breakdown of some of the different hard and soft adventure sport activities according to their place of occurrence.

Table 4.2: Different hard and soft adventure sport activities

Air	Earth	Water	Ice
Fighter plane racing	Adventure racing	Barefoot water-skiing	Bob skeleton
Hang gliding	Aggressive inline skating	Big wave surfing	Bobsleigh
Helicopter assault	BMX mountain biking	Boardsailing	Sled dog racing

courses			
Hot-air ballooning	Drag racing	Boogie boarding	Skiing
Microlighting	Extreme motocross	Jet skiing	Ski jumping
Paragliding	Indoor climbing	Scuba diving	Snowboarding
Parasailing	Paintball	Kiteboarding	Speed skiing
Power kiting	Kite buggying	Windsurfing	Steep skiing
Skydiving	Rally driving	Sea kayaking	
Scenic flights	Skateboarding	Surfing	
Ballooning	Mountain biking	Wakeboarding	
	Off-road driving	Water skiing	
		White-water rafting	

Source: Adapted from Greenwood and Yeoman (2007:12), McKay (2013:49) and Saayman (2012:306)

Venter (2014a:5) points out that words used to describe extreme, hard and soft adventure sport are often similar and therefore descriptive wording cannot be used to distinguish or set them apart. The following subdivisions will seek to clarify briefly the difference between extreme, hard and soft adventure sports in order to quantify adventure sport more accurately.

4.3.4.1 Extreme and hard adventure sport

The terms 'extreme adventure' and 'hard adventure' are often used interchangeably (Breivik, 2010:260; Wood, 2008), which inevitably leads to some confusion on what is expected during extreme and hard adventure sport. According to Saayman (2012:304), the number of sports being referred to as 'extreme sport' is continually growing, as adventurers, risk-takers and tourists continue to invent new ways to challenge themselves. Extreme adventure sport consists of any sport that emphasises speed, height, high levels of physical exertion and highly specialised gear, and is often an individual rather than a team sport (Wood, 2008). It has become synonymous with a multitude of non-traditional, independent and organised alternative sports (Brymer & Gray, 2009:139), for example skydiving, bungee jumping, BASE jumping, rock climbing, extreme skiing, waterfall kayaking and free-solo climbing (Boli & Li, 2005:3; Saayman, 2012:307).

Hard adventure attracts 'danger rangers' or 'adrenaline junkies' and involves strenuous physical exertion with the risk of serious injury and even death, for example skydiving, rock-climbing, heli-skiing or white-water kayaking (McKay, 2013; Mei-Dan & Carmont, 2013; Saayman, 2012; Venter, 2014a). According to Saayman (2012:304), extreme

adventure sport provides participants with a combination of danger, fear and excitement. Based on literature that has already been referred to, the author of this study considers extreme and hard adventure sport to be the same discipline that covers the same spectrum of risk and danger. Hence forth, extreme adventure sport will be referred to as 'hard adventure sport' for the purpose of this study.

The latest statistics on hard and soft adventure sport were compiled by ATTA in 2013. As can be seen in Table 4.3, there was a significant increase (62%) in hard adventure sport participation between 2009 and 2012.

Table 4.3: Hard adventure sport based on overall population

Hard adventure based on overall population			
Region	2009	2012	Growth per year
Europe	1.9%	4.9%	54%
North America	2.3%	0.9%	-20%
South America	1.4%	8.0%	153%
All Regions	1.6%	4.7%	62%

Source: ATTA (2013:5)

4.3.4.2 Soft adventure sport

Soft adventure sport is targeted at non-adrenaline junkies and families (Hudson, 2003:8) and embraces some elements of adventure but is characterised by high levels of safety (Patterson & Pan, 2002:32). There are lower elements of risk involved in soft adventure than in hard adventure sport (Mckay, 2013:33). Soft adventure consists of a high level of perceived risk with low levels of actual risk and is managed by professionals. The participant needs no prior experience or proficiency but is still offered an element of danger and challenge (George, 2014:216). As can be seen in Table 4.4, there has been a steady increase (17%) in soft adventure participation between 2009 and 2012 (ATTA, 2013:5).

Table 4.4: Soft adventure based on the overall population

Soft adventure based on the overall population			
Region	2009	2012	Growth per year
Europe	23.2%	41.9%	27%
North America	18.5%	15.5%	-5%
South America	34.9%	40.3%	5%
All Regions	24.8%	37.2%	17%

Source: ATTA (2013:5)

4.3.5 Summary

Patterson (2002:7) states that the ultimate placement of an activity as either hard or soft adventure will vary, depending on the type of terrain and weather conditions prevalent during participation. Based on the analysis of literature on hard and soft adventure sport, it is evident that certain aspects of the sports are similar, for example risk, danger and the fact that they take place in a natural setting. What sets hard adventure sport apart from soft adventure sport is that the former has an associated risk of death or serious bodily harm should a mistake be made or an accident happen, which is not prevalent in soft adventure sport (Venter, 2014a:5). According to Venter's definition:

adventure sport combines elements of leisure, tourism, travel, sport and recreation into physically challenging activities with elements of physical/emotional risk and uncertainty, which is performed by an individual or a group in either a manmade or natural environment for the purpose of experiencing danger, stress, anxiety, fear and excitement dependent on the participant's skill level.

The following section will seek to analyse the well-established literature on tourism experience as well as the relatively new adventure sport experience. The purpose will be to identify any similarities and/or differences found in literature on tourism experience and adventure sport experience that will serve to better understand the adventure sport experience and allow the correct selection of questions for the empirical survey.

4.4 ADVENTURE SPORT EXPERIENCE

According to Oh *et al.* (2007), there is no universally accepted or clearly defined method to explain experiences. Experience in general is a complex construct that has attracted considerable attention in literature (Aho, 2001; Atilgan, *et al.*, 2003; Gnoth, *et al.*, 2009). Oh *et al.* (2007) explain that experiences consist of behaviour, perception, cognition and emotions that are either direct or indirect. Tourism adventure experiences, of which adventure sport is a subfield (cf. 1.1), are created through a process of visiting, learning and enjoying activities in an environment away from home (Stamboulis & Skayannis, 2003).

Academic research has not fully explored the various adventure tourism (sport) experiences (Arnould, *et al.*, 1998; Gyimóthy & Mykletun, 2004; Mackenzie & Kerr, 2012:126). Based on the literature that has been referred to, it can be seen that the

academic field of adventure sport experience is not well researched yet. The following section will explore the tourism and adventure sport experience based on themes found in literature, followed by adventure participants' feedback.

4.4.1 Tourism experience based on literature

Murray *et al.* (2009:4) state that the tourism experience is prevalent in tourism literature. According to Tung and Richie (2011:1381) and Kruger (2012:279), the tourism experience encompasses the entire tourism trip (before, during and after the trip). De Rojas and Camarero (2008:525) are of the opinion that tourists seek a complete experience that includes leisure, culture, education and social interaction. Murray *et al.* (2009:2) mention that the tourism experience is particularly challenging in the field of tourism, as its role lies at the heart of the industry. They discuss key themes (Table 4.5) that have been developed around the tourism experience in literature (Murray, *et al.*, 2009:5). According to Kim *et al.* (2015:466) tourism experiences improve tourists quality of life and creates new interests in their lives.

Table 4.5: Key themes surrounding tourism experience

Theme	Study
Ambiguous understanding of the tourism experience concept	Arnould and Price (1993); Jennings <i>et al.</i> (2009); Oh <i>et al.</i> (2007); Quan and Wang (2004); Ritchie and Hudson (2009); Zehrer (2009)
Peak experiences	Cohen (1972); Cohen (1979); McCabe (2002); Mossberg (2007); Quan and Wang (2004); Turner and Ash (1975)
Marketing/Management approach	Brunner-Sperdin and Peters (2009); Mossberg (2007); Oh <i>et al.</i> (2007); Otto and Ritchie (1996); Quan and Wang (2004)
Involvement	Aho (2001); Brunner-Sperdin and Peters (2009); Larsen (2007); Mossberg (2007); Oh <i>et al.</i> (2007); Pine and Gilmore (1998); Pine and Gilmore (1999); Ritchie and Hudson (2009)
Emotional and spiritual elements	Aho (2001); Graburn (2001); Holbrook and Hirschman (1982); Jepson and Sharpley (2015); Mossberg (2007); Oh <i>et al.</i> (2007); Otto and Ritchie (1996); Pine and Gilmore (1998); Pullman and Gross (2003)
Social experience	Axelsen and Swan, (2010); Mossberg (2007); Murphy (2001); O'Dell (2005); Otto and Ritchie (1996); White and White (2009)
Environment to experience	Brunner-Sperdin and Peters (2009); Mossberg (2007); Oh <i>et al.</i> (2007)
Experience embedded in long-term memory	Csikszentmihalyi (1990); Kruger <i>et al.</i> (2013); Larsen (2007); Saayman (2013); Tussyadiah and Fesenmaier (2009); Tung and Richie (2011)

Source: Adapted from Murray *et al.* (2009:5)

4.4.1.1 Ambiguous understanding of the tourism experience concept

The ambiguous understanding of the tourism experience has led to various authors proposing different definitions (Table 4.5). There is a general difference in the central meaning of experience and the concept remains obscure and elusive (Jennings, *et al.*, 2009). Ritchie and Hudson (2009:112) set out to identify the main research streams with regard to the tourism experience and subsequently defined six. They came to the conclusion that more research was needed to elaborate and understand the tourism experience.

4.4.1.2 Peak experiences

Quan and Wang (2004:297) state that the social science approaches (Table 4.5) view tourist experience as 'peak experience'. According to them, peak experience or optimal experience serves as an escape from everyday life. According to the social science viewpoint, the tourism experience is seen as an escape from the dullness and routine of everyday life (Cohen 1972; Cohen, 1979; Turner & Ash, 1975).

4.4.1.3 Marketing/Management approach

The marketing/management approach (Table 4.5) views tourism experience as a consumer experience (Quang, *et al.*, 2004:297), because the consumption of the experience is done by a tourist as consumer of a tourism service (Mossberg, 2007:60). Mossberg (2007:64) emphasises the context in which a tourist consumes a service by suggesting a theme or story approach that would allow for a more meaningful tourism experience; according to the author (2007:71), such verbal and visual representation might encourage a positive experience. Oh *et al.* (2007) summarises the marketing/management approach by stating that a tourist seeks an engaging experience that is accompanied by the service element of the offering.

4.4.1.4 Involvement

Some authors view the tourism experience according to involvement (Table 4.5). Aho (2001) proposed four elements for the tourist experience, namely emotional, learning, practical and transformational experiences. However, Ritchie and Hudson (2009) point out that most tourist experiences consist of short encounters that obscure the actual experience. According to Oh *et al.* (2007), tourists may be motivated by pre-existing

mental and emotional images of what they expect to experience rather than the physical traits of the destination.

4.4.1.5 Emotional and spiritual elements

The emotional and spiritual elements of the tourism experience are well documented in literature (Table 4.5). Tourists usually consume a service to stimulate emotions such as belonging or attachment (Brunner-Sperdin & Peters, 2009; Jepson & Sharpley, 2015; Oh, *et al.*, 2007; Otto & Ritchie 1996). According to Mossberg (2007:61), tourism experience is for consumers a combination of emotional, physical, intellectual and spiritual elements.

4.4.1.6 Social experience

Some authors view the tourism experience as a social experience (Table 4.5). Mossberg (2007:60) argues that tourists, by their very nature, consume and therefore experience the trip from the start of their journey right through to its end. Tourists interact with others, which provides an opportunity to socialise (White & White, 2009:143), and social interaction and conversation are significant ways of dealing with anxiety (White & White, 2009:151). Events and festivals are core components of the tourism experience and provide opportunities to engage in leisure; they also offer social and cultural experiences to tourists (Axelsen & Swan, 2010). O'Dell (2005) states that the social experience is a place of pleasure, enjoyment and entertainment that serves as a meeting ground for diverse groups of people who come into contact with one another.

4.4.1.7 Environment to experience

Some authors view the tourism experience based on the environment in which it is experienced (Table 4.5). This consists of the tourism providers who make the circumstances available that will enhance the tourists' experience (Mossberg, 2007:60). According to Steyn *et al.* (2004:97), tourists visit a specific location to experience something unique. Murray *et al.* (2009:6) argue that successful tourism providers need to incorporate the following opportunities and services to ensure a quality experience for adventure sport:

- An interactive and social dimension.

- A safety dimension.
- A stimulating/challenge-seeking dimension.

4.4.1.8 Experience embedded in long-term memory

Some authors are of the opinion that the tourism experience is embedded in a tourist's long-term memory (Table 4.5). Saayman (2013) states that the tourism experience differs from service products in the sense that tourists can recall their experience years later, unlike, for example, a haircut they received three months previously. According to Larsen (2007:15), the tourism experience includes concepts such as expectation, events and memories. Csikszentmihalyi (1990) describes experience that is embedded in the long-term memory as an optimal experience and an escape from the daily routine where there is a sense of exhilaration and an escape that becomes the landmark in an individual's memory of what life should be.

Kruger *et al.* (2013:435) state that tourism (such as festivals) offers a wide range of experiences that differ from day-to-day living, offers a lifestyle package and is an indicator of a lifestyle tourism experience. Tung and Richie (2011:1381) identified expectation and recollection as important elements in long-term memory recollection. Expectation is explained as the pre-travel intentions that influence a tourist's subsequent expectation fulfilment (Tung & Richie, 2011:1381). Additionally, recollection serves as an important retention mechanism for long-term memory and requires memory points to help tourists reinforce their memories psychologically via, for example, photographs or videos (Tussyadiah & Fesenmaier, 2009:26).

A recent development in the adventure sport subculture is the widespread use of action cameras (such as GoPro) that are used to take high-definition videos and pictures of the participants' adventures. These are shared on popular online video websites (YouTube) and social media websites (Facebook) to build identity and status amongst the participants' peers (Breivik, 2010:264; French, 2016:2). The ultimate goal is to create a compilation of memory points throughout the tourism experience that can be shared with friends and relatives after the trip (Tung & Richie, 2011:1382).

The following section will explore themes found in literature on the adventure sport experience.

4.4.2 Adventure sport experience based on literature

According to Weber (2001), an individual's subjective adventure sport experience may be inconsistent with traditional research classifications and may require a greater exploration of the psychological aspects of the adventure sport experience, how the psychological experiences are managed and the impact on the overall experience quality. This makes narrowing down the aspects classification of the adventure sport experience challenging. Mackenzie *et al.* (2013:215) observe that adventure (sport) experience shares literature with leisure and recreation experience, which makes the starting point to understand it a bit easier. According to the authors (2013:215) the adventure (sport) experience occurs in phases that are, in turn, affected by contextual variables (e.g. activity and environment) and personal variables (e.g. motivation, mood and state of mind). The following section will discuss key themes found in literature on the adventure sport experience.

Table 4.6: Key themes surrounding adventure sport experience

Theme	Study
Cultural rebellion	Breivik (2010:260); Cater (2013:9)
Challenge/Risk experience	Burr <i>et al.</i> (2013:1311); Cater (2013:8); Health and Safety Executive (HSE) (2003); Saayman (2012:306)
Fear, anxiety and stress experience	Breivik (2010:1); Burr <i>et al.</i> (2013:1312); Swarbrooke <i>et al.</i> (2003); Vujko and Plavša (2011:95)
Adrenaline rush and escape experience	Breivik (2010:260); Cater (2013:9); Modern Combat Sports (2014); Saayman (2012:306)
Physical and psychological conflict experience	Cater (2013:9); Knutson <i>et al.</i> (2007); Vujko and Plavša (2011:95)
Social and emotional experiences	Mackenzie <i>et al.</i> (2013:228); Shone and Parry (2013)
Peak and optimal experiences	Borrie and Roggenbuck (2001:255)

Source: Author's own compilation based on literature consulted

4.4.2.1 Cultural rebellion

Cater (2013:9) is of the opinion that adventure sport experiences have an underlying masculinity imperative that varies according to culture. The concept of adventure (as well as its subsequent experiences) for males can be found in history through war (although not always voluntary, but duty bound) and has always served as an external motivator (Cater, 2013:9). According to Breivik (2010:260), modern life has become too

civilised, controlled, full of routine, risk free and secure, resulting in needs that can only be satisfied by adventure (sport) experiences, which can be seen as opposition to and protest against modern society.

4.4.2.2 Challenge/Risk experience

According to Saayman (2012:306), there has been a sharp increase in the demand for adventure sport experience, as participants are believed to seek something that will take them closer to the edge. Burr *et al.* (2013:1312) are of the opinion that those participants who are inadequately challenged by an activity will lose interest and drop out. The adventure (sport) experience allows young people to develop by meeting challenges they do not face every day and to experience a sense of achievement when they overcome a challenge (Health and Safety Executive, 2003). Cater (2013:8) tries to make sense of it all by affirming the need for adventure (sport) experiences as part of our being and mentions that although the method and form have changed, the elements of risk have been a constant throughout human history.

4.4.2.3 Fear, anxiety and stress experience

Breivik (2010:261) points out that skill is required, not only in body but also in mind, in order to experience adventure (sport), as individuals need to be able to cope with fear, anxiety and stress. Participating in an adventure sport offers a wide range of experiences that are different from the daily routine, for example danger, terror and anxiety but also the thrill of success, elation and excitement (Swarbrooke, *et al.*, 2003).

Cater (2013:8) explains that the challenges experienced during adventure sport (fear, anxiety and stress) are closely linked to what our prehistoric ancestors experienced in order to survive. According to Burr *et al.* (2013:1311), evolutionary theory suggests that humans developed fear as a mechanism to protect themselves against injury until they had sufficient mastery of a situation to cope with the effects that are induced (fear, anxiety and stress). Vujko and Plavša (2011:95) argue that adventure sport experiences are a way for modern society to combat stress and as such have a positive effect on participants' physical and psychological health condition, including self-esteem, confidence and biochemical mechanisms.

4.4.2.4 Adrenaline rush and escape experience

The stress associated with the adventure (sport) experience results in an individual's body releasing adrenaline, which causes acceleration of the heart and increases power in the muscles, as the body prepares to fight or run away (Cater, 2013:9). Saayman (2012:306) surmises that adventure sport participants want to experience the real thing, an adrenaline rush, perceived danger and the euphoria created by the experience. According to Modern Combat Sports (2014), adventure sports such as paintball emulate modern combat by providing the adrenaline pumping action of combat without the violence associated with true armed conflict.

Cater (2013:8) states that the ghosts of the psychological inheritance (cf. 4.5.2.3) remain within the human psyche and lead to a sensation of emotional highs in the body through the production of adrenaline, endorphins and catecholamines. This sensation leads to a heightened adventure experience and is often central to an individual's satisfaction level. Physical activity increases the production of endorphins, which serve as a natural narcotic, reduce pain and stimulate the feeling of euphoria (Vujko & Plavša, 2011:95). Herein, possibly, lies the primary reason for people seeking an adventure (sport) experience, because the reward for success is a strong blend of wonderful sensations (Breivik, 2010:260) that allow participants to escape, if only for a short while.

4.4.2.5 Physical and psychological conflict experience

According to Cater (2013:9), it is undeniable that many of the concepts that are found in adventure (sport) experiences, both physically and psychologically, are closely entwined with internal psychological conflicts experienced, for example travelling away from home, discarding traditional life and the glory and heroism on return. All participants in an adventure sport activity create their own experience based on their history, values, attitudes and principles brought to the activity (Knutson, *et al.*, 2007).

4.4.2.6 Social and emotional experiences

Mackenzie *et al.* (2013:228) are of the opinion that adventure (sport) experiences should be measured subjectively by making use of motivational states and emotions. Furthermore, interpersonal communication and socialisation affect the adventure (sport) experience based on the participant's desired need thereof. According to Shone and Parry (2013), humans are social animals and much of what they do revolves around

social stimulation. Patterson (2002:9) identified the meeting of new friends as an important component of the adventure (sport) experience.

4.4.2.7 Peak and optimal experiences

Borrie and Roggenbuck (2001:255) identified peak or optimal moments as part of a significant adventure (sport) experience. Many authors (Arnould and Price, 1993; Beedie, 2008; Csikszentmihalyi & Csikszentmihalyi 1999; Foley, *et al.*, 2003; Jones, *et al.*, 2003; Kerr & Mackenzie, 2012; Mackenzie, *et al.*, 2011; Mackenzie, *et al.*, 2013; Martin & Priest, 1986; Wu & Liang, 2011) make mention of the flow experience (cf. 2.3.3.1.5) in adventure sport, which was discussed in Chapter 2.

The next section will seek to ascertain the themes that were mentioned most frequently by adventure sport participants during an online question posed on Facebook by the online TV show Behind the Bunker on 21 February 2016.

4.4.3 Adventure sport experience based on internet questions

Behind the Bunker (2016) is a weekly, online paintball TV show with more than 27 000 viewers worldwide. On 21 February 2016, the presenters asked viewers to provide feedback regarding the following question: “What is it about paintball that keeps you coming back?” The answers provided support for the themes identified in Table 4.6. The answers that were posted on Behind the Bunkers Facebook page (2016) were as follow:

Paintballer 1: *“The friendly community, most of my paintball friends I met at the fields and have grown into great friendships, rather than friends who went and played paintball.”*

Paintballer 2: *“The heartbeat accelerated by the fear of being shot mixed with shortness of breath escaping or chasing an opponent. I feel the need ... the need for DEED!”*

Paintballer 3: *“The people I meet at games, and then see again the next game.”*

Paintballer 4: *“The community, the road trips, the life style.”*

Paintballer 5: *“The rush! And I don't go to jail for shooting at people!”*

Paintballer 6: *"The memories, the friendships, the good fights, the losses."*

Paintballer 7: *"There is no age difference. I play with all sorts of ages, it's great."*

Paintballer 8: *"The effect on people. No matter what walk of life or what you've got in your hands, when you're on the field be it scenario or speedball you're there to play and win. 15 v 15 scenario games with rentals and vets alike? No problem. Black, white, yellow, red. Colours of the person do not matter, for a brief few minutes anything in the world matters more than having fun and the people you may or may not know standing next to you hurling little balls of paint at others you may or may not know."*

Paintballer 9: *"The teamwork, the camaraderie, and above all else, the adrenaline rush of sneaking up to a well-defended church, breaching inside without being noticed, climbing the stairs while hearing voices, and proceeding to open fire on the 5 people that had NO clue you were stalking them. Oh... and the smoke..."*

Paintballer 10: *"This year will be 25 years straight of playing paintball for me, no time off, no hiatuses. Long ago it quit being about the game itself, and it became about the camaraderie, and friendships. I can show up to my home field for rec ball and have crap weather or no walk-ons show for the day, and I will still find myself hanging out and talking to the owner, the refs, and other players, not leaving until 6-8 hours later. My paintball friends are beyond that, they are family—I know I can rely on them, and we all look out for one another, and I know if I am ever in dire straits there is a whole crew of people that will bail me out and help when needed."*

Paintballer 11: *"I like that when I'm on the paintball field, all of life's troubles melt away. It's the only thing I've found that is so emotionally liberating stress relieving. And whether I'm playing good or playing badly, it's always fun."*

Paintballer 12: *"...because when I am out on the field, all that matters is the game, stress from every day is forgotten and relieved. Also helps that the community is so great and our whole family plays together."*

Paintballer 13: *"The camaraderie of the team and other players, the diverse fields, terrains, productions, and the fact that anyone from age 10+ can play alongside/against you and we are all out together enjoying ourselves."*

Paintballer 14: *"...the sound of paintballs being fired, especially from my own barrel."*

Paintballer 15: *"The people. I have made some amazing friends through paintball. And we all share a common goal... play paintball, help those who need it, and have fun!"*

Paintballer 16: *"The amount of money I've put into markers..."*

Paintballer 17: *"The camaraderie and the 'human chess' factor. By that I mean the strategy behind the game."*

Based on the responses posted on the Behind the Bunker (2016) question, the author has identified several themes, as shown in Table 4.7.

Table 4.7: Themes emerging from respondents (Behind the Bunker, 2016)

Theme	Respondent
Community and friendship	Paintballers 1, 2, 4, 6, 8, 10, 13 and 15
Fear	Paintballer 2
Challenge	Paintballers 2, 5, 6, 9 and 17
Lifestyle	Paintballers 4 and 7
Adrenaline rush and escape	Paintballers 5, 11 and 12
Memories	Paintballer 6
Stress relief	Paintballers 8, 11 and 12
Camaraderie	Paintballers 8, 9, 10, 15 and 17
Place and environment	Paintballers 13 and 14

Source: Author's own compilation

The following section will illustrate the themes that were found in tourism (Table 4.5) and adventure sport (Table 4.6), as well as respondents' comments on paintball as an adventure-based sport (Table 4.7). The purpose will be to identify any overlapping themes that will serve to better understand the adventure sport experience and allow the correct selection of questions for the empirical survey.

4.4.4 Themes to be explored in the empirical survey

4.4.4.1 Themes that only relate to the tourism experience in literature

The marketing/management approach theme (cf. 4.4.1.3) and the *involvement* theme (cf. 4.4.1.4) showed no overlap in literature that was consulted on adventure sport or in respondents' comments (Figure 4.9). However, as highlighted by Venter (2014a:3), paintballers often partake in scenario-based events that are centred on a story arc or historically based objective for the purpose of creating a deeper sense of involvement by the participants. Consequently, the *marketing/management approach* theme and the *involvement* theme will both be incorporated in the empirical survey.

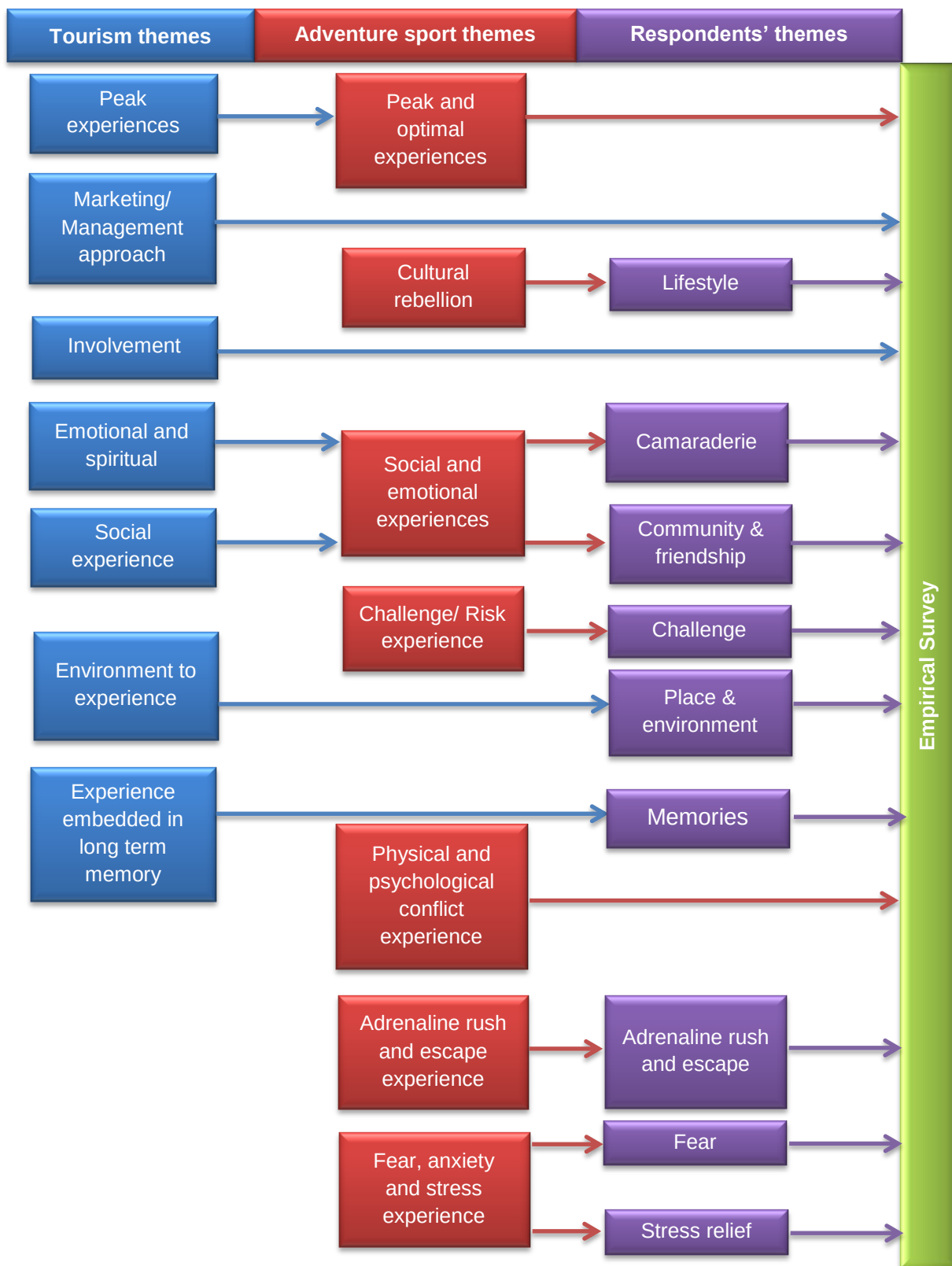


Figure 4.9: Themes found in tourism and adventure sport experience literature and respondents' comments on paintball as an adventure-based sport

Source: Author's own compilation based on literature review

4.4.4.2 Themes that only relate to the adventure sport experience in literature

- The *physical and psychological conflict* theme (cf. 4.4.2.5) that is experienced by adventure sport participants involves their travelling to and from events, as well as stepping out of their modern comfort zone to participate in scenario or historical (paintball) battles. Afterwards, they have the opportunity to tell their tales of glory and heroism. Therefore, the *physical and psychological conflict* theme will be incorporated in the empirical survey.

4.4.4.3 Themes that are present in the tourism experience in literature as well as in those experiences expressed by the respondents

- The *environment to experience* theme (cf. 4.4.1.7) and the *place/environment* theme (Table 4.7) comprise the paintball fields and event organisers who host events and cater for the paintballers' needs. Each paintball field is unique, based on its size, terrain, obstacle layout and atmosphere (Venter, 2014a:3), which makes every paintball experience different. Paintball fields provide the place for paintballers to interact off the field socially, ensure their safety through enforcement of rules and provide a stimulating, challenging environment. The question to be answered is the following: "To what extent do these experiences contribute to the paintballers' overall experience?" Hence, the *environment to experience* theme and the *place/environment* theme will be incorporated in the empirical survey.
- The *experience embedded in long-term memory* theme (cf. 4.4.1.8) and the *memories* theme (Table 4.7) comprise the paintballers' previous experiences that they draw on in anticipation of future experiences, in other words, expectation, event and memories. Therefore, the *experience embedded in long-term memory* theme and the *memories* theme will be incorporated in the empirical survey.

4.4.4.4 Themes that are present in the adventure sport experience in literature as well as in those experiences expressed by the respondents

- The *cultural rebellion* theme (cf. 4.4.2.1) and the *lifestyle* theme (Table 4.7) feed the subcultural norms of the adventure sport experience, especially of paintball, which offers simulated combat that is in direct opposition to the modern norm of safety and comfort. To what extent these themes impact the lifestyle of

paintballers needs to be tested. Therefore, the *cultural rebellion* theme and the *lifestyle* theme will be incorporated in the empirical survey.

- The *challenge/risk experience* theme (cf. 4.4.2.2) and the *challenge* theme (Table 4.7) form arguably some of the core components of adventure sport experience, as they provide challenges that are not available every day. Paintball, as defined by Venter (2014a:4), ranges from casual combat amongst friends to full-fledged military simulations that come close to actual physical challenges faced in combat but without the bloodshed, violence and death. Consequently, the *challenge/risk experience* theme and the *challenge* theme will be incorporated in the empirical survey.
- The *adrenaline rush and escape* theme (cf. 4.4.2.4; Table 4.7) is arguably another one of the core components of the adventure sport experience. The stress involved in simulated combat when being fired upon results in the body releasing adrenaline in response to the perceived danger and for a while, paintballers focus on the challenge at hand and forget the world around them. To what extent this theme motivates paintballers to participate is yet to be determined. Therefore, the *adrenaline rush and escape* theme will form part of the empirical survey.
- The *fear, anxiety and stress experience* theme (cf. 4.4.2.3), *fear* theme and *stress relief* theme (Table 4.7) are inherently part of the adventure sport experience. The extent to which a paintballer's skill matches the level of the posed challenge determines the levels of fear, anxiety and stress that are experienced. Consequently, the *fear, anxiety and stress experience* theme, *fear* theme and *stress relief* theme will be incorporated in the empirical survey.

4.4.4.5 Themes that relate to the tourism experience, adventure sport experience and respondents' experience

- The *peak experience* theme (cf. 4.4.1.2) and *peak and optimal experience* theme (cf. 4.4.2.7) represent a significant part of the adventure sport experience, culminating in the flow experience (cf. 2.3.3.1.5) that allows participants an internal feeling of escape, which overlaps with the *escape* theme (cf. 4.4.2.4) and Table 4.7. Therefore, the *peak experience* theme and *peak and optimal experience* theme will be incorporated in the empirical survey.

- The *emotional and spiritual* theme (cf. 4.4.1.5) and the *social experience* theme (cf. 4.4.1.6) that have been identified as part of the tourism experience overlap with the *social and emotional experience* theme (cf. 4.4.2.6) that is found in adventure sport experience. Furthermore, these themes overlap with the *camaraderie* theme and the *community and friendship* theme (Table 4.7) that were mentioned by paintball respondents. Practically, participants in paintball might feel the need to belong and socialise with others, thereby forming a bond and camaraderie (as pointed out by paintball respondents). The desire for such social needs and the strength of the social bond and camaraderie are not yet known. Consequently, the *emotional and spiritual* theme, *social experience* theme, *social and emotional experience* theme, *camaraderie* theme and *community and friendship* theme will all be incorporated in the empirical survey.

4.5 CONCLUSION

The purpose of this chapter was to analyse leisure, adventure sport and the adventure sport experience. First, the history of leisure in the Western world was studied and the various ways in which leisure can be defined were scrutinised. The most striking revelations were that the perception of what leisure is has changed over time and that different societies view leisure differently. The theoretical explanations of leisure in society and the various ways that are used to define leisure were then investigated. Leisure as a modern phenomenon was also reflected on. The relationship between leisure, play, recreation and tourism was examined and this led to the identification of adventure sport as a subsection of recreation that, in turn, is a subsection of leisure.

Second, adventure sport was analysed, based on the sectors that contributed to its emergence, namely adventure tourism, adventure travel and sport tourism. Subsequently, an in-depth investigation was performed into the nature of adventure sport, which comprises hard and soft adventure sport. Paintball was identified as a soft adventure sport with a high perception of danger but a low level of actual risk. Finally, the author of the study formulated a more encompassing definition of adventure sport based on the literature that had been consulted.

Third, in order to define the nature of the adventure sport experience clearly, a literature investigation into the tourism experience was performed. The literature on tourism

experience is extensively researched and widely defined, which points to a high level of importance. Several themes were identified and discussed. The available literature on adventure sport experience was subsequently investigated. For the purpose of this study, the author allocated the available referenced material into groups that shared the same wording and terminologies and designed them as themes. The available literature regarding the adventure sport experience is not as comprehensive as literature regarding the tourism experience. It is, however, evident that the need for individuals to experience adventure sport is driven on both a psychological and physical level.

Fourth, respondents' comments on an online question were analysed and grouped according to themes. The themes that were identified in the tourism experience, adventure sport experience and respondents' comments were compared to identify any overlaps and to understand the adventure sport experience better. A motivation for the inclusion of each theme in the empirical study was provided. The extent to which each theme plays a role in adventure sport experience will be investigated through the use of formulated questions that will be incorporated in the empirical study.

5

CHAPTER 5

RESULTS OF THE EMPIRICAL ANALYSIS

5.1 INTRODUCTION

The main goal of this study (cf. 1.4.1) was to develop a QoL framework for an adventure-based sport. The framework includes leisure-based activity, activity theory, adventure sport experience, life domains, sources of positive and negative affects in life domains, life domains overall and QoL. This study made use of the sequential exploratory mixed methods design, which entails that a qualitative study be conducted first in order to develop questions and statements for the quantitative study. The findings of the two studies will then be integrated to support and develop a QoL framework for an adventure-based sport activity by means of an SEM. The purpose of this chapter is to present and discuss the qualitative and quantitative (empirical) results of the study by specifically following the structure of Figure 5.1.

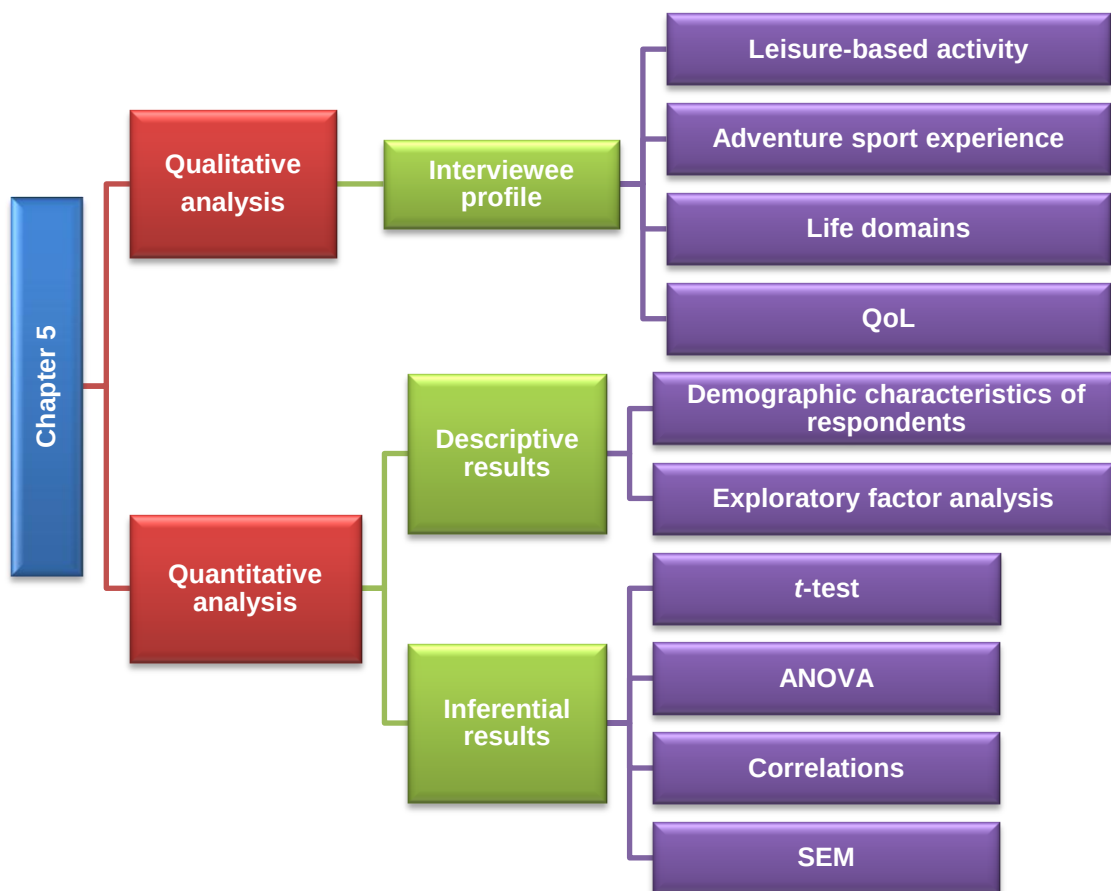


Figure 5.1: Outline of Chapter 5

5.2 QUALITATIVE ANALYSIS

The qualitative analysis consisted of two parts namely the interviews and the subsequent transcription analysis. With regards to the former, the author followed the laddering technique during the interviews as described by Grünbaum (2017), Reynolds and Gutman (1988) and Sirgy, *et al*, (2010); its goal is to map out means-end chains that are based on the means-end theory. Grünbaum (2017:61) states that the laddering technique generates insight into the deeper more unconscious reasons for why individuals behave a certain way which leads to a more complex, multifaceted, detailed and true understanding. Grünbaum (2017:61) points out that the laddering technique has proven to be a robust method of creating insight into an individual's mental processes. The technique was applied to the areas of the study (cf. 1.6.2.3.1) in which hierarchical questions were asked (based on themes identified in chapters 2-4), where one question (if answered in the affirmative) generated a response from the interviewee. If this question had not been discussed in full, it was followed up by the author with a further probe until the interviewee could not respond anymore. If the interviewee had answered in the negative, further probing questions were not asked. For example, the author would ask: "How has paintball affected your social life?" The interviewee would then discuss its impact in the affirmative by explaining how new friends were made and how his or her social life had improved. If the interviewee responded in the negative, for example, "It had no effect on my social life", the interviewer would move to the next life domain. The researcher did make use of a semi-structured interview guide (cf. 1.6.2.2.2) (Annexure B).

Burnard *et al*. (2008:429) explains that there are two fundamental approaches to analyse quantitative data namely deductive and inductive. The deductive approach is suitable when existing structures exist and theories are analysed; which in this study included the activity theory (activity aspects of paintball), adventure sport experience, life domains and QoL. With special reference to adventure sport experience (cf. 4.4.4), this study made use of literature from sport tourism, adventure tourism and respondents' comments (cf. 4.4.4) to determine the themes to be measured. In essence the researcher applied the inductive approach to determine the themes from literature in order use them during the interviews, followed by the deductive approach to analyse the results. The inductive approach involves analysing data with little or no predetermined theory such as measured during in leisure aspects of paintball (Annexure B: Section

A1), and relies on the data itself to derive the structure of the analysis. Burnard *et al.* (2008:429) points out that the inductive approach is comprehensive and very time consuming and most suitable where little or nothing is known about a study phenomenon. Burnard *et al.* (2008:429) notes that there are numerous inductive approaches available to analyse quantitative data. The inductive thematic content analysis approach was used to analyse the leisure aspects of paintball (cf. 5.2.2.1). The data collected was manually analysed in order to better confirm or deny the values of the qualitative research more accurately compared to a computer based program. Burnard (2008:430) explains that the thematic content analysis approach requires that the researcher transcribe and group together the responses of the interviewees according to each question asked under each section. By systematically searching through the data, repeating themes are identified from the interview transcripts, tabled and frequency given in brackets. The purpose is to offer a summarising word for each theme discussed in the transcript. According to Burnard (2008:430) such a process is called open coding.

The length of interviews varied from 25-90 minutes, depending on the length of the interviewee's responses. All interviewees were interviewed individually, except for interviewees 11 and 12, who were interviewed together. Each interview was recorded with a digital versatile disc (DVD) video camera and converted to MP4 video format for easier playback and storage. The following section shows the interviewee profile (cf. 5.2.1), followed by the results of the interviews (cf. 5.2.2-5.2.5) that have been transcribed and analysed.

5.2.1 Interviewee profile

The majority of interviewees were male (11), compared to only one female (six female paintballers were approached, but only one agreed to participate). Interviewees' ages varied from as young as 24 years to the most senior person, who was 48 years old. Five interviewees were in their 20s, four in their 30s and the remaining three in their 40s. To add an additional layer of anonymity, the continental region of origin was used and not the country of origin, because some of the interviewees were high-profile players within the paintball community. Half of the interviewees originated from Africa (more specifically, South Africa), whereas three originated from North America, two from Europe and one from Australasia. The majority of interviewees (eight) indicated that

they prefer MILSIM paintball and five of them indicated that they have some form of military, security or tactical training. Three interviewees were dedicated speedballers, whereas one interviewee identified with both styles of paintball. All interviewees had participated in paintball during the last six months and their paintball experience varied from three to 31 years. The responses from interviewees regarding the type of player were diverse and some classified themselves incorrectly (e.g. semi-professional players indicating that they are amateur paintball players). The author updated the type of player that the interviewees associated themselves with, based on the classification given in 4.3.

Table 5.1: Interviewee profile

Interviewee	Gender	Age	Continental region	Military/security/tactical training	Paintball played in the last 6 months	Years participating	Type of player	Style of paintball
1	Male	29	Africa	Yes	Yes	5	Semi-pro*	MILSIM
2	Male	33	Africa	No	Yes	3	Semi-pro*	MILSIM
3	Male	33	Africa	No	Yes	31	Dabbler	Speedball
4	Male	48	Europe	Yes	Yes	18	Semi-pro*	MILSIM
5	Male	40	Europe	Yes	Yes	20	Learner	MILSIM
6	Female	43	North America	No	Yes	17	Semi-pro*	Speedball
7	Male	29	Australasia	No	Yes	9	Semi-pro*	Speedball
8	Male	24	Africa	No	Yes	2	Semi-pro*	MILSIM
9	Male	25	North America	No	Yes	11	Amateur	MILSIM & Speedball
10	Male	35	North America	No	Yes	5	Pro**	MILSIM
11	Male	29	Africa	Yes	Yes	7	Semi-pro**	MILSIM
12	Male	31	Africa	Yes	Yes	9	Semi-pro**	MILSIM

* Semi-professional ** Professional

5.2.2 Leisure-based activity

In this section, the author sought to determine the leisure as well as the activity aspects of paintball as indicated by themes in the activity theory (cf. 1.2).

5.2.2.1 Leisure aspects of paintball

Interviewees were asked to listen to a definition of 'leisure' (cf. 4.2.6.) and to explore the leisure aspects of paintball, based on the following question:

Why do you choose paintball as your preferred leisure time?

Interviewee 1: "Definitely a time to unwind, relax and have fun. Paintball provides an adrenaline rush and breakaway from the normal cycle of reality. It appeals to me, because from a young age, I've been interested in military lifestyle and in South Africa, military service is not compulsory. As someone with a career, paintball works for me. With regards to personal fulfilment, I do it more for the physical aspects, because it puts my body to the test. There is a mental aspect to it, because it takes some courage to make some movements while playing, as the paintballs do hurt when they hit you. To engage your opponents and still remain calm is something one needs to learn and master, which appeals to me."

Interviewee 2: "For a number of reasons, namely the atmosphere, people you meet, the adrenaline, shooting and being shot at, military simulation and a fun sport and I am addicted to it. Physically, I do a lot more cardio since I started playing."

Interviewee 3: "I own a field and a store, so for me it's a way of surviving. I started off with the team sport element and coaching. However, for me it has become life. I've been involved with paintball since I was two, because my father started the paintball store, therefore my frame of reference has always been paintball and that's the way I like it."

Interviewee 4: "It is a way of keeping in a good physical condition, which I am sure would be worse if I didn't play paintball. At my age, you need to be somewhat fit in order to play and enjoy the game six or seven times a year. Ultimately, pain (if not fit) detracts from the fun of playing paintball. Furthermore, playing paintball is a time I can switch off my mind and the outside world, be a young guy again and have fun on and off the field, be a bit sportive. Emotionally, it takes about a week after I played paintball to get the smile off my face. It is very relaxing and gives me quality time, which helps me balance my physical and psychological state, provides relief and some time to blow off steam."

Interviewee 5: "It clears the mind. While in the field playing, one focus on what happens. It's more for relaxation but also a passion I enjoy doing. Emotional improvement [is] definitely [experienced], especially if you had a good day of eliminating a few opponents. Physically, exercise-wise, it keeps the mind focused and on the ball with all the adrenaline pumping."

Interviewee 6: "For me, it's for therapeutic reasons, a way to relieve stress, escape reality and exercise."

Interviewee 7: "It's a team sport and allows for bonding between different people. It's physically demanding, which improves your physical fitness and provides mental

stimulation through strategising and constant awareness. It's a lot of fun and an adrenaline rush."

Interviewee 8: "For me, paintball is a unique sport which brings various people together, regardless of fitness. It's all about the fun and enjoyment factor. I also play with my father, so it's a father-son activity we enjoy together."

Interviewee 9: "It's a mix of athleticism and intelligent choice. Not being athletic myself, I found that it helped me grow in skill, health and intelligence. It's basically chess with guns and there is nothing like it. It helped me physically improve and improved my thinking and reasoning skills."

Interviewee 10: "Of all the activities I pursue to achieve an adrenaline rush, paintball is the best. Physically, paintball hasn't improved my fitness; mentally, I do feel more relaxed after playing."

Interviewee (R) 11 and 12:

R11: "I first played paintball nine years ago and then time went by as facilities in Johannesburg were not yet set up. I and R12 started playing together and it became a hobby for us. For me, it is a sport which is right up my alley and affordable to play. For me, it's also about the different people you meet playing the sport."

R12: "I just enjoyed it. Its good exercise, you get outdoors and shoot your buddies. We started off casually playing paintball and then systematically, as we enjoyed it more, played organised events."

Table 5.2a: Initial coding of leisure themes of paintball

Interviewee	Leisure themes of paintball
1	Relaxing (unwind); fun; breakaway; military lifestyle (simulation); challenge; adrenaline rush; and mastery of skills (mental stimulation)
2	Atmosphere; fun; people you meet; shooting and being shot at (simulation); adrenaline rush; and improved fitness
3	Way of life and family history
4	Improved fitness; breakaway; fun; competitiveness; relaxing and relieving stress
5	Relaxing (clears the mind); adrenaline rush; and focus (mental stimulation)
6	Relieving stress; escaping reality (breakaway); and improving fitness
7	Social; improving fitness; mental stimulation; fun; and adrenaline rush
8	Social; improving fitness; fun; and family activity
9	Mental, physical stimulation and exercise (fitness)
10	Adrenaline rush; improved fitness; and relaxing mentally
11	Social and challenge
12	Fun; exercise (fitness); outdoors; shooting your friends (simulation) and the challenge thereof

With reference to the initial coding framework of leisure themes of paintball (Table 5.2a), the final coding framework (Table 5.2b) consisted of *fitness and exercise* (8), *the fun factor* (7), *to relax and relieve stress* (6), *adrenaline rush* (5), *mental stimulation* (5), *social aspect* (4), *challenge* (4), *escape* (3) and *simulation* (3).

Table 5.2b: Final coding framework of leisure themes of paintball

Final coding of leisure themes of paintball	Initial coding	Literature overlap
Fitness and exercise	• Fitness • Exercise	Argyle (1996) Vujko and Plavša (2011)
The fun factor	• Fun	Hall <i>et al.</i> (2006) Leitner & Leitner (2012) McLean <i>et al.</i> (2015) Page and Connel (2014) Saayman (2012) Venter (2014a)
To relax and relieve stress	• Unwind • Relaxing • Relieving stress • Clear mind • Relaxing mentally	Cater (2013) George (2014) McLean <i>et al.</i> (2015) Page and Connel (2014) Vujko and Plavša (2011)
Adrenaline rush	• Adrenaline rush	Cater (2013) George (2014) Saayman (2012) Vujko and Plavša (2011)
Mental stimulation	• Mastery of skills • Focus • Mental • Mental stimulation	Cini <i>et al.</i> (2012) Day (2013) Liu (2013) Mannell and Kleiber (1997)
Social aspect	• People you meet • Family history • Social • Family activity • Atmosphere	Andrews <i>et al.</i> (2014) Carless <i>et al.</i> (2013) Hawkins <i>et al.</i> (2011) Monson <i>et al.</i> (2009) Mowatt and Bennett, (2011) Page and Connel (2014)
Challenge	• Challenge • Competitiveness	Cater (2013) George (2014) Page and Connel (2010) Torkildsen (1999) Venter (2014a)
Escape	• Breakaway • Escaping reality (breakaway) • Outdoors	Cater (2013) McLean <i>et al.</i> (2015) Page and Connel (2010) Russell (2013)
Simulation	• Shooting and being shot at • Military lifestyle • Shooting your friends • Way of life	Modern Combat Sports (2014) Vujko and Plavša (2011) Venter (2014a)

The initial coding framework of leisure themes of paintball was compared to literature consulted which revealed a positive an overlap (Table 5.2b). Subsequently the themes will be incorporated in the online questionnaire (Annexure B) when framing the questions.

5.2.2.2 Activity aspects of paintball

Interviewees were informed that they would be given prominent themes associated with the activity theory (cf. 1.2) that would help explore the activity aspects of paintball. They had to comment on what came to mind with each theme.

5.2.2.2.1 Outcome– *What they want to achieve by playing paintball*

Interviewee 1: “[The] main goal is to break away, almost to enter a new world and live out a simulated military experience.”

Interviewee 2: “For the fun and being well known in the community.”

Interviewee 3: “The lifelong friends you make when you have been playing for many years. Some of my paintball friends I have now known more than 15 years. When I was still playing semi-professional paintball, the competitive aspect while playing made me come back for more. I’m not saying I’m not competitive anymore but not at that level.”

Interviewee 4: “Generally speaking, I want to hit more opponents than I am hit myself. I am not always out to achieve the ultimate victory with my team, although that would be nice. Ultimately, I want a good time with my team and my opponents. This is often affected by the gameplay you have, the team you play with, your opponent and scoring a good hit which is acknowledged by the opponent. This is why I play.”

Interviewee 5: “Fun. Whether you win or lose, who cares, as long as you had fun.”

Interviewee 6: “I want to fulfil my competitive nature, either through winning or achieving [the] best possible outcome.”

Interviewee 7: “To be honest, for me it’s to achieve good friendships and playing a sport with like-minded individuals.”

Interviewee 8: “I come from a military family and was raised in such an atmosphere. For various reasons, I didn’t join up, so paintball is the next best thing for me with the action, but no actual killing. Furthermore, it is a substitute for my previous sport, rugby. Because of injuries I sustained and time issues, I can no longer play rugby.”

Interviewee 9: “For me, I want to be the best. For the sport, I want it to be seen as something that takes athletic talent and mental intelligence. For the industry, I wish to see it become sustainable and accessible to all.”

Interviewee 10: “I want to have really exciting gunfights. It’s not to win, but to have interesting battles.”

Interviewee (R) 11 and 12:

R11: “We are the number one team in our league. I’m seeking not only local recognition but internationally as well. Paintball in South Africa compared to overseas, is a lot smaller. One of the big things for me is to grow the sport, especially amongst young people who are glued to their technology and need to get out more. Its good exercise and makes the mind sharper.”

R12: “If the youth isn’t on their phone[s], they are on their consoles playing games.”

R11: “A kid came one time and he said he likes to play computer games and I went to have a chat with him. I invited him to attend our team training to show him the closest thing to real-life fire fights. He enjoyed it and, sorry to say, his dad will suffer financially for it, but that’s what we want is for kids to get away from technology.”

R12: “Growing the sport! The more people play, the better for the sport as a whole. We can make paintball as big a sport as it is overseas.”

5.2.2.2.2 Subject– Describe the type of paintballer you are

Interviewee 1: “I am a tactical kind of player who wants to learn and improve and be a good team player, to be objective focused.”

Interviewee 2: “I enjoy both forms of paintball, especially close quarter combat (CQB) MILSIM. Traditional MILSIM is to slow for me, as I enjoy a speedy game.”

Interviewee 3: “I started off playing bushball years ago and then followed the trend in South Africa with paintball, which led me to speedball. Speedball is by far, in my opinion, the most popular form of paintball globally, with most large-scale events revolving around speedball. There is the odd number of large-scale bushball events globally such as Living Legends (Europe), but not as much as speedball.”

Interviewee 4: “I think that is affected by how you were brought up and what the first form of paintball was like that you experienced through the media. I always wanted to play cops and robbers. I never played speedball and always played MILSIM and woodland type of games which is fuelled by MAGFED (magazine fed) markers.”

Interviewee 5: “MILSIM has been my passion for a while with my military background. When I reached the age where I couldn’t do those things anymore, especially with a family, you do the next best thing, which is MILSIM. [In] MILSIM, you need to think and in my opinion [it is] a human chess game where you need to outsmart your opponents before they can outsmart you. I enjoy the challenge!”

Interviewee 6: “When I play, I emphasise communication with my team. I am also hands on when playing scenario through delegation and leading by example.”

Interviewee 7: “I’m a speedballer and am more at home to it, as it is fast paced and more intense than MILSIM, which is spread over a longer stretch of time.”

Interviewee 8: “I prefer MILSIM, because I was raised with such a history in my home. It’s about military simulation, the markers must be as realistic as possible and I use a MAGFED marker to enhance the realism. The events I play are set up to be as realistic as possible, which I do prefer.”

Interviewee 9: “I honestly consider myself a speedballer and MILSIM paintballer. I was moulded to appreciate both and do so.”

Interviewee 10: “MILSIM, specifically MAGFED, because I enjoy the challenge associated with it and the realistic aspects of it.”

Interviewee (R) 11 and 12:

R11: “I’m a MILSIM player, because I did private military contract (PMC) work. Paintball offers a bit of a taste of that PMC work and brings back memories; it brings back the camaraderie, the brotherhood. I find it is more detailed and realistic than speedball.”

R12: “With MILSIM, you cannot run in guns blazing as with speedball. With MILSIM, you have [a] limit[ed amount of] rounds and it need[s] to think and strategise.”

R11: “The GI fest event was a large-scale MILSIM event that I played as commander, which was very different and strategic. I think MILSIM paintball is growing and it offers more depth than traditional bushball.

5.2.2.2.3 *Object(ive) – The purpose of playing*

Interviewee 1: “The MILSIM-type of play for me is very fulfilling, as it requires planning and teamwork to execute right.”

Interviewee 2: “I enjoy the atmosphere and the people. You get along with like-minded people and have a good time.”

Interviewee 3: “When I still played semi-professionally, [I] wanted to be as good as I possibly could and go as far as I could to play for an overseas professional team. I have a competitive nature and want to win while having fun.”

Interviewee 4: “Feeling well, making new friends, being in the company of others with the same interests as me and travelling and seeing other countries.”

Interviewee 5: “To relax, especially [in] the type of world we live in today. The more you play MILSIM, the more you think tactically and [you] can use that in the real world. I’ve seen many, many paintballers who now work in Afghanistan as PMCs. Although paintball and real fighting are not the same thing, they learn the outcome if you get marked (shot).”

Interviewee 6: “As a female player, I play, behave and compete in such a way that others see me as an equal. I also want to inspire other females to play as well.”

Interviewee 7: “To make connections with people and make new friends while getting fitter.”

Interviewee 8: “For fun and enjoyment.”

Interviewee 9: “On a personal level, I want to reach a semi-professional or professional ranking in Northern America. At the end of the day, I love playing and want to play as much as possible.”

Interviewee 10: “I like to make videos of the paintball games I play and share them with the world via YouTube, but primarily, I play to have fun.”

Interviewee (R) 11 and 12:

R11: “I work a very stressful job during the week and for me, paintball is a way of blowing off some steam. It’s also about getting together with my mates and brothers and have a good time, afterwards having a few drinks and getting to know one another better. The camaraderie and friendship for me is one of the big things.”

R12: “Getting out there, bond and meet new people. I’ve played a lot of sports and the people I meet in paintball are the outgoing, happy and friendly ones. Paintball is a stress relief, good exercise and being able to get out with your brothers. Its outdoors and nothing is better. We are also trying to get more female players into the sport and breaching the stigma it has as a man’s sport.”

R11: “I keep learning. The better your opponents, the more the sport remains challenging.”

R12: “Paintball helps keep the mind sharp constantly. As we told a female player, it’s all well and good playing with your friends, but what happens when you are the last person left on your team and there are four opponents left? The strategy, planning, excitement, adrenaline and fear...”

R11: “It’s about learning to adapt to that fear and the quick decision time that is needed. A normal person in a real-life scenario will freeze up, compared to a paintballer whose reaction time will be quicker. Paintballers can make quicker decisions than normal people off the field in a stress scenario.”

R12: “I’ve noticed that people who play paintball socialise and talk more. I can testify that one of our team members was first reserved and since playing paintball, he won’t keep quiet.”

R11: "It's as if you find yourself when playing paintball. I've also seen it in myself that paintball has given me confidence in my work place. I take command of situations better and being able to give orders more confidently."

R12: "You make decisions better and clearer."

R11: "When you are preparing the night before, cleaning your gear et cetera, paintball actually teaches you discipline. It's not just in paintball, but in my work life as well, that I have become more disciplined. You become healthier and sharper, which reflects in your everyday life."

5.2.2.2.4 *Tools – The feelings associated with their markers/uniforms/gear*

Interviewee 1: "The uniform and equipment fulfils my desire to simulate a military experience and the excitement. It is an extension of the best of me. I do realise it will never be the real thing, but [it] is as close as I can come as a civilian."

Interviewee 2: "As long as a paintball marker shoots, it works for me. I have no preference for additional attachments such as laser dot sights. Being part of a team and have a team uniform, that is important to me."

Interviewee 3: "For me, it's my team logo on my kit. I don't care about the colour of the uniform, just the team logo, which gives a sense of belonging."

Interviewee 4: "The equipment, uniforms and markers we use as a group gives us our team identity. This is further enhanced by our team name and logo."

Interviewee 5: "Nothing. You need to learn to adapt; I have no preference. If it was actual military or law enforcement, my equipment, uniform and gear would have a completely different meaning to me."

Interviewee 6: "I think so, as mine needs to be customisable, functional and, in speedball, a fashion statement. I enjoy personalising my things so they are unique to me."

Interviewee 7: "Not particularly, besides being a bit brand loyal."

Interviewee 8: "Every time you get new gear or a marker, it's like Christmas and you feel like a kid again. It enhances the realism and feel of the game. I don't allow others to use my gear and when I use it, it gives me emotional satisfaction."

Interviewee 9: "I am brand loyal. The brand I am loyal to embody that what I believe is paintball. I have over 20 paintball guns that I have memories of and attachment to. To me, my equipment is an extension of who I am."

Interviewee 10: “None at all; I don’t prescribe emotion to objects.”

Interviewee (R) 11 and 12:

R11: “Yes, it does.”

R12: “It’s a pride factor; as soon as you put it on, you represent your team and your brothers.”

R11: “It’s something to be proud of. With my team, we take care of our kit and our uniforms. When we arrive at a field, we look similar. It’s a form of unity and that, for me, is a sense of pride. When I’ve retired from paintball, I want to make a mantelpiece of my gear and medals I’ve earned.”

5.2.2.2.5 *Rules – Adherence to rules by players and enforcement of rules*

Interviewee 1: “The rules make the sport. Anytime a player or somebody infringes on the rules, it ruins the experience. The sport needs honest players to make it great and if a player doesn’t adhere to that, they should rather stay away.”

Interviewee 2: “There are always a handful of players that try to cheat, but mostly players are honest and play to have fun. Cheating downs the sport. Safety is the most important aspect of the game and comes first. During big games, players are more prone to disregard the safety rules, which aren’t called for.”

Interviewee 3: “The rulebook for paintball could be compared to a telephone directory book. The interpretation of the rules differs from event to event and from country to country.”

Interviewee 4: “Over the years, I have figured out there is no one answer to this question. Firstly, within small games where people know each other, there is better sportsmanship. Big games, on the other hand, help individuals hide anonymously amongst the masses, which lead to unsportsmanlike conduct. I cannot stand the on-going and everlasting discussions after games about opponents wiping their paint off when hit, opponent[s] who didn’t leave the field when hit, the paint is bad, other players are using non-standard paintballs and there aren’t enough marshals to police the games. This doesn’t do justice to the game. I have found that different countries’ players show better sportsmanship than others.”

Interviewee 5: “That’s a tricky question. To host a successful paintball game, it depends on the type of paintball players you have. If you have players who don’t call their shots, it leads to an aggressive atmosphere on the field. If a guy doesn’t call his shot, I shoot him till he does. On my side, if I get shot, I call my hits and leave the field.”

Interviewee 6: In [the] tournament scene, the referee[ing] are getting better, but are a work in progress. With regards to adhering rules, I’m not good at cheating and I believe

in karma, so that's not for me. [In] woodsball (MILSIM), it's easier to cheat, because there are fewer referees around."

Interviewee 7: "I think the rules currently used are the best we ever had. The refereeing is very good where I am. For the most part, it seems that players adhere to the rules, although there are individuals and teams who wish to circumvent the rules or plainly cheat. For the most part, players are honest."

Interviewee 8: "It depends where you play and with whom you play. The basic rules where I play states that if you don't adhere to the rules, you are not allowed to play further or [at] the next event. Here and there, you might find a person who doesn't obey the rules, but we have marshals who control the games. It's about honesty and the community I play with are friends and respect each other."

Interviewee 9: "Safety first – that's the primary aspect of the sport and fun comes second. Safety is instilled in every player and I find that the more you play, the easier it becomes to practise those rules and teach other."

Interviewee 10: "To me, the only rules that matter are safety; everything else doesn't really matter. The players I've seen and people I know adhere to the safety rules of paintball such as keeping your mask on, on the field and to put your barrel plug on when leaving the field."

Interviewee (R) 11 and 12:

R11: "The adherence to rules has improved. Any sport has people that cheat but more recently, the adherence to [rules] has improved, as well as the enforcement has become stricter. Cheating takes away from the sport, especially with new players who might be on the receiving end of a cheater and then decide it's not for them."

R12: "For me, it's about there are fields with qualified people who can run the sport and then there are fields with unqualified people who try to run the sport. Some enforce the rules, others don't."

R11: "There should be a set standard that all fields must adhere to."

R12: "You should be knowledgeable about the rules."

5.2.2.2.6 Community – Perception of fellow paintballers

Interviewee 1: "The paintball community consists of fantastic people who share the same ideas and values as you do, which makes connecting with others easier."

Interviewee 2: "You get the handful of problem players. I've met many players and know many on a personal level and vice versa. You grow in friendships all over the place. I share the events I attend to grow the community."

Interviewee 3: “The guys are all pretty close. Everyone sticks together and try to help each other out. Paintballers are a mix of various professions, from high-end professionals to ordinary desk workers. When it comes to helping a fellow paintballer, everyone tries to help, regardless if you know someone for 10 years or two weeks.”

Interviewee 4: “I play other sports as well and to me, there isn’t that much of a difference between the communities. You can rely on your mates or friend who you know and have a good time. Others you don’t want to meet or don’t like to meet, just like in any other sport. In paintball, you find people who party hard, like to camp and show off your gear.”

Interviewee 5: “Another tricky one: good and bad. [There are] a lot of guys who enjoy the game and want to take it forward, while others want to destroy it for everybody else; not just players, but field owners and companies. For example, there are fields that allow first-time players to play with experienced players and they get shot to pieces. They will never play the paintball again, because their first paintball experience was horrible.”

Interviewee 6: “I think that’s the reason I’ve been playing so long, [it] is the community. I was just 26 and, coming from a military family, also wanted to serve. I guess I was looking for that camaraderie. My father said I didn’t need to and could finish college. A friend of mine dragged me to a paintball field and I became hooked. Paintball for me is an opportunity to meet like-minded individuals like myself and become friends. Almost 17 years later, I have some of the best friends across the globe. I was once stuck at an airport and reached out to the paintball community via Facebook and was assisted immediately with accommodation. The paintball community is like family to me and I met my husband, who is a paintballer, at a paintball field.”

Interviewee 7: “I love them. I’m a big fan of paintball, as it seems to attract the same kind of purpose, no matter what country they come from or background. All paintballers are a little bit crazy; the community is very good. I’ve made a lot of friends globally, randomly from forums and Facebook groups. In essence, anywhere from everywhere, it’s amazing.”

Interviewee 8: “Where I am from when I started: there were only a handful of players. After two years, the paintball community has grown to almost 70 players who play every second week along with players from neighbouring towns.”

Interviewee 9: “That’s a difficult question. The format comes with a certain type of player and I enjoy the competitive player because of the required dedication and sacrifice one need[s] to make. I’ve met players from across the world and you don’t need to speak the same language in order to connect and understand each other, which blows my mind.”

Interviewee 10: “They’re incredibly friendly. I see players being friendly with one another across the globe and that’s fantastic, but with me, it’s a bit different being a celebrity paintball player. Players make an effort to ensure others have a good time.”

Interviewee (R) 11 and 12:

R11: “Most are good sports and friendly, while you have those that don’t play by the rules.”

R12: “Very welcoming and open to new players.”

5.2.2.2.7 Division of labour – Organisers’ ability and players’ receptiveness

Interviewee 1: “There are organisers who make the sport special and go out of their way, that have a vision that they pursue to make the experience for participants great. For such visions to work, you need the right audience to work, which is difficult, as you have different player types. Some might expect a MILSIM experience, while others are there to just have fun, which might cause friction.”

Interviewee 2: “We try to organise more and bigger events. The previous event, Paint Fest, was a huge success and players are still talking about it two weeks later. I have found that the demand for casual paintball has decreased, as players demand more challenging events and scenarios that fit the MILSIM profile. Cheaters detract from the enjoyment of events and ruin the experience for others.”

Interviewee 3: “That’s a touchy subject in South Africa because of the lack of professional leagues when compared to other countries. In South Africa, we might have a few hundred semi-professional players, compare[d] to the thousands in, for example, the United States of America. Overseas players have to follow the rules or leave for a different league. In South Africa, paintballers have to follow the rules of the league, which might cause unhappiness. However, the local league is more open to suggestions to improve participant satisfaction, compared to their overseas counterparts.”

Interviewee 4: “I think people are very open to new ideas in theory. It all depends on the people you deal with. If they have the same interests, they will be more receptive. Players spend thousands of euros and hundreds of euros on markers, but are reluctant to pay for special or great paintball events.”

Interviewee 5: “I’ll give an example of what happened the previous weekend. I hosted a completely different type of game. Even though the whole idea was the same, I organised it in such a way that there was more player interaction. We had a map with two commanding officers controlling their players on a map with flags. The players would report their progress to their commander who, in turn, could provide them with updates and orders. This enhanced player interaction and the guys enjoyed it a lot more than the standard paintball event. There is always a lot of socialising after a game. The idea with the last event was for players to be able to socialise more while playing.”

Interviewee 6: “There are some things that need to change from [an] international standpoint, as the sport is becoming extremely expensive at international professional level. This has given rise to regional leagues which are less costly, which players have been very receptive to. The end result should always be to grow the sport.”

Interviewee 7: “For the most part, I believe organisers do their best to cater as much to player demand as possible with new ideas and new game formats. Players, as a rule, are really receptive, but I have seen organisers [who did] not embrace new ideas and suffered because the players don’t support them.”

Interviewee 8: “We have two paintball fields that accommodate paintballer requests where possible. Consultation with players is essential to draw players. Players are receptive to new ideas; to give an example, we had our first off-field game at an abandoned soccer stadium this year with more than 80 players joining in.”

Interviewee 9: “That depends on your region in the world you play. I’ve found that worldwide, there are certain paintball individuals that are charismatic and have the passion and ability to motivate paintballers in whole regions and countries. Paintball transcends boundaries, whether economically, borders and distance and it connects people. There will always be those that embrace new ideas and those that don’t, but that can be said about society as a whole.”

Interviewee 10: “I’ve noticed some organisers attempting to innovate with new ideas, but it’s hard for players to understand more difficult concepts. For example, the use of medics and their role in paintball games – as soon as players need to apply their trade, they start to do it wrong. This can mostly be attributed to adrenaline rush and the pace of the game, which clouds their judgement. The more complicated games become, the less and less the[y] end up being successful, because people cannot keep up with the rules in the heat of the moment.”

Interviewee (R) 11 and 12:

R12: “They love the new ideas of putting themes to events such as zombie matches or hostage rescue. It’s the variety of games that is better and that’s what I enjoy.”

R11: “For the last four to five years, we have been playing hostage rescue and other themed events that add realism to it such as flash bangs and explosions. You need to keep pushing yourself.”

R12: “It needs to remain challenging.”

5.2.2.3 Final coding for activity themes of paintball

Table 5.3: Final coding for activity themes of paintball

Themes	Outcome – <i>What they want to achieve by playing paintball</i>	Subject – <i>Describe the type of paintballer you are</i>	Object(ive) – <i>Purpose of playing</i>	Tools – <i>The feelings associated with their markers/uniforms/gear</i>	Rules – <i>Adherence to rules by players and enforcement of rules</i>	Community – <i>Perception of fellow paintballers</i>	Division of labour – <i>Organisers' ability and players' receptiveness</i>
Positive	Breaking away; fun; socialising; good time with community; winning; friendship; action; being the best; recognition; growing the sport	<i>MILSIM</i> – challenging; tactical; realistic; military background; military family <i>Speedball</i> – human chess; fast paced; intense	Planning; team work; fun; making friends; travelling; tactical thinking; simulation; inspiring others; blowing off steam; keeping your mind sharp; discipline; health	Extension of myself; identity; pride factor; functional; enhancing realism	<i>Adherence</i> – rules make the sport; safety is of the utmost importance; honesty and integrity <i>Enforcement</i> – safety is paramount	Fantastic people; camaraderie; openness; incredible friendliness; helpfulness; reliability; similar interests; understanding transcends borders and language	<i>Organisers' ability</i> – making the sport special; making the experience great; enhancing socialisation during play and off the field; charismatic individuals motivating players <i>Players' receptiveness</i> – demand for more challenging events has grown; receptiveness to new ideas
Negative				No connection; no relevance	<i>Adherence</i> – cheaters detract from positive experience and ruin the sport. <i>Enforcement</i> – lack of standard rules; interpretation of rules; some don't enforce rules; not all marshals are trained.	A few problem players; politics; mismatch-skilled vs. non-skilled players who are destroyed	<i>Organisers' ability</i> – limited choice in speedball leagues in some countries <i>Players' receptiveness</i> – Style differs, which might lead to friction; an unsatisfying or overwhelming experience; interpretation of rules; new concepts not understood

Table 5.3 summarises the final coding framework as revealed under each of the activity themes (according to the activity theory) that interviewees associated with paintball; some positive and negative affect statements were found that will be incorporated into the online questionnaire. As the activity theory has never been applied to an adventure-based sport in this manner, no literature comparison can be made.

5.2.3 Results of the adventure sport experience

Interviewees were informed that they would be given key themes that would be explained in more detail if required. The interviewees were then asked to comment on what came to mind with regard to paintball.

5.2.3.1 Paintball as a peak experience

Interviewee 1: “Everyone has a goal, whether achieving certain objectives or having a specific paintball kill rate for the day. If your equipment and team mates work together, which leads to success, it leaves you with a sense of euphoria and a special feeling. If inexperienced participant[s] join the game, they have a lot to learn and you want to help them. Because the markers performance similarly, defeating opponents by applying skill means something special and shows you came a long way. Afterwards, one points out to the inexperienced participants [what they] did wrong and thereby helping them [to] learn.”

Interviewee 2: “[It] depends on the circumstance[s]; if new players arrive, play a MILSIM game and they are into it and they enjoy it, they won’t be scared off if they are beat[en]. If they are not into it and are hurt, their experience will be negative.”

Interviewee 3: “[It] depends [on] how competitive you want to be. There are paintballers who just play for the experience, regardless of the end results, and have fun. Others don’t participate to make friends; they want to reach the highest level they can.”

Interviewee 4: “I recall a paintball game when we had an unbelievably epic match against Dutch and English paintballers. What made it impressive was not the individual skill level of the opponents, but the ability of their team to plan and execute their attack. Playing against a more skilled opponent makes me want to play better. Playing against weaker opponents such as my young son is relaxing, but that doesn’t mean that he won’t hit me. I enjoy playing with people who know their equipment and don’t mess around, who don’t behave like boys but like men.”

Interviewee 5: “Most of the events we organise [are] events that test the skill levels of players and their ability to think outside the box. Half of the players grasp the concept of the new type of events and enjoy them. The other half, mostly speedballers, don’t care about objectives. Basically, it depends on the players themselves and what they want to do while at a game. There is a lot of potential. The thing that chases most paintballers

away from the sport is the cost. Paintball is very expensive, especially those that spend vast amounts to buy the best gear. Subsequently, they cannot play every weekend.”

Interviewee 6: “When I think of big games and you have players that are not very experienced playing with experienced players, I take them under the wing or divide them up with the experienced players. Also, I task new players with less demanding missions than their experienced counterparts.”

Interviewee 7: “[It] depends on the individual[s], whether they rise to the challenge or decide it doesn’t appeal to them.”

Interviewee 8: “In paintball, the way we play requires teamwork, although you sometimes find individuals who are lone wolves. You are only as good as the guy next to you; if they don’t do their job, then you will suffer. You don’t need to be an extreme athlete to play; you only need to be able to play as a team.”

Interviewee 9: “I wouldn’t say that the issue is to match the challenge of the game with the skill of the player. I would rather say the challenge of the game denotes the skill of the player. If the game is challenging, then players either step up to the challenge or allows it to step over them. The challenge is always there, but that’s what I like about paintball: it’s a dynamic sport. Importance is that new players understand they will grow with the game as they gain experience.”

Interviewee 10: “That’s when there is a disconnect[ion] between the scenario and the competency of the players. It can be incredibly frustration for everyone involved. The skilled players find it frustrating to play with inexperienced players because it is boring. Conversely, the inexperienced players are not enjoying it, because they are constantly shot to pieces. It’s equally frustrating for both sides.”

Interviewee (R) 11 and 12:

R11: “New players will not have a good time if they play against experienced players, because they will lose time and again.”

R12: “Agrees with R11.”

5.2.3.2 Paintball as a lifestyle

Interviewee 1: “It’s not a quick learn-and-play hobby. Paintball requires commitment and passion and will be with me forever.”

Interviewee 2: “Paintball is my life at the moment! I have my Monday-to-Friday job that I do, but weekends I’m at the paintball field, working to earn extra cash in order to continue playing. Even on my Facebook profile, everything is paintball! Its community, family and growing up together.”

Interviewee 3: “Overseas, it will work much better than in South Africa, because the community is too small. For me, it’s a lifestyle, because I was born into it and my bread and butter. For most, I think, it’s just a breakaway from daily routine.”

Interviewee 4: The respondent panned his camera to show the interviewer a large poster on his wall, showing him in his camouflage uniform and gear. Underneath the photo, it reads “Paintball for life”.

“Paintball changed my life significantly. I first worked in corporate industry as a marketing and brand manager, which didn’t fit my personality. I ended up starting my own successful company which supplied paintballers with products* that enhance their branding. The product is sold worldwide to paintballers. Paintball changed my life for the better.” (*Note that the products are not mentioned, as they will reveal the respondent’s identity.)

Interviewee 5: “As I said earlier, paintball is a learning platform for the real world. A typical close-quarter combat (CQB) game can serve as a learning platform for when there is an intruder in your home. Many people only use paintball to relax and don’t put one and one together, so it depends on the lifestyle of the person. For me, I cannot continue to go overseas and practise my military skills, so I substituted it with paintball.”

Interviewee 6: “I don’t make a lot of money doing this, but [I do it] because of what I get out of it such as travelling across the globe, sponsored equipment and travel and accommodation. I feel rich, because I can travel the world and have all these positive experiences.”

Interviewee 7: “Personally, to me, paintball is my lifestyle. I’ve dedicated a large portion of my life to paintball and, in turn, my lifestyle is surrounded by paintball friends on and off the field.”

Interviewee 8: “In the last two years, paintball has become a lifestyle for me and I’ve invested a fair amount of money into it. It’s a good thing to have in your life, because it’s a good sport and allows you socialisation afterwards and chill with your friends while having a braai. It’s also good exercise the way we play. You don’t need to be fit but it helps.”

Interviewee 9: “It’s hard to explain. There are many little things such as the person who plays it once a year as a fun activity, compared to those who play once or twice a month. Then there are those who play every weekend for the rush – it becomes their life. It teaches that money isn’t valuable and that the experience is worth it. Playing paintball has made daily life boring for me. It teaches you to slow down life and appreciate it more. It also teaches confidence.”

Interviewee 10: “I don’t know. I try to keep it separate from my day-to-day life. I have a bunch of friends I’ve met through paintball. I also do a lot of other activities I do with my friends.”

Interviewee (R) 11 and 12:

R11: "It's blood, sweat and tears to get where you, we, are and we are serious about it. We started for fun."

R12: "And it got better and better, till a point where we have sponsors and earning podium positions."

R11: "It's become a lifestyle for me. I was big into skydiving and motocross, which has now taken such a backseat to paintball, because I find it more rewarding. Paintball is [a] much more social experience."

5.2.3.3 Camaraderie, friendship and community found in paintball

Interviewee 1: "There is nothing like playing the game and thereafter seeing the guys and being one of them, talking about what went right and wrong, coaching each other, helping each other, which enhance the bond and sense of wellness."

Interviewee 2: "The majority of players are friendly. You can arrive at any paintball field you haven't been to before and play with local players. You'll find that players will invite you to other events and that's how you grow the sport. The more fun you have, the more you enjoy it, the better it becomes and your friendship circle grows."

Interviewee 3: "The guys who have been in the game for a long time who[m] you have built a relationship with, you can trust them on the field, whether they are on your team or not. [The] majority of the guys stick around after they played and have a beer and share war stories of the day, which feeds that camaraderie."

Interviewee 4: "As with any sport, you find people you get along [with] well and form a team. There are emotional moments which strengthen the camaraderie and often you would stay in touch with those members. Maybe these intense feelings are brought on by being shot at; naturally, [it is] not the real thing, but it can still be compared to a battle experience, which is more than you would find in other sports."

Interviewee 5: "I've seen it a little bit in South Africa, but it tends to fall away after a while due to internal paintball politics. The team I sponsor is an excellent example of camaraderie and friendship. The players support one another on and off the field."

Interviewee 6: "I wonder what type of personality other paintballers have, because they share the same love of the sport as I [do]. It's so wonderful to attend events and see old friends and make new ones, all of whom come from different backgrounds and professions and can live out their fantasies. I cannot think of any other sport which comes close to the bonds formed by paintball players."

Interviewee 7: "That is exactly what paintball is. Those three concepts surmise paintball perfectly."

Interviewee 8: That's basically paintball. You have comrades in a sense and your friends playing with you."

Interviewee 9: "That is the core of the paintball experience. I think of that as everyone I have ever played with. It transcends boundaries across the language barriers. Strangely enough, you might not have anything in common with someone, but mention that you played paintball and [if] they also did, you instantly become friends."

Interviewee 10: "That fits paintball to a T. If new players arrive that don't know anybody, there will always be someone who will try to include them. I've experienced that worldwide."

Interviewee (R) 11 and 12:

R11: "When I got back from my PMC work, it was hard to adjust again to civilian life. The routines of PMC work stuck with me, but what was missing is that closeness and camaraderie. Paintball has given me that bond again, even better than before. With PMC work, you fight to stay alive and fight to return to your family. With paintball, you fight with your family and it's a different dynamic."

R12: No comment given.

5.2.3.4 The adrenaline rush and escape experience associated with paintball

Interviewee 1: "Paintball definitely gives that feeling of adrenaline, either when things go well and your team is winning, but also when you are the last player left on your team and you know there are 10 opponents left. The paintballs do hurt and you don't know where the next one is going to come from or the rate of fire the opponent is using. It's a fantastic and a good feeling. Win or lose, it's fun!"

Interviewee 2: "Definitely an adrenaline rush. It's also an escape from your Monday-to-Friday life and society as a whole."

Interviewee 3: "Guys come to play paintball to blow off some steam from their nine-to-five weekday jobs. You see a lot of guys come here stressed and they look better when they can leave their problems in the parking lot and get the stress off their shoulders."

Interviewee 4: "That's part of the game! It's not necessarily the pulling of the trigger or getting shot at that causes the stress, but rather the other 60% of the time when nothing is happening and you expect to be shot at but don't know when. It's a wonderful feeling."

Interviewee 5: "For a new player, the adrenaline might be too much, might be scary or frightening, which can push them away. That is one of the reasons I don't allow new players to play with veteran players. Veteran players playing against new players will not get that rush. Paintball makes you forget about your problems; for example, issues with your wife or financially, when you go on the field, you forget everything. When I was

overseas and I needed to escape from work, I would attend international paintball events in Europe. I'd would tell my friends and work colleagues to pack their things and let's go for the weekend. You won't believe [it], but when you get back from such a game, you have a much clearer mindset because you broke away."

Interviewee 6: "I love the fact that I can basically hunt someone down or complete an objective without "actually" killing someone or get killed myself. The adrenaline rush is that more enjoyable, because there is no actual killing. I can still fulfil that excitement while knowing I will live to see another day. In terms of escape, there are so many stressors in life, especially as a parent. Even playing paintball for a couple of hours allows me to release that built-up stress. The escape from reality allows you to rejuvenate and come out fresh to tackle the challenges of life."

Interviewee 7: "Paintball is the biggest adrenaline rush I've ever experienced and I've done several other adventure sports such as rock climbing and abseiling. So far, nothing has come close to the adrenaline rush paintball gives me. Paintball lets you focus just on your game and helps you [to] forget daily stresses, work problems and girlfriends/boyfriends."

Interviewee 8: "That's also paintball. It's quite an adrenaline rush sprinting over walls and people shooting at you. Paintball is the one way I can relax and forget about life stresses."

Interviewee 9: "Paintball makes you feel alive; it's a rush. The more you play, the more it helps you [to] slow down time. With experience, you gain the ability to remain calm and collected and allow you to think clearer. When you put on your goggles and mask and take your gun and the entire world goes away, all that matters is what is in front of you. You can have the worst week of your life, and that weekend you play paintball and all of that negativity disappears. It's tranquility in motion."

Interviewee 10: "Paintball, obviously. Being shot at will give you an adrenaline rush. For me, escape means vacation, lying on a beach. I travel a lot with paintball and can then do those activities that help me escape."

Interviewee (R) 11 and 12:

R11: "The way modern life is lived is not the way we were designed to function. Our bodies cannot take the stresses and worries. While playing paintball, you forget about those things."

R12: Agreed with R11.

5.2.3.5 The social and emotional experience of paintball

Interviewee 1: "You get to meet other people that share the same interests and form relationships from there. I myself won't become house friends, but they do become paintball friends at the field and [i] catch up on their lives and how they are doing. It is a lot of fun."

Interviewee 2: “Emotional not really, for me it’s just to have a good time. I don’t get emotional if I am shot out or have a bad day; there is always a next time. Social definitely, you talk about what happen.”

Interviewee 3: “I get emotional when my team wins or loses. I am emotional, because I’ve been in the game so long, it’s a passion. For some, it’s just a social experience and to have fun, which is their prerogative, while others are emotionally vested and [they have] heavy emotions, which include tears of joy and sadness when they win or lose. It all depends on their lifestyle.”

Interviewee 4: “Emotionally, sometimes, after I have left the field and cooled down, I reflect on what I did and what I said. It feels like I am two different people, which makes me smile at myself and other players. The social experience is very linked to the emotional experience. On the field, you scream at each other, shout at each other and sometimes curse one another. Off the field, you socialise. On the field, you are an opponent and off the field, you are friends.”

Interviewee 5: “Social experience depends on what the player wants, whether they want to meet new people or not. Social experience is very important for new players and to grow the experience.”

Interviewee 6: “Especially as the head of a female team, I feel responsible as an example to them. I have experienced positive and negative comments and many female players have trouble coping, which allows me to guide them through it. My team are my sisters and I want more female players to play, and for long.”

Interviewee 7: “Again, that’s purely paintball. It’s a social experience, as you will meet the craziest people you will ever meet and they become your best friends. It’s an amazing sport for social interaction. Emotional goes hand in hand with friendships and social experiences.”

Interviewee 8: “In a sense, paintball, where I am, is a big social experience; for example, the last game we played with 80 players. When we had 30-minute breaks, players would come together and speak about what just happened and connect with one another.”

Interviewee 9: “I’d say honestly it consists of both and embodies everything associated with human nature regarding those themes. It can build you up emotionally when you win and break you down when you lose. Sometimes, you are sad and other times, you are happy. Socially, it has brought me towards people and created animosity between rivals. Mostly, it brings people together socially. People become completely different when they put a mask on; for example, the most calm and collected person will become a raging fanatic. It basically breaks you down and makes you vulnerable and helps reveal your true self.”

Interviewee 10: “I’d say meeting new paintballers and paintball celebrities such as Greg Hastings is for me a social experience. It’s really exciting when people come up to me and say ‘hi’, which for me is the emotional experience.”

Interviewee (R) 11 and 12:

R11: “We require dedication by attending training sessions et cetera before you can join our team.”

R12: “A lot of players have changed since they started playing paintball. They have gone from being the main man to much more disciplined individuals.”

5.2.3.6 Memories in paintball

Interviewee 1: “That’s definitely something that paintball leaves you with, either scars or some very good stories to tell: memories, a lot of [them], good and some bad. There is always something to tell your other friends about your paintball experience and encouraging them to join.”

Interviewee 2: “There are plenty of memories! Every event leaves you with memories you share with your paintball friends and talk about constantly.”

Interviewee 3: “I don’t have enough battery space! I’ve travelled the world with my team – Asia, [the] USA, England and France. It’s not just on the field, but the road trips too: many memories, but never one a bad one, even when you lost.”

Interviewee 4: “Oh man, tons of it. I remember snap shots of each event. Every time I think of an event and the snap shots that come to mind, I have good memories.”

Interviewee 5: “Memories are a very big thing. Memories in paintball help you on the emotional side. The internal events I attended in 2011-2013 was something I will never forget. What I experience[d] there is something I can almost not describe, the level of camaraderie there is out of this world. Memories are an extreme positive. When I think of birthday events we host in paintball, you get the popular kids and the not so popular kids or the introverts. At the end of the day, if that introvert has one of the last kills of the day, especially one of the popular kids, everyone will be talking about it off the field. That kid is treated like a hero and his social life has changed completely. He now has a memory which will last him a lifetime. That change automatically shows what it’s like to be part of the team.”

Interviewee 6: “What comes to mind is my initial involvement in the paintball industry, trying to find inroads into higher tier competitions. I don’t remember exact details but more general experiences. The first win stands out in my mind.”

Interviewee 7: “Well, I’ve spent the last nine years playing paintball and all my would-be holidays are paintball events, big trips overseas and locally, which has given me amazing memories.”

Interviewee 8: “It’s nice to have memories of games, for example where you won or had a good time.”

Interviewee 9: “I can think of a thousand memories, moments and decisions. It’s a roller coaster experience and memories, both positive and negative, go along with it. For every positive I have experienced, I have also experienced a negative, which go hand in hand. The most important is that those memories are mine.”

Interviewee 10: “For me, my old field, CQB , brings back fun memories of socialising and having fun.”

Interviewee (R) 11 and 12:

R11: “There are plenty! If I look back, I can take away only positive memories – the laughs, experiences, flipping out at each other [and] the bantering between you and your brothers.”

R12: “Making friends of enemies and enemies of your friends.”

R11: “That’s exactly that, you nailed it on the head, brother. Being able to walk onto a field and knowing that guy there is your brother and your friend. But when you are on opposite sides of the field, friendship doesn’t matter. I have learned a lot about my friends and the type of people they are while under stress.”

R12: “It shows the real them.”

R11: “Yes. You cannot fake who you are while being shot at. It gives you a deeper sense of who someone is.”

R12: “There is this one guy we play with that, in the beginning, we couldn’t stand each other’s company. Now through paintball we are best friends.”

R11: “[For] me being the friend in the middle, knowing they didn’t like each other, it was hard. But seeing them come together and rely on each other, that changed things.”

R12: “And you carry that bond off the field.”

5.2.3.7 Fear, anxiety and stress in paintball

Interviewee 1: “That is something for me that disappear, because I get to live out a different world where you have an objective and forget the real world for a while.”

Interviewee 2: “Playing paintball, nothing. I play to get rid of my stress. Working as a marshal definitely stresses me out, because you want everything to run smoothly.”

Interviewee 3: “Fear as the outcome of losing could affect the outcome of [an] entire competitive season. You work as hard as you can and when the finals come up where you have to win, the stress comes up. Anxiety comes in when you are trying to win and it all comes down to one or two points.”

Interviewee 4: “Fear is one of the only negative things. In the beginning, when you are new to paintball, you don’t know what to expect, especially how hard the paintball hits you. The unexpected and unsportsmanlike behaviour causes stress. Sometimes, especially with big games, the event organisers bring out teasers (videos) of the action that can be expected and they make it look like a real battle, which can cause stress and anxiety.”

Interviewee 5: “Anxiety occurs when someone doesn’t know how paintball is; for example, will it hurt, won’t it hurt? That deer-in-the-headlights moment I’ve seen many times. A lot of kids run off the field because they cannot handle that adrenaline feeling; it’s not something they haven’t ever experienced before. Something else that can cause anxiety and fear for new players is from what they see on YouTube of paintball such as the bruises, cut skin and blood. This, in turn, leads to stress. The best practice is to be honest with new players and telling them that it will bite.”

Interviewee 6: “With speedball, I always get butterflies before every match, but as soon as the ten-second bell rings before the game commences, I become focused. I fear letting my team down if I am shot out. When playing MILSIM, I fear the unknown, those players hiding and you don’t know when you will be shot stupid.”

Interviewee 7: “Sitting in a bunker being the last man on your team, being hunted by three opponents, that’s definitely fear, stress and anxiety. That’s the actual play of the game. Stress to me is neutral, as it is something you experience in the moment and after it passes it’s over.”

Interviewee 8: “In the beginning, some people experience fear, but as soon as you had your first game and it didn’t hurt as much as you thought it would, that fear goes away. For me, it’s more excitement and adrenaline.”

Interviewee 9: “The adrenaline removes those when you play; it’s about making decisions. The biggest fear for me is to make the wrong move. Stress is getting onto the field and the anxiety is not being on the field enough and being able to step up. You learn to conquer them and harness them.”

Interviewee 10: “Not paintball, for sure. I don’t get fear, anxiety and stress from playing paintball. I do have those things in day-to-day life, but not from paintball, otherwise I wouldn’t have played [it].”

Interviewee (R) 11 and 12:

R12: “Paintball is about getting out of your comfort zone to a point where you think you cannot do something because you are stressed and then push through.”

R11: “Its human nature to stress up and freeze because you don’t know what to do. Our team enforces the critical thinking under stress.”

R12: “A lot of people quit and give up before they can push through.”

R11: “It’s a mental block that you need to overcome. It’s also that first shot that new players fear, because they don’t know how much it will hurt. It lasts three to four seconds, then it’s gone. Paintball builds confidence, because it takes a special kind of person to get shot and then go back for more. Paintballers arrive at a field and are stressed and tired, and paintball is a detox which I don’t get anywhere else.”

R12: “I agree.”

5.2.3.8 Final coding for adventure sport experience

Table 5.4: Final coding for adventure sport experience

Theme	Positive	Negative	Literature overlap
Peak experience	Teamwork and skill achieve victory and generate euphoria; skilled opponents make for more memorable experiences; assisting new players to ease in	Inexperienced players can get hurt; childish behaviour; cost hinders frequent play; skilled players find inexperienced opponents frustrating and vice versa	Cohen (1972) Cohen (1979) McCabe (2002) Mossberg (2007) Quan and Wang (2004) Turner and Ash (1975) Sirgy (2012)
Paintball lifestyle	Born to it; bread and butter; changed life for the better; sponsored; substitute for previous military work; learning platform that breeds tactical competency; rich and positive experience; enhanced social life	Commitment is needed to become competent; it requires financial investment	Breivik (2010) Page and Connel (2010) McLean et al. (2015)
Camaraderie, friendship and community	Embodies the core spirit of the sport; being part of a group; welcoming and support to new players; shared war stories; fulfils the need for closeness, previously found in combat		Andrews et al. (2014) Kruger et al. (2014) Jepson and Sharpley (2015) Mackenzie et al. (2013) McLean et al. (2015)
Adrenaline rush and escape	<i>Adrenaline rush</i> – definitely when things go well or bad; being shot at	<i>Adrenaline rush</i> – it can be too much for some; if not challenging, experienced	Breivik (2010) Cater (2013) George (2015)

	<i>Escape</i> – escape from reality, life, and society; clears mind and relieves stress; tranquillity in motion	players don't feel the rush	Page (2011) Saayman (2012)
Social and emotional	<i>Social</i> – Meet new people; similar interests; become friends on and off the field; social interaction plenty and important for sport growth; playful bantering <i>Emotional</i> – Winning can build you up	<i>Social</i> – negative comments <i>Emotional</i> – losing can break you down; screaming, shouting and cursing	Axelsen and Swan (2010) Mackenzie <i>et al.</i> (2013) McLean <i>et al.</i> (2015) Mossberg (2007) Shone and Parry (2013)
Memories	Too many stories to tell; good experiences; very important to paintballers; making friends of enemies and enemies of your friends	Scars from bad experiences	Larsen (2007) Sirgy (2012) Tussyadiah and Fesenmaier (2009)
Fear, anxiety and stress	Fear and anxiety disappear with experience	<i>Fear</i> – losing; making wrong decisions when new to the sport <i>Anxiety</i> – in the moment under pressure; inexperience <i>Stress</i> – before a match; unsportsmanlike behaviour	Cater (2013) Breivik (2010) Burr <i>et al.</i> (2013) Mckay (2014) Saayman (2012) Tsaur <i>et al.</i> (2015) Vujko and Plavša (2011)

The initial coding framework of adventure sport experience according to the literature based themes set out in cf. 4.4.4.1-4.4.4 was tested during the interviews. Table 5.4 validates the literature based themes, which is mirrored by interviewee feedback. Furthermore Table 5.4 shows the positive and negative affects interviewees associated with paintball as an adventure based sport. Based on the interviews, the paintball lifestyle emerged as a theme worthy of further investigation in the quantitative phase of this study. Therefore the themes shown in Table 5.4 will be incorporated into the online questionnaire measurement (Annexure B) and serve as the final coding framework of adventure sport experience.

5.2.4 Results of life domains

Life domains were explained to the interviewees as areas of their lives that carry significant meaning and have an effect on how they see their life overall. Interviewees were asked to discuss how paintball had affected each of the life domains listed.

5.2.4.1 Social life

Interviewee 1: “Positive – all the fun you have while playing, telling stories, sharing tactics, planning and the focus that goes into it. Negative – if something goes wrong like equipment failure or you have a bad day on the field. Overall, I am satisfied with my social life.”

Interviewee 2: “It’s improved my social life in a big way. As I mentioned, the community and the team you meet regularly: you might find guys inviting you to their home for a braai or go out for drinks. [In] the paintball community, you build a lot more friends who have the same interest as you. My friends and I decided to buy paintball gear together and start playing. I am satisfied with my social life.”

Interviewee 3: “It might be different for others, as I was born into the sport while being raised. Long-time players know each other’s personal life. You trust them on the field and off the field with your personal problems. I am definitely satisfied with my social life.”

Interviewee 4: “The people I started with playing paintball were already my friends and most still are. My social life is filled up with many of the people I play with. I’ve met nice people who have become my friends, much more so than in any other sport I play. Also, being somewhat well known in the paintball community encourages social activity. I am satisfied with my social life.”

Interviewee 5: “You are asking the wrong person; I don’t have a social life. I run several paintball fields, so my work life doesn’t allow social time. That being said, I also prefer not to have a social life outside my family. I would like to have a more social life, but I don’t have time for it.”

Interviewee 6: “My life is way better. I feel more confident when I am talking to people outside the paintball industry too; I always bring up paintball. I feel very satisfied with my social life.”

Interviewee 7: “Paintball has affected my social life in a very positive manner. I’ve made a lot of lifelong friends. Many have left paintball, but we are still friends. After school, I hit a social roadblock which I only overcame once I started playing paintball. I am satisfied with my social.”

Interviewee 8: “At the moment, my social life and paintball life is one and the same thing, because my best friends play paintball with me. A paintball event is the focal point for my social life. I am satisfied with my social life.”

Interviewee 9: “A lot of people I hang out with and relate to play paintball. I find that people who play the game have a similar mind set [and] are very resilient and intelligent. Whenever we get together to socialise, it inevitably ends up becoming a discussion over paintball. I am never satisfied with anything; it’s just the way I am. Paintball has taught me that satisfaction is perception.”

Interviewee 10: “I’ve made a lot of friends playing paintball, so it has affected my life in a very positive way. I am very satisfied with my social life [and am] very busy socially.”

Interviewee (R) 11 and 12:

R11: “I am satisfied with my social life.”

R12: “I am a lot more satisfied with my social life than I was before. When I was young, I was very apathetic, which has changed me as a person for the better.”

R11: “Paintball has taught me how to perfect the small things in life. My social life is much better organised.”

5.2.4.2 Emotional life

Interviewee 1: “Emotionally – beforehand, you don’t know what to expect, especially a new objective with a lot of excitement beforehand and satisfaction afterwards. For me, it’s a self-test to see if my body can still handle the effort. It is satisfying to know you can go further if you had to. Paintball is definitely a de-stress activity and a release. Overall, I am satisfied with my emotional life.”

Interviewee 2: “I don’t see that it has affected my emotional life. I’m a very down-to-earth kind of person.”

Interviewee 3: “Obviously, running a business is stressful and takes its toll, especially as it’s my bread and butter. The recession hit us hard, as player[s] play less or give up and move on. It gets emotional, because if it fails, I need to do something else which requires wearing a suit and tie, which isn’t me. I am definitely satisfied with my emotional life.”

Interviewee 4: “It has affected my emotional life a lot. It helps me de-stress and relax. I am definitely satisfied with my emotional life.”

Interviewee 5: “I’m so involved with paintball, I get nightmares. If I take the wife out for dinner, we end up talking about paintball. So basically, my life revolves around paintball. Yes, I am satisfied with my emotional life and it’s what I chose it.”

Interviewee 6: “I feel emotionally very stronger due to the competitive demands of the sport. I had to learn how to control my behaviour, because I am in the spotlight as a world-renowned player and people are watching me. As a female player, I feel that I

have an emotional role to fill and to set a good example. Overall, my emotional life is good.”

Interviewee 7: “There have been many ups and downs in my personal life. Being around people who are supportive and understanding made it much better. Paintball, for me, has become a stable platform to control my emotions. I am satisfied with my emotional life.”

Interviewee 8: “To be honest, I think I am quite a stable person and don’t have emotional problems. It has definitely made my life more exciting and granted a new dimension and allowed me to meet new people. A nice, big event helps [to] take you away from the city and makes you feel more rested afterwards.”

Interviewee 9: “It’s forced me to be a lot calmer, because I am an emotional person. You must learn to turn off your emotions, otherwise they will rule you.”

Interviewee 10: “I suppose it helps me to relax but beyond that, paintball hasn’t had a very big effect on my emotional life. I am satisfied with my emotional life.”

Interviewee (R) 11 and 12:

R11: “I was a real scatterbrain before playing paintball. I’m more driven and precise and I have become a better person. I lost someone close to me a couple of years ago and that sent me off the rails. If it wasn’t for my buddies, I would probably have been in a gutter by now.”

R12: “Paintball has given me the ability to push beyond my limits. I am a shy person, but I can put myself out there where I could[n’t] have before.”

5.2.4.3 Health and safety life

Interviewee 1: “Healthwise, paintball is good exercise, testing and increasing your fitness levels [and] also a motivation to train between games. I see paintball as a testing mechanism to see how far I have come. Spending a day in a full combat kit, running around in the field and sun, you can risk serious injury if you are not fit. I have never suffered serious injuries. I take safety in my personal and paintball life seriously, which is reinforced by my tactical training. Even though paintball markers are not real firearms but simulated, I treat them the same, which to me is priority number one. Priority number two is the people around me. If I see someone do[ing] something dangerous, I will point it out. I will never be satisfied with my overall health and safety life, because I will always push myself to be better.”

Interviewee 2: “I still eat the way I always do. I’m satisfied with my health and safety life.”

Interviewee 3: “I’ve injured myself playing paintball but not too seriously, just a broken ankle. I was a lot fitter when I still played semi-professionally. Overall, I am satisfied with my health and safety life.”

Interviewee 4: “[The] first thing that comes to mind being a self-employed person, father of three children and husband means that I don’t necessarily play every game offered. For example, I don’t attend night games, simply because I don’t want to get hurt. I have hurt myself badly playing paintball in the past. Safety-wise, following the rules by keeping your mask on while on the field, [and] keeping your marker safe is key. Sometimes [it is] very shocking (when I go to play abroad) how lax some of the safety rules are. Overall, I am satisfied with my health and safety life.”

Interviewee 5: “You become a lot more vigilant with health and safety when other people rely on you, especially kids playing. I am satisfied with my health and safety life.”

Interviewee 6: “I suffered quite a few injuries, but if I wasn’t playing paintball, I would have been doing something else which might have led to the same outcome, because I am so adventurous. Mentally, I think it has been so beneficial in seeing things out of the box. Yes, I am satisfied with my health and safety life.”

Interviewee 7: “I was overweight before I started playing paintball and afterwards become fitter and skinnier. Also, [it] gave me the willpower to stay fit and healthy to be good at paintball. So, it has had a positive effect on my health. In terms of safety, I am much more safety-conscious, because I don’t want to hurt myself and then not be able to play paintball. I am satisfied with my health and safety life.”

Interviewee 8: “I think I am quite healthy and exercise four times a week. Paintball is a good addition to my routine. I am satisfied with my health and safety life.”

Interviewee 9: “It has definitely made me healthier. I’m now exercising regularly in order to be a better player.”

Interviewee 10: “Paintball hasn’t had any real effect on my health and safety life one way or the other. I broke an arm once, but that could have happened in any sport I do. I am satisfied with my health and safety life.”

Interviewee (R) 11 and 12:

R11: “I played professional rugby and they trained us hard, but I am sorry to say that nothing beats a day of paintball. You are completely broken after a full day, even your toes hurt. Paintball encouraged me to become more fit than I did before. I started eating better as well, gym five days a week and jog five kilometre a day.”

R12: “I’ve played professional soccer and I am now much fitter than I was before. You are not fit until you are MILSIM paintball fit, having to run up hills and dodging paintballs while jumping over rocks and then having to make accurate foot placements.”

R11: "With paintball, you play from 8:00 to 16:00. With other sports, you work out specific parts of your body, while with paintball, it's a full-body workout, even your toes are sore! If I play a Sunday, the following Monday I have more energy than I would have had before."

R12: "MILSIM paintball is the best workout you can do. I am a lot more satisfied with my health than I was before."

5.2.4.4 Leisure and recreation life (travel life included)

Interviewee 1: "In between games, when I social with friends and family, paintball is a nice topic. One shares stories and experiences and get others to be part of the sport. Paintball occupies maybe 20% of my leisure and recreational life. Overall, I am satisfied with my leisure and recreation life."

Interviewee 2: "I live for my paintball weekends. If I could play every day, I would. My leisure life is on and off, because my work and leisure life over weekends are interwoven. My leisure life is balanced. I am satisfied with my leisure and recreation life."

Interviewee 3: "I don't really have leisure time, because everything is paintball focused or orientated. If I go on holiday and I know there is a paintball field nearby, I pop in to see what they are doing and trade some secrets to help keep the game going. Sometimes I wish I can get away from it all for a day or two and not play paintball. All my friends are paintballers and that always leads to a conversation on the sport. If I could break away from the sport a bit, I would be more satisfaction with my leisure and recreation life."

Interviewee 4: "It's easier for a guy in his mid-20s to find the time to play paintball than a guy in his late 40s who has a family. My work responsibilities intertwined with paintball and it's therefore difficult to distinguish whether I travel for work or leisure. However, I have realised that I need another sport to achieve relaxation in my leisure time. Paintball is demanding when travelling, as you need to pack and arrange all your equipment. I am definitely satisfied with my leisure and recreation life."

Interviewee 5: "There is no such thing; I don't have time. My last holiday was 15 years ago – just too busy with the work. I have no choice but to be satisfied with my leisure and recreation life."

Interviewee 6: "It has affected it positively, compared to anything else, because I travel so much, meet new people and have that escape. I am satisfied with my leisure and recreation life."

Interviewee 7: "I've travelled to places which I would [not] have travelled otherwise such as Malaysia and New Zealand. I ended up staying longer in New Zealand and toured the North Island, which was amazing. It has definitely positively affected my

leisure and recreation life and I have enjoyed it very much. I am satisfied with my leisure and recreation life.”

Interviewee 8: “Paintball replaced my previous sport, rugby, and I enjoy it more. I have less commitment with paintball than rugby, which required four practice sessions a week et cetera. It fits in nicely into my life. I am satisfied with my leisure and recreation life.”

Interviewee 9: “Previously, paintball took away from my leisure and recreation life, because it leaves you with little time if you play professionally. It has encouraged me to do more things not related to paintball, for example snowboarding and dirt bike riding, which imitate the paintball feeling the closest.”

Interviewee 10: “Because I travel around, I make videos of what I am doing. Paintball has opened opportunities for me to travel, which I would not have done otherwise. Paintball drives me to travel to new places such as Croatia, which I would [not] have travelled to before. I’d like to travel more, but my day-to-day life doesn’t allow me to.”

Interviewee (R) 11 and 12:

R11: “Before we took off as a team, paintball was more of a hobby where we played occasionally. When we started getting sponsored, it has become a primary activity. If something else comes up on a[n] event paintball day, then that thing will get cancelled.”

R12: “Agreed. We now end up spending more time during the holidays playing paintball at different fields where we wouldn’t have played before. So we will travel to a field that we have heard about.”

R11: “Agreed.”

R12: “Playing paintball has actually encouraged us to travel more, just to travel and see different field[s].”

R11: “We now organise our travels to include team members’ families so they can enjoy the travel with us. We look for places which cater for children as well.”

5.2.4.5 Financial life

Interviewee 1: “To be honest, if you are serious about the sport and bought your paintball marker, equipment and uniform, it becomes a once-off expense. From there [on], the only expenses are your range fees, paintballs and compressed air. If the equipment is well maintained, it will last a lifetime. I feel the money I spend on paintball is well spent. Overall, I am satisfied with my financial life.”

Interviewee 2: “At first, it affected my financial life negatively, especially when I purchased my gear, but now it is balanced. I cannot complain, but I would like to live comfortably overall.”

Interviewee 3: “Different for me, because paintball is my business. We always owned a field and a shop. I don’t think anyone can be completely satisfied with their financial life, but I do OK.”

Interviewee 4: “I would say as a private person that I was always able to play paintball. It all depends on your job and your income. From a business perspective, paintball helped me [to] start my business and did me well. Overall, I am satisfied with my financial life.”

Interviewee 5: “I support my family through paintball. Competition between paintball fields requires creative thinking to be different. I am satisfied with my financial life.”

Interviewee 6: “O man, if you think of the monetary value of the experiences I feel rich. I enjoy giving to others, even at the expense of myself. Financially, paintball isn’t that lucrative, but I am not financially driven. I think my financial life can be better and have some plans in place.”

Interviewee 7: “Not great, paintball is an expensive sport. While other people spend their money on cars, drinking and other stuff, all my money went to paintball. I worked full time just to play. It’s a bank-sucking sport. On the other hand, I don’t think my finances would have been any different if I didn’t play paintball, as I would probably have spent it on other stuff or activities. No, unless you are [a] millionaire, I don’t see many people being satisfied with their financial life.”

Interviewee 8: “To be honest, it doesn’t have the most positive influence on your financial life. Once you have the basics such as [a] marker, mask and gear, which cost a lot of money, you only need to buy paintballs.”

Interviewee 9: “I’ve gone from a positive \$100 000 to [a] negative \$30 000 in the space of a year, all because of paintball. Before 2014, it was negative –not the impact, but just the finances. It has taught me that money doesn’t matter and that experiences are priceless. When I started playing, I spent money which I didn’t have on paintball, which was a negative. However, in the past two years, it has become the opposite. I now own part of a paintball company.”

Interviewee 10: “For most people, I assume it will be in a negative way, because it’s an expensive hobby. For me, it’s the opposite; I do make money off the videos I post (on YouTube), which translates into a positive for me. I am satisfied with my financial life.”

Interviewee (R) 11 and 12:

R11: “It’s not that expensive to play paintball, except when you start up and buy your own equipment. Once you have your basic kit, your expenses are low.”

R12: “MILSIM is much cheaper than speedball because of the limited number of paintballs you may use. Speedball uses boxes and boxes of paintballs, whereas [in] MILSIM, you only shoot when you have a clear line of sight.”

R11: "If I knew then what I know now, I would have bought half the things I did. If people are more knowledgeable about paintball, they would spend more wisely."

R12: "Not only that, store owners and salespersons should think of the long run and not try and sell the most expensive marker available."

R11: "With kids, the parents play and that scares them off, because they are sold the most expensive equipment available. Start off small and after[wards], sales will come from that. I would mind a bit more money, but I am satisfied with my financial life."

R12: "I am a lot better off now."

5.2.4.6 Other life domains

Interviewee 1: "It enhances my awareness or tactical lifestyle. Paintball serves as a field where I can hone my skills while under stress. It gives me confidence in myself that I can respond in a certain way if needed to."

Interviewee 2: "Family and responsibility. Families get involved, kids get involved."

Interviewee 3: "Nothing comes to mind."

Interviewee 4: "Indirectly, social life. Through paintball, I create my own middle world to support paintball. We have, for example, established a MILSIM school group where real military instructors teach us military techniques. This has led me to meet a whole new group of people, namely military professionals."

Interviewee 5: "Family life. I had six fields and spend five to six days away from my family, but it's my choice and sacrifice for them."

Interviewee 6: "Family relationship. Because of cultural reasons, they don't understand why I play, as it doesn't fit into their belief of [a] traditional family role."

Interviewee 7: "Not really, but in my personal life, I have become a much better team player on and off the field, which I now am."

Interviewee 8: "Paintball has affected my situational awareness positively. Paintball has positively affected my relationship with my father, as he joins me with the big games. My best friend's father and some other players' fathers and daughter[s] also play together, which translates into a great bonding experience."

Interviewee 9: "Family life. I came from an unstable household and paintball helped me find myself when I didn't know who I was. Paintball taught me the meaning of family and what that truly means. Paintball has shown me true humanity."

Interviewee 10: “Family life. I see my son and family as often as I can, but paintball does interrupt my family life, especially when I travel far away from time to time. That being said, paintball effect on my family life is not detrimental.”

Interviewee (R) 11 and 12:

R11: “A support structure is important. You have to have people that understand your commitment. Where previously, team members’ girlfriends and wives would complain, they now support their passion.”

R12: “Family bonding, for sure. Families should come to events as well to see what the husbands are up to. That’s also how we can get [the] paintball community to grow, by inviting the spouses to play as well. Get the whole family involved. The bond is now much better in my family because of paintball and the support they bring during games.”

5.2.4.7 Sources of positive and negative affects in life domains

Table 5.5: Sources of positive and negative affects in life domains

Life Domain	Positive	Negative
Social life	Telling stories; meeting new people, making new friends; more socially confident; social life is paintball life	Impact of equipment failure; not enough time to socialise; friends leaving the sport
Emotional life	Excitement when you don’t know what to expect; feeling distressed; learning control and calmness; fellow players emotionally supportive; projecting confidence	Possibility of failure; nightmares about paintball
Health and safety life	<i>Health</i> – improved fitness; good exercise <i>Safety</i> – good management reduces risk; standards very high; teaches firearm safety; improves vigilance	<i>Safety</i> – serious injury possible; avoid certain types of paintball events due to risk; poor management increases risk
Leisure and recreation life	Fills up leisure time; paintball a positive leisure and recreation experience	Paintball overwhelms one sometimes; work impedes leisure time over weekends sometimes; not enough time for leisure
Travel life	Visiting new fields; travelling to new places I wouldn’t have seen otherwise; motivates to travel in order to play; experiencing new events and fields	Packing a paintball kit is demanding.
Financial life	Money spent is worth it; creating financial opportunities; cost of playing is affordable; there are alternative formats to alleviate the costs.	Initial expenses for equipment are high; negative affect in finances
Other life domains: Family life	It can have a positive affect if the family becomes involved; it increases the family bond under pressure; it teaches what family is through shared camaraderie.	It takes away from family time; family friction exists because of time spent with sport.

In Table 5.5, interviewees expressed positive and negative affects in relation to social life, emotional life, health and safety life, leisure and recreation life, travel life, financial life and the emerged family life domain. The feedback that was generated from the interviews was used to validate the suitability of each life domain as part of the final

framework for this study. The positive and negative affects were incorporated into the online questionnaire measurement under each life domain. The final coding therefore consisted of each life domain in the online questionnaire (Annexure B).

5.2.5 Results of QoL

Interviewees were first asked to discuss how paintball had affected their QoL over the previous six months. If the initial answer was not sufficient, interviewees were asked the following probing questions:

- Is your life close to ideal?
- Would you describe your conditions of life as excellent?
- Are you satisfied with your life?
- Have you managed to do the important things you want to in life?
- If you could live your life over, would you change anything?

Interviewee 1: “The only thing that comes to mind is that paintball helped strengthen the bond between myself and one of my lifelong friends who shares the game with me. With work obligations, time for friends is limited, few. Paintball allows us to catch up and spend time together doing something we both enjoy, which means a lot.”

Interviewee 2: “Helping kids play paintball, it is a rewarding experience. When they ask if I am marshalling, that makes me feel good. Everything about paintball is rewarding. Besides having more money, my life is good. I haven’t yet done all the important things in my life, as I always have goals. If I could go back to school, I would pay more attention.”

Interviewee 3: “I have all the important things in life and wouldn’t change anything. Possibly, I should have expanded more when the sport was smaller and the market empty of competitors. Other than that, I wake up with a smile on my face every day.”

Interviewee 4: “The last six months were cold and rainy and not spectacular. Paintball season only started in May. The next six months will be very exciting, with many opportunities to travel for business and paintball. Every year, I count the months till the season starts and try to stay healthy and ready for the paintball season. I am satisfied with my life, but need at least three lifetimes to do all I want to.”

Interviewee 5: “Paintball has improved my quality of life. My life is not ideal yet. My main priority is that my family is happy and I am happy regardless how we do it. Financial stability is important. I’ve seen combat, have a family, so I yes, I have the important things in my life. Besides a few small things, I would live my life the same way if I had it over again.”

Interviewee 6: “Paintball has affected my life positively in the last six months, because my contribution to the sport has been recognised lately through various channels. I wish I could play more paintball with my spouse more often, because if I don’t, it has a negative impact on me. I do feel satisfied with my life, looking at the big picture. There are many things as an individual I still want to do and [I] feel compelled to grow the sport, especially for female paintballers. I would live my life the same as if I had to do it all over again.”

Interviewee 7: “My life is closer to ideal than what it would have been if I wasn’t playing paintball. I view my life conditions as acceptable and although I am satisfied with my life, I think it can be much better. I still need to achieve all the important things in my life such as travel, which I can achieve through playing paintball in places such as Germany et cetera. I would do my life over the same way if I could, which includes playing paintball.”

Interviewee 8: “My life isn’t yet ideal, as I am still young. I’m engaged and getting married. Paintball hasn’t affected my life negatively and fits in nicely with my life. My condition of life is quite good at the moment. If I could live my life over again, I would do it the same way.”

Interviewee 9: “Paintball has surrounded my life and makes me feel understood, not just by one person, but [by] many. Up till today, the paintballers I have met have had a positive effect on my life. The unspoken understanding between players makes it special. And all of this comes from shooting a gun and a paintball at 300 feet!”

Interviewee 10: “In the last six months, paintball hasn’t changed my quality of life one way or the other. Looking back five years versus now, paintball has improved my quality of life dramatically. I’ve met new friends, made money from it and turned it into a little side business. My life is close to ideal; however, I strive to improve and do more. I’ve gotten to do most of the things I want in life.”

Interviewee (R) 11 and 12:

R12: “My life isn’t ideal yet, but much closer than before, with friends being a lot more, I’m more open, [have] more self-confidence, [and my] family is a lot closer. I am satisfied with my life. I haven’t done all the things I want in life yet such as married and having kids.”

R11: “I am satisfied with my life. A couple of years ago, I was in a near fatal accident and coming out of that, I wrote myself a bucket list that I have completed 90% of such as travelling abroad, [and] skydiving; wife and kids are still missing. If I could live my life over, I would start playing paintball sooner.”

Table 5.6: Effect of paintball on QoL during the last six months and life overall

Interviewee	Effect of paintball on QoL during the last six months and life overall
1	Strengthening bonds with friends
2	Helping others (rewarding experience); more money; I have not yet done all the important things in life.

3	I wake up with happiness every day; I wouldn't change anything.
4	Opportunities to travel; motivation to stay healthy; satisfied with life
5	Has improved my QoL; family happiness is very important; I would live my life the same way again.
6	Affected my life positively; many more challenges ahead; I would live my life the same way again.
7	Brought me closer to a perfect life; I would live my life the same way again.
8	Fits in perfectly with my life; I would live my life the same way again.
9	Makes me feel understood and positively affected my life.
10	Changed my life dramatically for the better; life is close to ideal.
11	More friends, more confidence, better family ties; life is closer to ideal than it was before.
12	I would have liked to play paintball sooner; satisfied with life.

Table 5.6 shows interviewees' response regarding the effect that paintball had on their QoL over the previous six months and life over all. Most of the interviewees (eight) mentioned that paintball had helped to improve their lives or had a positive influence on their lives. Five said that they would live their lives the same way again if they had to, whereas two said that they were satisfied with their lives. This aspect of the framework would be represented under the umbrella of QoL and will consist of standardised questions used to measure QoL. The following section will explore the findings of the quantitative analysis.

5.3 QUANTITATIVE ANALYSIS

The following section contains the analyses and interpretation of the online survey and includes, descriptive statistics (cf. 5.3.1), exploratory factor analysis (EFA) (cf. 5.3.2), *t*-tests (cf. 5.3.3), analysis of variance (cf. 5.3.4), correlations (cf. 5.3.5) and the SEM (cf. 5.3.6).

5.3.1 Descriptive statistics

The purpose of this section is to analyse the descriptive results, based on 506 respondents who completed the online questionnaire (designed in Google Forms) that ran between 1 July 2016 and 31 July 2016. First, the descriptive results regarding demographic characteristics (Section E) will be analysed, followed by leisure aspects (Section A1) and activity aspects (Section A2) of paintball. Thereafter, the adventure sport experience (Section B) and life domains (Section C) will be analysed. Last, QoL (Section D) will be unpacked.

5.3.1.1 Descriptive statistics regarding demographic characteristics of respondents

From Table 5.7, it can be seen that the majority of respondents were male (93%), whereas the remaining seven percent were female. According to Goldbecker (2013:50), the high ratio of male to female players is consistent with the pattern of participation in paintball. Over the past five years of playing paintball, the author has observed that the vast majority of players are male, with only a handful of female players. Largely, the respondents indicated their working status as full-timers (81%), whereas students constituted eight percent of respondents. Part-timers contributed to six percent of respondents, whereas four percent were unemployed. The remaining one percent of respondents were retired. Taking into consideration the work station figures, the age group of respondents was between 25-34 years (38%), followed by 35-49 years (36%). Reflecting on the previous figures, most respondents (53%) had acquired a diploma/degree, followed by those who had completed high school (33%). Most respondents were married (44%), followed by those who were single (33%).

All respondents had to classify themselves as a specific type of paintballer; most indicated 'dabbler' (semi-professional) (49%), followed by 'enthusiast' (professional) (32%). The ratio of respondents' classification of themselves was expected, given the years of experience that will be described next. Most respondents (36%) had been playing paintball between 6-10 years, with an overall average of 9.3 years. The results are consistent with the findings of Goldbecker (2013:52) with regard to the average years of participation. The majority of respondents (47%) had played paintball five times or less during the last six months. Furthermore, it was observed that more than half of the respondents (55%) chose MILSIM/scenario, compared to 14 percent who preferred speedball. Nearly a third (31%) of respondents played either style of paintball. According to Venter (2014a:4), MILSIM/scenario is the most popular form of the adventure sport and will therefore contribute to the highest percentage of respondents.

Concerning previous military/law enforcement/formal tactical training (MLT) background, the majority of respondents (76%) indicated that they had no such training, with the remaining 24 percent acknowledging that they had, which is consistent with the findings of Goldbecker (2013:50).

The vast majority of respondents (33%) were from the United States of America (USA), followed by South Africa and Canada with 17 percent each. The United Kingdom accounted for 14 percent of respondents. According to Venter (2014a:1), the majority of paintballers can be found in North America and Europe. Because no other study has targeted South Africa thus far, the results are setting the norm to follow. Given the origin of participants, the finding that the majority of respondents (84%) spoke English as their home language is to be expected.

Table 5.7: Demographic characteristics of respondents

Demographic characteristics of respondents							
Gender	Male			Female			
	93%			7%			
Age groups	≤ 19	20-24		25-34	35-49	> 50	
	6%	13%		38%	36%	7%	
Home language	English	Afrikaans		German		Other	
	84%	7%		5%		4%	
Highest level of education	No school	Grade 12		Diploma/Degree	Post-graduate	Doctorate/PhD	
	1%	33%		53%	12%	1%	
Current working status	Full-timer	Part-timer		Unemployed	Student	Pensioner	
	81%	6%		4%	8%	1%	
Marital status	Single	Married		Living together		Divorced	
	33%	44%		20%		3	
Type of paintballer	Sampler (amateur)	Learner (amateur)		Dabbler (semi-professional)		Enthusiast (professional)	
	1%	18%		49%		32%	
Style of paintball	MILSIM/scenario			Speedball		Both	
	55%			14%		31%	
Years playing paintball	≤ 5	6-10	11-15	16-20	21-25	26-30	31
	31%	36%	20%	6%	4%	3%	1%
Times played in last six months	≤ 5	6-10	11-15	16-20	21-25	26-30	31
	47%	22%	11%	11%	5%	4%	1%
MLT	Yes			No			
	24%			76%			
Country of origin	USA	Canada	RSA	UK	Australia	NZ	Other
	33%	17%	17%	14%	4%	2%	13%

5.3.1.2 Descriptive statistics with regard to leisure aspects of paintball and activity aspects of paintball

The questionnaire made use of the following Likert scale: 1 – *Strongly disagree*; 2 – *Disagree*; 3 – *Neutral*; 4 – *Agree*; and 5 – *Strongly agree*. The online questionnaire consisted of two parts: *leisure aspects of paintball* and *activity aspects of paintball*, which were interpreted according to the above scale, enabling means, standard deviation and frequencies.

5.3.1.2.1 *Leisure aspects of paintball*

From Table 5.8, it can be seen that respondents regarded the *leisure aspects of paintball* ($\bar{x} = 4.41$) as an important part of the reason why they participate. Most respondents strongly agreed ($\bar{x} = 4.33$) that *paintball helps to improve their fitness*. They also strongly agreed ($\bar{x} = 4.45$) that *paintball serves as good exercise*. The vast majority of respondents strongly agreed ($\bar{x} = 4.87$) that *paintball has a great fun factor*. Respondents agreed ($\bar{x} = 4.42$) that *paintball helps them to relax*. It can be observed that respondents strongly agreed ($\bar{x} = 4.61$) that *paintball helps to relieve stress*. Respondents also strongly agreed ($\bar{x} = 4.67$) that *paintball provides an adrenaline rush*. Pertaining to the statement that *paintball provides mental stimulation*, respondents strongly agreed ($\bar{x} = 4.54$). It can be seen that respondents strongly agreed ($\bar{x} = 4.55$) that *paintball provides a platform to socialise*. The vast majority of respondents strongly agreed ($\bar{x} = 4.58$) that *paintball provides a challenge*. Nearly half of respondents (41%) agreed ($\bar{x} = 3.87$) that *paintball helps them to escape from reality*. More than half of respondents (51%) strongly agree ($\bar{x} = 4.33$) that *playing paintball provides them a chance to go outdoors*. Most respondents (40%) agreed ($\bar{x} = 3.79$) that *they love the simulation (MILSIM)*. Lastly nearly half strongly agreed ($\bar{x} = 4.29$) that *paintball is fast paced*. According to Goldbecker (2013:20), paintball highlights leadership, tactics, competition, strategy, practice, target sports and conditioning. However, the unique skill sets required by scenario paintball also include orienteering, hiking, adventure racing, camping, endurance, resiliency and perseverance. The need to travel supports tourism, and the camaraderie between teammates and community members leads to social clubs and networking.

Table 5.8: Leisure aspects of paintball

Leisure aspects of paintball	Mean $\bar{x}$	Std. deviation	Frequency				
	4.41	.77	1	2	3	4	5
It helps to improve my fitness.	4.33	.741	1%	1%	8%	46%	45%
It serves as good exercise.	4.45	.688	1%	0%	6%	39%	54%
It has a great fun factor.	4.87	.465	1%	0%	0%	9%	90%
It helps me to relax.	4.42	.788	1%	2%	9%	31%	57%
It helps to relieve stress.	4.61	.679	1%	0%	4%	26%	69%
It provides an adrenaline rush.	4.67	.647	1%	1%	3%	21%	74%
It provides mental stimulation.	4.54	.656	1%	0%	4%	34%	61%
It provides a platform to socialise.	4.55	.677	1%	0%	5%	32%	63%
It provides a challenge.	4.58	.650	1%	0%	4%	31%	64%
It helps me to escape from reality.	3.87	1.164	4%	10%	23%	23%	41%
It gives me a chance to go outdoors.	4.33	.831	1%	1%	12%	34%	52%
I love the simulation (MILSIM).	3.79	1.245	7%	9%	23%	21%	40%
It is fast paced.	4.29	.788	1%	0%	16%	36%	47%

5.3.1.2.2 Activity aspects of paintball

From Table 5.9, it can be seen that respondents regarded the *rules* as the most important activity aspect in paintball ($\bar{x} = 4.31$). Concerning rules, respondents agreed that *it is comforting to know that paintball is one of the safest adventure sports* ($\bar{x} = 4.21$). Respondents strongly agreed ($\bar{x} = 4.41$) that *by adhering to the rules, they feel better*. The vast majority of respondents strongly agreed ($\bar{x} = 4.47$) that *trusting other players to be honest makes the sport worthwhile*. Respondents also strongly agreed ($\bar{x} = 4.40$) that *players who cheat detract from the positive experience*. It can be observed that respondents strongly agreed ($\bar{x} = 4.43$) that *it is frustrating when paintball fields don't enforce the rules*. Respondents agreed ($\bar{x} = 3.987$) that *untrained marshals make paintball less fun*.

Respondents regarded *community* as the second-most important activity aspect in paintball ($\bar{x} = 3.86$). Concerning community, respondents strongly agreed that *paintball players are fantastic people* ($\bar{x} = 4.24$). Respondents also strongly agreed ($\bar{x} = 4.23$) that *paintballers are incredibly friendly*. The vast majority of respondents strongly agreed ($\bar{x} = 4.40$) that *camaraderie between players transcends borders and language barriers*. Respondents also strongly agreed ($\bar{x} = 4.16$) that *problem players detract from the overall paintball experience*. It can be observed that respondents were divided ($\bar{x} =$

2.58) on the question whether *amateurs playing against experienced players can affect the sport negatively*. Respondents agreed ($\bar{x} = 3.56$) that *politics in paintball have a negative effect on the sport*.

Objective is seen as the third-most important activity aspect in paintball ($\bar{x} = 3.57$). Concerning objective, respondents strongly agreed that *being part of a paintball team enhances the experience* ($\bar{x} = 4.29$). The vast majority of participants (58%) strongly agree ($\bar{x} = 4.42$) that they *enjoy travelling to new places to play paintball*. Respondents also strongly agreed ($\bar{x} = 4.50$) that *inspiring other paintballers makes them feel good*. It can be observed that respondents agreed ($\bar{x} = 3.42$) that *paintballers who are not disciplined, detract from the overall experience*. The vast majority of respondents strongly disagreed ($\bar{x} = 1.79$) with the statement that *they don't make enough friends playing paintball and that it makes them despondent*. Respondents were divided ($\bar{x} = 2.97$) on the question whether *a lack of playing paintball to blow off steam causes frustration*.

Respondents viewed *division of labour* as the fourth-most important activity aspect in paintball ($\bar{x} = 3.47$). Concerning division of labour, respondents strongly agreed ($\bar{x} = 4.68$) that *organisers who go above and beyond what is expected of them enhance the paintball experience*. Respondents also strongly agreed ($\bar{x} = 4.37$) that *charismatic paintballers enhance the overall paintball experience*. It can be observed that respondents strongly agreed ($\bar{x} = 4.14$) that *paintballers are open to new ideas in order to help the sport grow*. Respondents disagreed ($\bar{x} = 2.22$) on the question whether *having more paintball leagues will impact the sport negatively*. Respondents agreed ($\bar{x} = 3.10$) that *there is friction between MILSIM and speedball players that affects the sport negatively*. Respondents disagreed ($\bar{x} = 2.30$) with the statement that *paintballers have difficulty understanding new game concepts*.

Tools was the fifth-most important activity aspect in paintball ($\bar{x} = 3.32$). Concerning tools, respondents strongly agreed ($\bar{x} = 4.15$) that *their paintball gear gives them a sense of pride*. Respondents agreed ($\bar{x} = 3.90$) that *they view their paintball gear as an extension of themselves and that it makes them proud*. It can be observed that respondents agreed ($\bar{x} = 3.63$) that *their gear represents their identity*. Respondents

also agreed ($\bar{x} = 3.94$) that *if paintball gear isn't functional, it frustrates them*. Respondents disagreed ($\bar{x} = 2.58$) with the statement that *when others play MILSIM paintball with speedball markers, it takes some pleasure away from the overall experience*. Respondents also disagreed ($\bar{x} = 1.71$) with the statement that *they feel no connection to their paintball gear*.

Respondents viewed *outcome* as the sixth-most important activity aspect in paintball ($\bar{x} = 3.32$). Concerning outcome, respondents strongly agreed ($\bar{x} = 4.52$) that *it feels good to be able to break away from daily stresses*. Respondents also strongly agreed ($\bar{x} = 4.84$) that *playing paintball is fun*. It can be observed that respondents strongly agreed ($\bar{x} = 4.45$) that *socialising at paintball events makes them feel good*. Respondents disagreed ($\bar{x} = 1.92$) with the statement that *if they don't win, they feel negative*. Respondents also disagreed ($\bar{x} = 2.04$) with the statement that *the action they experience while playing paintball isn't enough*. Respondents disagreed ($\bar{x} = 2.08$) with the statement that *to be unrecognised for their achievements makes them feel negative*.

Subject was the seventh- and least most important activity aspect in paintball ($\bar{x} = 3.12$). Concerning subject, respondents agreed ($\bar{x} = 3.78$) that *they enjoy the challenge of playing MILSIM paintball*. Respondents also agreed ($\bar{x} = 3.73$) that *playing MILSIM paintball tactically enhances the experience*. It can be observed that respondents were neutral ($\bar{x} = 2.81$) when asked if *their military background comes in handy when they play MILSIM paintball*. Respondents disagreed ($\bar{x} = 2.27$) with the statement that *a lack of realism while playing MILSIM paintball detracts from the overall experience*. Respondents also disagreed ($\bar{x} = 2.53$) with the statement that *if speedball isn't fast paced, they don't enjoy it*. It can be seen that respondents agreed ($\bar{x} = 3.61$) that *speedball is an intense game and deserves more recognition*.

Table 5.9: Activity aspects of paintball

Activity aspects of paintball	Mean	Std. deviation	Frequency				
	3.56	.956					
Outcome	3.31	.79	1	2	3	4	5
It feels good to be able to break away from daily stresses.	4.52	.624	1%	0%	2%	41%	56%
Playing paintball is fun.	4.84	.465	1%	0%	0%	13%	86%
Socialising at paintball events makes me feel good.	4.45	.728	1%	0%	7%	36%	56%
If I don't win, I feel negative.	1.92	.990	41%	36%	14%	7%	2%
The action I experience while playing paintball isn't enough.	2.04	.918	30%	44%	20%	4%	2%
Not being recognised for my achievement makes me feel negative.	2.08	1.009	34%	34%	22%	9%	1%
Subject	3.12	1.16	1	2	3	4	5
I enjoy the challenge of playing MILSIM paintball.	3.78	1.222	8%	8%	21%	29%	36%
Playing MILSIM paintball tactically enhances the experience.	3.73	1.221	7%	9%	23%	27%	35%
My military background comes in handy when I play MILSIM paintball.	2.81	1.210	22%	8%	49%	10%	12%
A lack of realism while playing MILSIM paintball detracts from the overall experience.	2.27	1.075	30%	29%	30%	9%	3%
If speedball isn't fast paced, I don't enjoy it.	2.53	1.099	21%	25%	39%	9%	6%
Speedball is an intense game and deserves more recognition.	3.61	1.138	6%	8%	32%	26%	27%
Objective	3.57	.97	1	2	3	4	5
Being part of a paintball team enhances the experience.	4.29	.931	3%	2%	11%	32%	52%
I enjoy travelling to new places to play paintball.	4.42	.760	1%	1%	8%	35%	55%
Inspiring other paintballers makes me feel good.	4.50	.679	1%	0%	6%	35%	58%
Paintballers who are not disciplined detract from the overall experience.	3.42	1.264	9%	17%	21%	29%	24%
I don't make enough friends playing paintball and that makes me despondent.	1.79	.887	46%	34%	16%	4%	1%
If I don't play paintball often enough to blow off steam, I become frustrated.	2.97	1.293	16%	23%	21%	27%	13%
Tools	3.32	1.07	1	2	3	4	5
My paintball gear gives me a sense of pride.	4.15	.869	1%	3%	15%	41%	40%
I view my paintball gear as an extension of myself and that makes me proud.	3.90	1.087	3%	8%	20%	32%	36%
My gear represents my identity.	3.63	1.220	7%	11%	24%	28%	30%

If paintball gear isn't functional, it frustrates me.	3.94	1.030	3%	9%	14%	41%	34%
When others play MILSIM paintball with speedball markers, it takes some pleasure away from the overall experience.	2.58	1.333	28%	23%	23%	15%	11%
I feel no connection to my paintball gear.	1.71	.860	49%	35%	12%	3%	1%
Rules	4.31	.84	1	2	3	4	5
It's comforting to know that paintball is one of the safest adventure sports.	4.21	.851	1%	2%	17%	36%	44%
By adhering to the rules, I feel better.	4.41	.707	1%	1%	8%	40%	52%
Trusting other players to be honest makes the sport worthwhile.	4.40	.736	1%	2%	7%	39%	52%
Players who cheat detract from the positive experiences.	4.40	.988	4%	3%	5%	26%	62%
It's frustrating if paintball fields don't enforce the rules.	4.43	.779	1%	2%	6%	35%	56%
Untrained marshals make paintball less fun.	3.98	.980	2%	6%	19%	39%	35%
Community	3.86	.95	1	2	3	4	5
Paintball players are fantastic people.	4.24	.806	1%	1%	16%	39%	44%
Paintballers are incredibly friendly.	4.23	.791	1%	2%	14%	42%	42%
Camaraderie between players transcends borders and language barriers.	4.40	.773	1%	1%	10%	35%	54%
Problem players detract from the overall paintball experience.	4.16	.917	2%	3%	13%	40%	42%
Amateurs playing against experienced players can affect the sport negatively.	2.58	1.289	26%	28%	19%	19%	9%
The politics in paintball have a negative effect on the sport.	3.56	1.149	7%	9%	31%	28%	25%
Division of labour	3.47	.91	1	2	3	4	5
Organisers who go above and beyond what is expected of them enhance the paintball experience.	4.68	.621	1%	0%	4%	21%	74%
Charismatic paintballers enhance the overall paintball experience.	4.37	.776	1%	1%	11%	36%	52%
Paintballers are open to new ideas in order to help the sport grow.	4.14	.889	1%	4%	16%	39%	41%
Having more paintball leagues will impact the sport negatively.	2.22	1.028	29%	32%	30%	6%	3%
There is friction between MILSIM and speedball players that affects the sport negatively.	3.10	1.091	9%	18%	38%	25%	11%
Paintballers have difficulty understanding new game concepts.	2.30	1.056	25%	39%	23%	10%	4%

5.3.1.3 Descriptive statistics with regard to adventure sport experience

The questionnaire made use of the following Likert scale: 1 – *Strongly disagree*; 2 – *Disagree*; 3 – *Neutral*; 4 – *Agree*; and 5 – *Strongly agree*. The purpose of this part of the online questionnaire was to measure the adventure sport experience and the answers were interpreted according to the above scale, enabling means, standard deviation and frequencies.

From Table 5.10, it can be seen that respondents regarded a *peak experience* as the most important adventure sport experience in paintball ($\bar{x} = 3.82$). Respondents strongly agreed ($\bar{x} = 3.73$) that *teamwork and skill achieve victory and generate euphoria*. Almost equally, respondents strongly agreed ($\bar{x} = 4.36$) that *skilled opponents make for more memorable experiences*. It can be observed that respondents strongly agreed ($\bar{x} = 4.00$) that *childish behaviour by some paintballers detracts from the overall experience*. Respondents were neutral ($\bar{x} = 2.51$) when asked if *skilled players find playing against inexperienced opponents frustrating*.

Respondents viewed *fear, anxiety and stress* as the second-most important adventure sport experience in paintball ($\bar{x} = 3.56$). It can be observed that respondents agreed ($\bar{x} = 3.87$) that *fear is common when one is new to paintball*. Respondents also agreed ($\bar{x} = 3.86$) that *some stress before a match is normal*. Concerning *becoming anxious when put under pressure in paintball*, respondents disagreed ($\bar{x} = 2.43$). Respondents strongly agreed ($\bar{x} = 4.10$) that *unsportsmanlike behaviour causes unnecessary stress*.

Lifestyle was seen as the third-most important adventure sport experience in paintball ($\bar{x} = 3.24$). Respondents strongly agreed ($\bar{x} = 4.41$) that *paintball has made their life better*. Concerning whether *paintball has changed the way in which they view life*, respondents agreed ($\bar{x} = 3.73$). It can be observed that respondents disagreed ($\bar{x} = 2.34$) with the statement that *if you are not committed to paintball, you will not enjoy it*.

Respondents viewed *social and emotional experience* as the fourth-most important adventure sport experience in paintball ($\bar{x} = 3.18$). Respondents strongly agreed ($\bar{x} = 4.46$) that *meeting people with similar interests is a positive experience*. Pertaining to the statement that *they feel emotionally broken when they lose a game*, respondents

strongly disagreed ($\bar{x} = 1.56$). Concerning whether *negative comments by fellow paintballers detract from the social experience*, respondents agreed ($\bar{x} = 3.44$). It can be observed that respondents agreed ($\bar{x} = 3.25$) with the statement that *screaming, shouting and cursing while playing paintball detract from the overall experience*.

Memories was the fifth-most important adventure sport experience in paintball ($\bar{x} = 3.07$). Respondents strongly agreed ($\bar{x} = 4.69$) that *paintball has left them with wonderful memories*. Almost equally, respondents strongly agreed ($\bar{x} = 4.57$) that *sharing memories with other paintballers adds to the appeal of the sport*. It can be observed that respondents disagreed ($\bar{x} = 1.53$) with the statement that *they have very bad memories of paintball*. Pertaining to the statement that *they feel left out during paintball conversations because they have no memories to share*, respondents strongly disagreed ($\bar{x} = 1.48$).

Camaraderie, friendship and community was the sixth-most important adventure sport experience in paintball ($\bar{x} = 2.97$). Respondents strongly agreed ($\bar{x} = 4.35$) that *camaraderie between paintballers embodies the core spirit of the sport*. More so, respondents strongly agreed ($\bar{x} = 4.50$) that *it feels good to be part of the paintball community*. It can be observed that respondents strongly disagreed ($\bar{x} = 1.43$) with the statement that *they have not made new friends while playing paintball*. Concerning the statement that *the paintball community is not supportive of new players*, respondents strongly disagreed ($\bar{x} = 1.58$).

Surprisingly, *adrenaline rush and escape* was the least important adventure sport experience in paintball ($\bar{x} = 2.74$). Respondents agreed ($\bar{x} = 3.81$) that *the adrenaline rush is a key reason why they enjoy paintball so much*. More so, respondents agreed ($\bar{x} = 3.85$) that *paintball helps them to escape from daily life and reality*. It can be observed that respondents disagreed ($\bar{x} = 1.85$) with the statement that *after playing paintball, their minds don't feel rested and clear*. Concerning the statement that *they feel more stressed after playing paintball*, respondents strongly disagreed ($\bar{x} = 1.44$).

Table 5.10: Adventure sport experience

Adventure sport experience	Mean	Std. deviation	Frequency				
	3.23	.91					
Peak experience	3.82	.89	1	2	3	4	5
Teamwork and skill achieve victory and generate euphoria.	4.42	.728	1%	1%	5%	41%	52%
Skilled opponents make for more memorable experiences.	4.36	.801	1%	2%	7%	39%	51%
Childish behaviour by some paintballers detracts from the overall experience.	4.00	1.005	3%	6%	14%	42%	35%
Skilled players find playing against inexperienced opponents frustrating.	2.51	1.011	16%	38%	29%	15%	3%
Lifestyle	3.24	1.05	1	2	3	4	5
Paintball has made my life better.	4.41	.753	1%	1%	8%	36%	54%
Paintball has changed the way in which I view life.	3.73	1.107	3%	10%	28%	27%	31%
If you are not committed to paintball, you will not enjoy it.	2.34	1.109	24%	39%	22%	10%	5%
Camaraderie, friendship and community	2.97	.82	1	2	3	4	5
Camaraderie between paintballers embodies the core spirit of the sport.	4.35	.754	1%	1%	6%	45%	47%
It feels good to be part of the paintball community.	4.50	.679	1%	1%	4%	37%	58%
I have not made new friends while playing paintball.	1.43	.892	73%	19%	3%	2%	3%
The paintball community is not supportive of new players.	1.58	.939	62%	25%	6%	4%	2%
Adrenaline rush and escape	2.74	.90	1	2	3	4	5
The adrenaline rush is a key reason why I enjoy paintball so much.	3.81	1.027	3%	10%	19%	42%	27%
Paintball helps me to escape from daily life and reality.	3.85	1.017	3%	9%	19%	41%	29%
After playing paintball, my mind doesn't feel rested and clear.	1.85	.906	40%	44%	10%	4%	2%
I feel more stressed after playing paintball.	1.44	.661	63%	3%	5%	1%	0%
Social and emotional experience	3.18	.99	1	2	3	4	5
To meet people with similar interests is a positive experience.	4.46	.665	1%	0%	4%	42%	53%
I feel emotionally broken when I lose a game.	1.56	.785	59%	29%	9%	2%	0%
Negative comments by fellow paintballers detract from the social experience.	3.44	1.205	9%	15%	18%	40%	19%
Screaming, shouting and cursing while playing paintball detract from the overall experience.	3.25	1.297	12%	19%	25%	24%	21%
Memories	3.07	.73	1	2	3	4	5

Paintball has left me with wonderful memories.	4.69	.600	1%	0%	1%	24%	74%
To share memories with other paintballers adds to the appeal of the sport.	4.57	.629	1%	0%	2%	35%	62%
I have very bad memories of paintball.	1.53	.863	65%	23%	6%	5%	1%
I feel left out during paintball conversations because I have no memories to share.	1.48	.811	66%	26%	6%	1%	2%
Fear, anxiety and stress	3.56	.98	1	2	3	4	5
Fear is common when one is new to paintball.	3.87	.940	3%	6%	15%	54%	23%
Some stress before a match is normal.	3.86	.885	3%	5%	15%	58%	19%
I become anxious when I am put under pressure in paintball.	2.43	1.135	25%	31%	24%	17%	3%
Unsportsmanlike behaviour causes unnecessary stress.	4.10	.950	3%	4%	10%	46%	37%

5.3.1.4 Descriptive statistics with regard to life domains and life domains overall

The questionnaire made use of the following Likert scale: 1 – *Strongly disagree*; 2 – *Disagree*; 3 – *Neutral*; 4 – *Agree*; and 5 – *Strongly agree*. This part of the online questionnaire measured life domains and was interpreted according to the above scale, enabling means, standard deviation and frequencies.

From Table 5.11, it can be seen that respondents felt that paintball affected their *leisure and recreation life* most ($\bar{x} = 3.64$). It can be observed that respondents agreed ($\bar{x} = 3.86$) with the statement that *paintball fills up most of their leisure time positively*. The majority of respondents strongly agreed ($\bar{x} = 4.08$) that *they prefer paintball above other recreational activities*. More so, respondents strongly agreed ($\bar{x} = 4.26$) that *paintball offers various types of activities that enhance leisure and recreation life*. Concerning the statement that *respondents don't have enough leisure time to play paintball as often as they would like to*, respondents agreed ($\bar{x} = 3.89$). Regarding the statement that *paintball overwhelms their sense of responsibilities sometimes*, respondents disagreed ($\bar{x} = 2.29$). Respondents chose to agree ($\bar{x} = 3.09$) with the statement that *sometimes, they feel excessively exhausted from a day's paintball*. Pertaining to the statement that *overall, they are satisfied with their leisure and recreation life*, respondents strongly agreed ($\bar{x} = 4.04$).

Health and safety life was considered the second-most affected life domain ($\bar{x} = 3.45$). Respondents strongly agreed ($\bar{x} = 4.26$) that *paintball has helped them to improve their fitness*. More so, respondents strongly agreed ($\bar{x} = 4.49$) that *playing paintball is good exercise*. It can be observed that respondents agreed ($\bar{x} = 3.64$) with the statement that *they are more vigilant in their day-to-day life because of paintball*. Concerning the statement that *the fear of injury detracts from the overall sport experience*, respondents disagreed ($\bar{x} = 1.84$). Respondents chose to disagree ($\bar{x} = 1.74$) with the statement that *they avoid certain types of paintball because of the risk they hold*. Pertaining to the statement that *overall, they are satisfied with their health and safety life*, respondents strongly agreed ($\bar{x} = 4.19$).

Respondents viewed *travel life* as the third-most affected life domain ($\bar{x} = 3.41$). The vast majority of respondents strongly agreed ($\bar{x} = 4.35$) that *they enjoy visiting new places while travelling to play paintball*. Respondents also strongly agreed ($\bar{x} = 4.14$) that *paintball allows them to travel to places that they wouldn't have visited otherwise*. It can be observed that respondents agreed ($\bar{x} = 3.94$) with the statement that *paintball motivates them to travel in order to play*. Concerning the statement that *packing all their paintball gear can be exhausting*, respondents disagreed ($\bar{x} = 2.90$). Likewise, respondents disagreed ($\bar{x} = 2.35$) that *when they travel far, they sometimes feel uneasy getting out of their comfort zone*. Respondents also disagreed ($\bar{x} = 2.36$) with the statement that *travelling from one place to another makes them feel tired and exhausted*. Pertaining to the statement that *overall, they are satisfied with their travel life*, respondents agreed ($\bar{x} = 3.80$).

Social life has emerged as the fourth-most affected life domain ($\bar{x} = 3.32$). Respondents strongly agreed ($\bar{x} = 4.17$) that *being able to tell stories of past paintball games enhances their social life*. More so, respondents strongly agreed ($\bar{x} = 4.48$) that *they enjoy meeting new people while playing paintball*. It can be observed that respondents agreed ($\bar{x} = 3.84$) with the statement that *they have become more confident in social situations since they started playing paintball*. Concerning the statement that *they cannot seem to make new friends while playing paintball*, respondents disagreed ($\bar{x} = 1.57$). Respondents also chose to disagree ($\bar{x} = 1.95$) with the statement that *without paintball, they have no social life*. Pertaining to the statement that *they feel despondent*

when fellow paintballers leave the sport permanently, respondents agreed ($\bar{x} = 3.12$). Respondents strongly agreed ($\bar{x} = 4.11$) with the statement that *overall, they are satisfied with their social life*.

Respondents viewed *financial life* as the fifth-most affected life domain ($\bar{x} = 3.28$). The majority of respondents strongly agreed ($\bar{x} = 4.33$) that *the money they spend on paintball is worth the experiences they get to enjoy*. It can be observed that respondents agreed ($\bar{x} = 3.17$) with the statement that *they try to save money by playing other forms of paintball*. Most respondents remained neutral ($\bar{x} = 2.87$) when given the statement that *playing paintball has taught them how to manage their finances*. Respondents chose to agree ($\bar{x} = 3.69$) with the statement that *the initial expenses to start playing paintball are high*. Concerning the statement that *paintball has a negative effect on their finances*, most respondents chose to remain neutral ($\bar{x} = 2.95$). Pertaining to the statement that *they spend more money on paintball than they can actually afford to*, respondents remained neutral ($\bar{x} = 2.38$). Respondents agreed ($\bar{x} = 4.19$) with the statement that *overall, they are satisfied with their financial life*.

Respondents viewed *emotional life* as the sixth-most affected life domain ($\bar{x} = 3.10$). The majority of respondents strongly agreed ($\bar{x} = 4.04$) that *they experience excitement when they don't know what to expect*. Concerning the statement that *playing paintball has helped them in learning to be calm and in control under stress*, most respondents agreed ($\bar{x} = 3.92$). It can be observed that respondents also agreed ($\bar{x} = 3.90$) with the statement that *paintballers are emotionally supportive*. Pertaining to the statement that *they don't feel more confident since they have started playing paintball*, respondents disagreed ($\bar{x} = 2.02$). Respondents chose to disagree ($\bar{x} = 2.01$) with the statement that *sometimes, they become emotional due to a fear of failure*. Overall, respondents strongly agreed ($\bar{x} = 4.19$) that they are satisfied with their emotional life.

Family life was the least affected life domain with regard to paintball ($\bar{x} = 3.05$). Most of the respondents agreed ($\bar{x} = 3.42$) that *paintball has had a positive effect on their family life, as their families join them when they play*. Similarly, respondents agreed ($\bar{x} = 3.27$) with the statement that *the pressures of playing paintball has strengthened the bond that they feel towards their families*. Most respondents agreed ($\bar{x} = 3.83$) with the

statement that *their paintball family is their real family*. Concerning the statement that *playing paintball reduces the time that they spend with family*, most respondents chose to stay neutral ($\bar{x} = 2.68$). It can be observed that respondents disagreed ($\bar{x} = 3.90$) with the statement that *they are in conflict with their family because they play so much paintball*. Similarly, respondents disagreed ($\bar{x} = 2.01$) that *sometimes they feel guilty about playing paintball and neglecting their family*. Respondents strongly agreed ($\bar{x} = 4.29$) that *overall, they are satisfied with their family life*.

Table 5.11: Life domains and life domains overall

Life domains	Mean	Std. deviation	Frequency				
Social life	3.32	.91	1	2	3	4	5
Being able to tell stories of past paintball games enhances my social life.	4.17	.848	1%	3%	14%	43%	40%
I enjoy meeting new people while playing paintball.	4.48	.670	1%	1%	3%	41%	55%
I have become more confident in social situations since I started playing paintball.	3.84	1.024	2%	6%	29%	31%	32%
I cannot seem to make new friends while playing paintball.	1.57	.778	56%	34%	7%	2%	1%
Without paintball, I have no social life.	1.95	1.075	42%	36%	12%	6%	4%
I feel despondent when fellow paintballers leave the sport permanently.	3.12	1.131	11%	16%	32%	31%	9%
Overall, I am satisfied with my social life.	4.11	.834	1%	4%	11%	51%	34%
Emotional life	3.10	.96	1	2	3	4	5
I experience excitement when I don't know what to expect.	4.04	.806	1%	3%	15%	53%	28%
Playing paintball has helped me in learning to be calm and in control under stress.	3.92	.994	2%	7%	19%	40%	32%
Paintballers are emotionally supportive.	3.90	.850	1%	3%	24%	47%	24%
I don't feel more confident since I have started playing paintball.	2.02	.980	36%	36%	21%	5%	2%
Sometimes, I become emotional due to a fear of failure.	2.01	1.054	40%	34%	14%	11%	1%
Overall, I am satisfied with my emotional life.	4.04	.896	2%	4%	13%	49%	32%
Health and safety life	3.45	.90	1	2	3	4	5
Paintball has helped me to improve my fitness.	4.26	.772	1%	2%	9%	46%	42%
Playing paintball is good exercise.	4.49	.639	1%	0%	3%	42%	54%
I am more vigilant in my day-to-day life because of paintball.	3.64	1.035	3%	8%	32%	33%	23%
The fear of injury detracts from the overall sport experience.	1.84	.972	45%	35%	13%	5%	2%
I avoid certain types of paintball because of the risk they hold.	1.74	.990	53%	31%	8%	6%	2%
Overall, I am satisfied with my health and safety life.	4.19	.835	1%	3%	10%	46%	39%
Leisure and recreation life	3.64	0.99	1	2	3	4	5

Paintball fills up most of my leisure time positively.	3.86	.946	2%	7%	18%	48%	25%
I prefer paintball above other recreational activities.	4.08	.904	1%	4%	17%	40%	37%
Paintball offers various types of activities that enhance leisure and recreation life.	4.26	.694	0%	1%	10%	51%	38%
I don't have enough leisure time to play paintball as often as I would like to.	3.89	1.188	6%	11%	10%	36%	37%
Paintball overwhelms my sense of responsibilities sometimes.	2.29	1.072	25%	38%	22%	11%	4%
Sometimes, I feel excessively exhausted from a day's paintball.	3.09	1.268	13%	24%	17%	33%	13%
Overall, I am satisfied with my leisure and recreation life.	4.04	.870	1%	5%	12%	51%	30%
Travel life	3.41	.02	1	2	3	4	5
I enjoy visiting new places while travelling to play paintball.	4.35	.774	1%	2%	8%	41%	49%
Paintball allows me to travel to places that I wouldn't have visited otherwise.	4.14	1.005	2%	6%	13%	33%	46%
Paintball motivates me to travel in order to play.	3.94	1.040	3%	8%	19%	35%	36%
Packing all my paintball gear can be exhausting.	2.90	1.259	15%	29%	18%	27%	11%
When I travel far, I sometimes feel uneasy getting out of my comfort zone.	2.35	1.148	27%	34%	18%	17%	3%
Travelling from one place to another makes me feel tired and exhausted.	2.36	1.033	22%	38%	23%	15%	2%
Overall, I am satisfied with my travel life.	3.80	.903	1%	8%	22%	48%	21%
Financial life	3.28	.12	1	2	3	4	5
The money I spend on paintball is worth the experiences I get to enjoy.	4.33	.792	1%	2%	8%	41%	48%
I try to save money by playing other forms of paintball.	3.17	1.257	11%	21%	28%	22%	19%
Playing paintball has taught me how to manage my finances.	2.87	1.291	18%	23%	27%	18%	14%
The initial expenses to start playing paintball are high.	3.69	1.091	3%	14%	19%	38%	25%
Paintball has a negative effect on my finances.	2.95	1.163	11%	25%	31%	22%	10%
I spend more money on paintball than I can actually afford to.	2.38	1.169	24%	40%	18%	12%	7%
Overall, I am satisfied with my financial life.	3.54	1.109	6%	11%	25%	38%	20%
Family life	3.05	.05	1	2	3	4	5
Paintball has had a positive effect on my family life, as they join me when I play.	3.42	1.180	8%	12%	31%	27%	22%
The pressures of playing paintball have strengthened the bond that I feel towards my family.	3.27	1.084	7%	14%	42%	23%	16%
My paintball family is my real family.	3.83	1.085	4%	9%	18%	38%	31%
Playing paintball reduces the time that I spend with family.	2.68	1.118	16%	31%	26%	22%	4%
I am in conflict with my family because I play so much paintball.	1.80	.964	47%	34%	12%	5%	2%
Sometimes I feel guilty about playing paintball and neglecting my family.	2.08	1.136	41%	28%	16%	13%	2%
Overall, I am satisfied with my family life.	4.26	.816	1%	2%	12%	41%	44%

5.3.1.5 Descriptive statistics with regard to quality of life

The questionnaire made use of the following Likert scale: 1: – *Strongly disagree*; 2: – *Disagree*; 3 – *Neutral*; 4 – *Agree*; and 5: – *Strongly agree*. This part of the online questionnaire measured QoL, which was interpreted according to the above scale, enabling means, standard deviation and frequencies.

From Table 5.12, it can be seen that respondents agreed that *they are satisfied with their life* ($\bar{x} = 3.87$). Similarly, respondents agreed ($\bar{x} = 3.69$) that *the conditions of their life are excellent*. Concerning the statement that *so far, they have obtained the important things that they want in life*, respondents agreed ($\bar{x} = 3.67$). It can be observed that respondents agreed ($\bar{x} = 3.62$) with the statement that *in most ways, their lives are close to ideal*. Pertaining to the statement that *if they could live their lives over, they would change almost nothing*, respondents agreed ($\bar{x} = 3.44$).

Table 5.12: Quality of life

QoL	Mean $\bar{x}$	Std. deviation	Frequency				
	3.66	.99	1	2	3	4	5
In most ways, my life is close to ideal.	3.62	.962	3%	10%	24%	47%	15%
The conditions of my life are excellent.	3.69	.918	2%	8%	25%	48%	17%
I am satisfied with my life.	3.87	.865	1%	7%	15%	55%	21%
So far, I have obtained the important things that I want in life.	3.67	1.005	3%	12%	20%	45%	19%
If I could live my life over, I would change almost nothing.	3.44	1.200	7%	18%	19%	36%	20%

5.3.2 Exploratory factor analysis

The purpose of this section is to analyse the results of the EFA in order to present the extracted aspects for further analysis. First, the EFA results regarding *leisure aspects of paintball* (Section A1) and *activity aspects of paintball* (Section A2) will be presented. Thereafter, the *adventure sport experience* (Section B) and *life domains* (Section C) will be analysed. Last, QoL (Section D) will be unpacked.

5.3.2.1 Exploratory factor analysis of leisure aspects of paintball

Prior to performing the EFA, the suitability of data for the factor analysis was assessed by making use of BTS and KMO (as described in 1.6.2.4.2) and was found to be

acceptable. The correlation matrix was considered appropriate (as described in 1.6.2.4.2). From Table 5.13, specifically concerning the BTS, it was found to be statistically significant at $p \leq 0.00001$. The KMO value of the identified factor (aspect) in Table 5.13 was 0.896, which falls within the range of being great (cf. 1.6.2.4.2); therefore, the factor analysis is appropriate for these data.

A principle component analysis was used to extract the aspects from the data that best describe the underlying relationship among the variables. The eigenvalues (as described in 1.6.2.4.2) were used and the Oblimin rotation with Kaiser Normalisation rotation technique was applied. As can be seen in Table 5.13, one aspect was extracted and labelled *leisure aspects of paintball*, which accounts for 43.5% of the total percentage of variance explained. The identified aspects in Table 5.13 consist of the following “overall” statements regarding the leisure aspects of paintball: *It helps to improve my fitness; it serves as good exercise; it has a great fun factor; it helps me to relax; it helps to relieve stress; it provides an adrenaline rush; it provides mental stimulation; it provides a platform to socialise; it provides a challenge; it helps me to escape from reality; it gives me a chance to go outdoors; I love the simulation (MILSIM); and it is fast paced*. The statements measured an acceptable α coefficient (0.86), which indicates a high internal consistency. The mean inter-item correlation for *leisure aspects of paintball* (0.38) fell within an acceptable range (as described in 1.6.2.4.2) for 13 items (question statements).

The high level of reliability is indicative of leisure as a modern phenomenon (cf. 4.2.5), with many of the items in Table 5.13 mirroring the view of Page and Connel (2010) that leisure time is taken by individuals because it provides personal enjoyment, relaxation, personal fulfilment and a sense of pleasure to complete and fulfil us as human beings. Leisure serves as an outlet to break the routine of daily living.

Table 5.13: Exploratory factor analysis of leisure aspects of paintball

Questionnaire statements	Leisure aspects of paintball
It helps to improve my fitness.	.672
It serves as good exercise.	.720
It has a great fun factor.	.706
It helps me to relax.	.627
It helps to relieve stress.	.732
It provides an adrenaline rush.	.689
It provides mental stimulation.	.745
It provides a platform to socialise.	.701
It provides a challenge.	.735
It helps me to escape from reality.	.566
It gives me a chance to go outdoors.	.579
I love the simulation (MILSIM).	.351
It is fast paced.	.644
Cronbach alpha coefficient	.86
Mean inter-item correlation	.38
Mean $\pm$ std. deviation	4.40 $\pm$.49

5.3.2.2 Exploratory factor analysis of activity aspects of paintball

Prior to performing the EFA, the suitability of data for the factor analysis was assessed by making use of BTS and KMO (as described in 1.6.2.4.2) and was found to be acceptable. The correlation matrix was considered appropriate (as described in 1.6.2.4.2). From Tables 5.14a and 5.14b, specifically concerning the BTS, it was found to be statistically significant at $p \leq 0.00001$. The KMO value of the identified factor (aspect) in Tables 5.14a and 5.14b was 0.862, which falls within the range of being great (cf. 1.6.2.4.2); therefore, the factor analysis is appropriate for these data. A principle component analysis was used to extract the aspects from the data which best describe the underlying relationship among the variables. The eigenvalues (as described in 1.6.2.4.2) were used and the Oblimin rotation with Kaiser Normalisation rotation technique was applied.

Concerning the *activity aspects of paintball*, ten aspects were extracted from the data by means of an EFA, explaining 57% of the total variance. These ten aspects most appropriately indicate the underlying relationship among the particular variables. The aspects that were extracted from the data were labelled *positive internal activity aspects*, *negative internal activity aspects*, *aspects impacting MILSIM*, *positive impact of rules*, *negative impact of rules*, *positive impact of gear*, *negative impact of gear*,

negative external impact, positive impact of community and negative impact of community.

The α coefficients of the extracted aspects *positive internal activity aspects, aspects impacting MILSIM, positive impact of rules, negative impact of rules, positive impact of gear* and *positive impact of community* were above the minimum (0.70) requirement, which indicates a high internal consistency (as described in 1.6.2.4.2). The α coefficients of the extracted aspects *negative internal activity aspects* and *negative external impact* were measured at 0.65 and 0.52, respectively. Therefore, *negative internal activity* can be viewed as questionable and *negative external impact* as poor (as described in 1.6.2.4.2). The extracted aspects *negative impact of gear* and *negative impact of community* both consisted of one statement each and could therefore not generate any α coefficients. The study made use of the themes found in the activity theory (cf. 1.2 & 2.4.2), from which statements were drawn up, tailored specifically with activity aspects of paintball in mind. The untested statements therefore did not all result in reliable α coefficients.

With the exception of the aspects *negative impact of gear* and *negative impact of community*, which did not generate a mean inter-item correlation, all the other identified aspects' mean inter-item correlation fell within the acceptable range (as described in 1.6.2.4.2).

Means and standard deviations of the aspects are also reported to determine which of the aspects were the most important. *Positive impact of community* emerged as the most important positive activity aspect of paintball (with a mean score of 4.43). *Negative external impact* was revealed as the most important negative activity aspect of paintball (with a mean score of 4.29).

Table 5.14a: Exploratory factor analysis of activity aspects of paintball

Questionnaire statements	Positive internal activity aspects	Negative internal activity aspects	Aspects impacting MILSIM	Positive impact of rules	Negative impact of rules
It feels good to be able to break away from daily stresses.	.509				
Playing paintball is fun.	.482				
Speedball is an intense game and deserves more recognition.	.353				
Being part of a paintball team enhances the experience.	.624				
I enjoy travelling to new places to play paintball.	.489				
Inspiring other paintballers makes me feel good.	.501				
Organisers who go above and beyond what is expected of them enhance the paintball experience.	.418				
Charismatic paintballers enhance the overall paintball experience.	.446				
If I don't win, I feel negative.		.610			
The action I experience while playing paintball isn't enough.		.592			
Not being recognised for my achievements makes me feel negative.		.593			
If speedball isn't fast paced, I don't enjoy it.		.637			
I don't make enough friends playing paintball and that makes me despondent.		.464			
I enjoy the challenge of playing MILSIM paintball.			.838		
Playing MILSIM paintball tactically enhances the experience.			.876		
My military background comes in handy when I play MILSIM paintball.			.636		
A lack of realism while playing MILSIM paintball detracts from the overall experience.			.438		
When others play MILSIM paintball with speedball markers, it takes some pleasure away from the overall experience.			.460		
It's comforting to know that paintball is one of the safest adventure sports.				.580	
By adhering to the rules, I feel better.				.791	
Trusting other players to be honest makes the sport worthwhile.				.743	
Paintballers who are not disciplined detract from the overall experience.					.406
Players who cheat detract from the positive experience.					.774
It's frustrating if paintball fields don't enforce the rules.					.743

Untrained marshals make paintball less fun.					.709
Problem players detract from the overall paintball experience.					.740
Cronbach alpha coefficient	0.77	0.65	0.72	0.73	0.72
Mean inter-item correlation	0.34	0.27	.34	.48	0.37
Mean $\pm$ std. deviation	4.40 $\pm$.48	2.07 $\pm$.63	3.03 $\pm$.84	4.07 $\pm$.69	3.03 $\pm$.74

Table 5.14b: Exploratory factor analysis of activity aspects of paintball

Questionnaire statements	Positive impact of gear	Negative impact of gear	Negative external impact	Positive impact of community	Negative impact of community
If I don't play paintball often enough to blow off steam, I become frustrated.	.519				
My paintball gear gives me a sense of pride.	.802				
I view my paintball gear as an extension of myself and that makes me proud.	.819				
My gear represents my identity.	.805				
I feel a connection to my paintball gear.	.662				
If paintball gear isn't functional, it frustrates me.		.457			
The politics in paintball have a negative effect on the sport.					
Having more paintball leagues will impact the sport negatively.					
There is friction between MILSIM and speedball players that affects the sport negatively.					
Paintballers have difficulty understanding new game concepts.			.707		
Socialising at paintball events makes me feel good.					
Paintball players are fantastic people.					
Paintballers are incredibly friendly.					
Camaraderie between players transcends borders and language barriers.					
Paintballers are open to new ideas in order to help the sport grow.				.376	
Amateurs playing against experienced players can affect the sport negatively.					
Cronbach alpha coefficient	0.79	N/A	0.52	0.81	N/A
Mean inter-item correlation	0.45	N/A	0.21	0.46	N/A
Mean $\pm$ std. deviation	2.79 $\pm$.69	4.34 $\pm$.61	4.29 $\pm$.60	4.43 $\pm$.78	2.57 $\pm$ 1.29

* Reverse coding

In addition, it is important to record that reverse coding was conducted on one variable of the *positive impact of gear* aspect in the EFA, namely *I feel no connection to my paintball gear* (please refer to Table 5.14b). The scale of this particular item was reversed in order to remain consistent with other variables; thus, a total score can be calculated. The scores for this individual item of the *positive impact of gear* aspect range from 1 – *Strongly agree* to 5 – *Strongly disagree*.

No precedent exists in literature where the themes of the activity theory (cf. 1.2 & 2.4.2) have been measured within an adventure-based sport. Therefore, the identification of the *positive impact of community* and *negative external impact* aspects has set the bench mark for future studies.

5.3.2.3 Exploratory factor analysis of the adventure sport experience

Adventure sport experience sought to analyse the themes (cf. 4.4.4) that best associate with the adventure sport experience. The EFA of the adventure sport experience was divided into two separate analyses, namely a *positive adventure sport experience* and a *negative adventure sport experience*. The above would best reflect the results of each EFA.

5.3.2.3.1 *The positive adventure sport experience*

Prior to performing the EFA, the suitability of data for the factor analysis was assessed by making use of BTS and KMO (as described in 1.6.2.4.2) and was found to be acceptable. The correlation matrix was considered appropriate (as described in 1.6.2.4.2). From Table 5.15, specifically concerning the BTS, it was found to be statistically significant at $p \leq 0.00001$. The KMO value of the identified factors (aspects) in Table 5.15 was 0.890, which falls within the range of being great (cf. 1.6.2.4.2); therefore, the factor analysis is appropriate for these data. A principle component analysis was used to extract the aspects from the data which best describe the underlying relationship among the variables. The eigenvalues (as described in 1.6.2.4.2) were used and the Oblimin rotation with Kaiser Normalisation rotation technique was applied.

Concerning the *positive adventure sport experience*, three aspects were extracted from the data by means of an EFA, explaining 58.7% of the total variance. These three

aspects most appropriately indicate the underlying relationship among the particular variables. The aspects that were extracted from the data regarding the adventure sport experience were labelled *positive camaraderie*, *positive sport lifestyle* and *positive sport stress*.

The α coefficients of the extracted aspects *positive camaraderie* and *positive sport lifestyle* were above the minimum (0.70) requirement, which indicates a high internal consistency (as described in 1.6.2.4.2) of the Likert scale used. The α coefficients of the extracted aspect *positive sport stress* measured 0.54, was less than the expected guidelines of 0.70, however the mean inter-item correlation (Table 5.15) fell in an acceptable range as described in cf. 1.6.2.4.2 by Field (2013) and Pallant (2010).

The study made use of the themes found in literature regarding tourism experience (cf. 4.4.1), adventure experience (cf. 4.4.2) and adventure sport experience, based on internet questions (cf. 4.4.3). The themes were analysed and those that were most appropriate for the study were identified (cf. 4.4.4). The subsequent positive statements were drawn up, based on the themes identified (cf. 4.4.4). The untested statements therefore did not all result in reliable α coefficients. All the identified aspects mean that the inter-item correlation fell within the acceptable range (as described in 1.6.2.4.2).

Means and standard deviations of the aspects were also reported in order to determine which of the aspects were the most important. *Positive camaraderie* emerged as the most important positive adventure sport experience in paintball (with a mean score of 4.47). This is in line with the findings of Kruger *et al.* (2014:649) that QoL is more affected by camaraderie when a shared passion is pursued. As paintball is a team-based adventure sport simulating combat (Venter, 2014a), the camaraderie felt between participants is real. Camaraderie was also echoed by participants in the internet questions (cf. 4.4.3) as one of the main motivators of this adventure sport experience. Interviewees expressed the same strong feeling during their interviews (cf. 5.2.3.3).

Table 5.15: Exploratory factor analysis of the positive adventure sport experience

Questionnaire statements	Positive camaraderie	Positive sport lifestyle	Positive sport stress
Teamwork and skill achieve victory and generate euphoria.	.675		
Skilled opponents make for more memorable experiences.	.703		
Camaraderie between paintballers embodies the core spirit of the sport.	.702		
It feels good to be part of the paintball community.	.717		
To meet people with similar interests is a positive experience.	.756		
Paintball has left me with wonderful memories.	.759		
To share memories with other paintballers adds to the appeal of the sport.	.753		
Paintball has made my life better.		.483	
Paintball has changed the way in which I view life.		.761	
The adrenaline rush is a key reason why I enjoy paintball so much.		.493	
Paintball helps me to escape from daily life and reality.		.722	
Fear is common when one is new to paintball.			.782
Some stress before a match is normal.			.766
Cronbach alpha coefficient	.86	.71	.54
Mean inter-item correlation	.48	.39	.38
Mean $\pm$ std. deviation	4.47 $\pm$.51	3.86 $\pm$.76	3.95 $\pm$.72

5.3.2.3.2 *The negative adventure sport experience*

Prior to performing the EFA, the suitability of data for the factor analysis was assessed by making use of BTS and KMO (as described in 1.6.2.4.2) and was found to be acceptable. The correlation matrix was considered appropriate (as described in 1.6.2.4.2). From Table 5.16, specifically concerning the BTS, it was found to be statistically significant at $p \leq 0.00001$. The KMO value of the identified factors (aspects) in Table 5.16 was 0.733, which falls within the range of being acceptable (cf. 1.6.2.4.2);

therefore, the factor analysis is appropriate for these data. A principle component analysis was used to extract the aspects from the data which best describe the underlying relationship among the variables. The eigenvalues (as described in 1.6.2.4.2) were used and the Oblimin rotation with Kaiser Normalisation rotation technique was applied.

Concerning the *negative adventure sport experience*, six aspects were extracted from the data by means of an EFA, explaining 39.9% of the total variance, which can be considered low. These six aspects most appropriately indicate the underlying relationship among the particular variables. The aspects that were extracted from the data regarding the adventure sport experience were labelled *negative memories*, *negative stresses*, *negative challenge*, *negative commitment*, *negative emotion* and *negative pressure*. The α coefficients of the extracted aspects *negative memories* and *negative stresses* were above 0.60, which indicates a questionable internal consistency (as described in 1.6.2.4.2).

The α coefficients of the extracted aspects *negative challenge*, *negative commitment*, *negative emotion* and *negative pressure* could not be measured, as they consisted of one item each. Only *negative memories* and *negative stresses* produced a mean inter-item correlation that fell within the acceptable range (as described in 1.6.2.4.2).

The study made use of the themes found in literature regarding tourism experience (cf. 4.4.1), adventure experience (cf. 4.4.2) and adventure sport experience, based on internet questions (cf. 4.4.3). The themes were analysed and those that were most appropriate for the study were identified (cf. 4.4.4). The subsequent negative statements were drawn up, based on the themes identified (cf. 4.4.4). The untested statements therefore did not all result in reliable α coefficients.

Means and standard deviations of the aspects were also reported in order to determine which of the aspects were the most important. *Negative stresses* emerged as the most important negative adventure sport experience in paintball (with a mean score of 3.69). *Negative stresses* consisted of the following items: *childish behaviour by some paintballers detracts from the overall experience*; *negative comments by fellow paintballers detract from the social experience*; *screaming, shouting and cursing while*

playing paintball detract from the overall experience; and unsportsmanlike behaviour causes unnecessary stress. The aspects consist of a combination of themes (cf. 4.4.4), namely peak experience, social experience, emotional experience and fear, anxiety and stress. The themes arose during the interviews (cf. 5.2.3.3) as negative items that detract from the overall adventure sport experience.

Table 5.16: Exploratory factor analysis of negative adventure sport experience

Questionnaire statements	Negative memories	Negative stresses	Negative challenge	Negative commitment	Negative emotion	Negative pressure
I have not made new friends while playing paintball.	.454					
The paintball community is not supportive of new players.	.596					
After playing paintball, my mind doesn't feel rested and clear.	.696					
I feel more stressed after playing paintball.	.651					
I have very bad memories of paintball.	.570					
I feel left out during paintball conversations because I have no memories to share.	.583					
Childish behaviour by some paintballers detracts from the overall experience.		.611				
Negative comments by fellow paintballers detract from the social experience.		.740				
Screaming, shouting and cursing while playing paintball detract from the overall experience.		.714				
Unsportsmanlike behaviour causes unnecessary stress.		.702				
Skilled players find playing against inexperienced opponents frustrating.			.495			
If you are not committed to paintball, you will not enjoy it.						
I feel emotionally broken when I lose a game.				.635		
I become anxious when I am put under pressure in paintball.						
					.671	
						.512
Cronbach alpha coefficient	.63	.66	–	–	–	–
Mean inter-item correlation	.21	.33	–	–	–	–
Mean ± std. deviation	1.55 ± .51	3.69 ± .79	2.51 ± 1.01	2.34 ± 1.10	1.56 ± .78	2.43 ± 1.13

5.3.2.4 Exploratory factor analysis of life domains

Life domains sought to analyse the life domains (cf. 1.2) that are best associated with paintball. The EFA of life domains was grouped into three separate analyses, namely *positive life domain contributions*, *negative life domain contributions* and *life domains overall*. The above would best reflect the results of each EFA.

5.3.2.4.1 Positive affect in life domains

Prior to performing the EFA, the suitability of data for the factor analysis was assessed by making use of BTS and KMO (as described in 1.6.2.4.2) and was found to be acceptable. The correlation matrix was considered appropriate (as described in 1.6.2.4.2). From Table 5.17, specifically concerning the BTS, it was found to be statistically significant at $p \leq 0.0001$. The KMO value of the identified factors (aspects) in Table 5.17 was 0.91, which falls within the range of being great (cf. 1.6.2.4.2); therefore, the factor analysis is appropriate for these data. A principle component analysis was used to extract the aspects from the data which best describe the underlying relationship among the variables. The eigenvalues (as described in 1.6.2.4.2) were used and the Oblimin rotation with Kaiser Normalisation rotation technique was applied.

Concerning the *positive affect in life domains*, seven aspects were extracted from the data by means of an EFA, explaining 70.5% of the total variance. These seven aspects most appropriately indicate the underlying relationship among the particular variables. The aspects that were extracted from the data were labelled *positive emotional life*, *positive family life*, *positive travel life*, *positive leisure and recreation life*, *positive social life*, *positive fitness life* and *positive financial life*.

The α coefficients of the extracted aspects *positive emotional life*, *positive family life*, *positive travel life*, *positive leisure and recreation life*, *positive social life* and *positive fitness life* were above the minimum (0.70) requirement, which indicates a high internal consistency (as described in 1.6.2.4.2). The study made use of life domains (cf. 3.2), from which positive statements were drawn up, tailored specifically with life domain aspects of paintball in mind. The α coefficients of the extracted aspect *positive financial life aspects* were measured at 0.47, making it unreliable. Subsequently, the aspect was not included in Table 5.17. The poor α coefficients of *positive financial life aspects* could

be attributed to the fact that paintball has no positive impact on participants' finances, with the possible exception of the small number of professional players (cf. 4.3). As shown above, six of the seven life domains resulted in meaningful α coefficients. The aspects *positive family life*, *positive travel life* and *positive fitness life* generated a high mean inter-item correlation, as is expected of aspects containing less than 10 items (as stated in 1.6.2.4.2). The mean inter-item correlation of the remaining aspects, namely *positive emotional life*, *positive leisure and recreation life*, *positive social life* and *positive financial life* fell within the optimal range (as described in 1.6.2.4.2).

Means and standard deviations of the aspects were also reported in order to determine which of the aspects were the most important. Within positive life domains, *Positive health and safety life* emerged as the most important positive life domain contributor (with a mean score of 4.40) in paintball. This is in line with the findings of Yazicioglu *et al.* (2012), whose findings show that combat veterans who participate in sport have a far higher QoL than those who don't. Similarly, Lundberg *et al.* (2011) illustrate the therapeutic potential of sport and recreation services in addressing the QoL needs of returning combat veterans who have acquired a disability, whether physically or psychologically.

Table 5.17: Exploratory factor analysis of positive affect in life domains

Questionnaire statements	Positive emotional life	Positive family life	Positive travel life	Positive leisure and recreation life	Positive social life	Positive health and safety life
I have become more confident in social situations since I started playing paintball.	.755					
Playing paintball has helped me in learning to be calm and in control under stress.	.611					
I am more vigilant in my day-to-day life because of paintball.	.728					
My paintball family is my real family.	.395					
Paintball has had a positive effect on my family life, as they join me when I play.		.924				
The pressures of playing paintball have strengthened the bond that I feel towards my family.		.881				
I enjoy visiting new places while travelling to play paintball.			.695			
Paintball allows me to travel to places that I wouldn't have visited otherwise.			.925			
Paintball motivates me to travel in order to play.			.868			
Paintball fills up most of my leisure time positively.						
I prefer paintball above other recreational activities.						
Paintball offers various types of activities that enhance leisure and recreation life.						
The money I spend on paintball is worth the experiences I get to enjoy.				.536		
Being able to tell stories of past paintball games enhances my social life.						
I enjoy meeting new people while playing paintball.						
I experience excitement when I don't know what to expect.						
Paintballers are emotionally supportive.					.551	
Paintball has helped me to improve my fitness.						
Playing paintball is good exercise.						
Cronbach alpha coefficient	0.79	0.84	0.83	0.75	0.74	0.81
Mean inter-item correlation	0.48	0.73	0.64	0.43	0.42	0.69
Mean $\pm$ std. deviation	3.80 $\pm$.81	3.35 $\pm$ 1.05	4.14 $\pm$.82	4.13 $\pm$.64	4.15 $\pm$.60	4.40 $\pm$.65

5.3.2.4.2 *Negative affect in life domains*

Prior to performing the EFA, the suitability of data for the factor analysis was assessed by making use of BTS and KMO (as described in 1.6.2.4.2) and was found to be acceptable. The correlation matrix was considered appropriate (as described in 1.6.2.4.2). From Table 5.18, specifically concerning the BTS, it was found to be statistically significant at $p \leq 0.00001$. The KMO value of the identified factors (aspects) in Table 5.18 was 0.795, which falls within the range of being good (cf. 1.6.2.4.2); therefore, the factor analysis is appropriate for these data. A principle component analysis was used to extract the aspects from the data which best describe the underlying relationship among the variables. The eigenvalues (as described in 1.6.2.4.2) were used and the Oblimin rotation with Kaiser Normalisation rotation technique was applied.

Concerning the negative affect in life domains, seven aspects were extracted from the data by means of an EFA, explaining 57% of the total variance. These seven aspects most appropriately indicate the underlying relationship among the particular variables. The aspects that were extracted from the data were labelled *negative affect in family life*, *negative affect in financial life*, *negative affect in travel life*, *negative affect in social life*, *negative affect in leisure and recreation life*, *negative affect in emotional life* and *negative affect in health and safety life*.

The α coefficients of the extracted aspects *negative affect in family life*, *negative affect in financial life*, *negative affect in travel life* and *negative affect in leisure and recreation life* were above the minimum (0.70) requirement, which indicates a good internal consistency. *Negative affect in social life* measured 0.62 and is considered questionable (as described in 1.6.2.4.2). The study made use of life domains (cf. 3.2) from which negative statements were drawn up, tailored specifically with life domain aspects of paintball in mind.

The α coefficients of the extracted aspects, namely *negative affect in emotional life* and *negative affect in health and safety life*, were measured at 0.38 and 0.45, respectively, making them unreliable, based on α coefficients (as described in 1.6.2.4.2). Subsequently, the aspects were not included in Table 5.18. The untested negative statements therefore did not all result in reliable α coefficients.

As shown in Table 5.18, five of the seven negative life domains resulted in meaningful α coefficients. The mean inter-item correlation of these five aspects, namely *negative affect in family life*, *negative affect in financial life*, *negative affect in travel life*, *negative affect in social life* and *negative affect in leisure and recreation life*, fell within the optimal range (as described in 1.6.2.4.2).

Means and standard deviations of the aspects were also reported in order to determine which of the aspects were the most important. Within negative life domains, *negative affect in financial life* emerged as the most important negative life domain contributor (with a mean score of 3.01) in paintball. According to Goldbecker (2013:10), paintball imparts a severe financial challenge on participants and can leave them financially exhausted. With reference to 5.3.1.1, 49% of respondents were dabblers (semi-professional) and 32% were enthusiasts (professional); combining these percentages with the expenditure of Venter (2014a:3), based on the type of paintballers, the resulting perception that paintball has a negative impact on participants' *financial life* is to be expected.

Table 5.18: Exploratory factor analysis of negative affect in life domains

Questionnaire statements	Negative affect in family life	Negative affect in leisure and recreation life	Negative affect in travel life	Negative affect in social life	Negative affect in financial life
I cannot seem to make new friends while playing paintball.	.834				
I don't feel more confident since I have started playing paintball.	.719				
Playing paintball reduces the time that I spend with my family.		.692			
I am in conflict with my family because I play so much paintball.		.768			
Sometimes I feel guilty about playing paintball and neglecting my family.		.783			
Packing all my paintball gear can be exhausting.			.696		
When I travel far, I sometimes feel uneasy getting out of my comfort zone.			.850		
Travelling from one place to another makes me feel tired and exhausted.			.760		
The fear of injury detracts from the overall sport experience.				.439	
I avoid certain types of paintball because of the risk they hold for me.				.533	
The initial expenses to start playing paintball are high.					.628
Paintball has a negative effect on my finances.					.753
I spend more money on paintball than I can actually afford to.					.781
Cronbach alpha coefficient	0.54	0.74	0.70	0.62	0.72
Mean inter-item correlation	0.38	0.48	0.44	0.45	0.46
Mean $\pm$ std. deviation	1.87 $\pm$.67	2.19 $\pm$.87	2.54 $\pm$.91	1.79 $\pm$.84	3.01 $\pm$.92

5.3.2.4.3 Life domains overall

Prior to performing the EFA, the suitability of data for the factor analysis was assessed by making use of BTS and KMO (as described in 1.6.2.4.2) and was found to be acceptable. The correlation matrix was considered appropriate (as described in 1.6.2.4.2). From Table 5.19, specifically concerning the BTS, it was found to be statistically significant at $p \leq 0.00001$. The KMO

value of the identified factor (aspect) in Table 5.19 was 0.876, which falls within the range of being great (cf. 1.6.2.4.2); therefore, the factor analysis is appropriate for these data. A principle component analysis was used to extract the aspects from the data which best describe the underlying relationship among the variables. The eigenvalues (as described in 1.6.2.4.2) were used and the Oblimin rotation with Kaiser Normalisation rotation technique was applied.

As can be seen in Table 5.19, one aspect was extracted and labelled *life domains overall*, which accounts for 50.4% of the total percentage of variance explained. The identified factor (aspect) in Table 5.19 consists of the following “overall” statements regarding the life domains: *I am satisfied with my social life*; *I am satisfied with my emotional life*; *I am satisfied with my health and safety life*; *I am satisfied with my leisure and recreation life*; and *I am satisfied with my travel life*. The statements measured a high α coefficient level of reliability (0.83), which indicates a high internal consistency. The mean inter-item correlation for *life domains overall* (0.42) fell within the acceptable range (as described in 1.6.2.4.2). Within life domains overall, *I am satisfied with my social life* emerged as the most important life domain overall, based on the α coefficient (.666) in paintball. The authors Kruger *et al.* (2013:450) found that participants’ life domains overall have a direct influence on their QoL.

Table 5.19: Exploratory factor analysis of life domains overall

Questionnaire statements	Life domains overall
Overall, I am satisfied with my social life.	.666
Overall, I am satisfied with my emotional life.	.619
Overall, I am satisfied with my health and safety life.	.507
Overall, I am satisfied with my leisure and recreation life.	.625
Overall, I am satisfied with my travel life.	.556
Overall, I am satisfied with my financial life.	.549
Overall, I am satisfied with my family life.	.558
Cronbach alpha coefficient	.83
Mean inter-item correlation	.42
Mean $\pm$ std. deviation	4.0 $\pm$.63

5.3.2.5 Exploratory factor analysis of quality of life

Prior to performing the EFA, the suitability of data for the factor analysis was assessed by making use of BTS and KMO (as described in 1.6.2.4.2) and was found to be

acceptable. The correlation matrix was considered appropriate (as described in 1.6.2.4.2). From Table 5.20, specifically concerning the BTS, it was found to be statistically significant at $p \leq 0.00001$. The KMO value of the identified factor (aspect) in Table 5.20 was 0.882, which falls within the range of being great (cf. 1.6.2.4.2); therefore, the factor analysis is appropriate for these data. A principle component analysis was used to extract the aspects from the data which best describe the underlying relationship among the variables. The eigenvalues (as described in 1.6.2.4.2) were used and the Oblimin rotation with Kaiser Normalisation rotation technique was applied.

As can be seen in Table 5.20, one aspect was extracted and labelled *quality of life*, which accounts for 71.9% of the total percentage of variance explained. The identified factor (aspect) in Table 5.20 consists of the following statements regarding QoL: *In most ways, my life is close to ideal; the conditions of my life are excellent; I am satisfied with my life; so far, I have obtained the important things that I want in life and if I could live my life over, I would change almost nothing*. The statements measured a high α coefficient level of reliability (0.89), which indicates a high internal consistency. The mean inter-item correlation for *quality of life* (0.65) fell within the acceptable range (as described in 1.6.2.4.2). The authors Sánchez *et al.* (2009:195) found that the more a person participates in a sport or physical activity, the greater their valuation of their QoL.

Table 5.20: Exploratory factor analysis of quality of life

Questionnaire statements	Quality of life
In most ways, my life is close to ideal.	.882
The conditions of my life are excellent.	.876
I am satisfied with my life.	.887
So far, I have obtained the important things that I want in life.	.819
If I could live my life over, I would change almost nothing.	.768
Cronbach alpha coefficient	.89
Mean inter-item correlation	.65
Mean $\pm$ std. deviation	3.66 $\pm$.83

5.3.3 t-test

The purpose of this section was to compare the demographic characteristics of respondents, namely gender and MLT, with the identified factors (aspects) (cf. 5.3.2) in accordance with *t*-test criteria that were discussed in 1.6.2.4.4. For the purpose of this

analysis, only aspects with a significant difference ($p \leq 0.05$) will be analysed, discussed and tabled.

5.3.3.1 *t*-test of gender and the identified aspects of paintball

With reference to Table 5.21, males represented the vast majority of respondents, namely 472, whereas females were in the minority with 34. This could not be generalized to larger study populations, however the results is indicative as a trend in paintball. A significant difference ($p \leq 0.05$) concerning *leisure-based activity* was found between male and female respondents, with female respondents more positive in practice regarding the *leisure aspects of paintball* ($p \leq 0.025$) than male respondents. Specifically, the effect size of the difference was found to be small ($d = 0.38$) according to the interpretation guidelines; therefore, it was of small practical significance.

With reference to the *activity theory aspect of paintball*, a significant difference ($p \leq 0.05$) was identified between male and female respondents, with female respondents in practice more positive regarding the *positive internal activity aspects* ($p < 0.008$), *positive impact of rules* ($p < 0.015$), *negative external impact* ($p \leq 0.001$) and *positive impact of community* ($p \leq 0.002$) than male respondents. The related effect sizes of *positive internal activity aspects* ($d = 0.45$), *positive impact of rules* ($d = 0.36$) and *positive impact of community* ($d = 0.37$) were of small practical significance, whereas *negative external impact* ($d = 0.57$) was of medium practical significance.

With reference to *positive adventure sport experience*, a significant difference ($p \leq 0.05$) was found between male and female respondents, with female respondents in practice more positive regarding the *positive adventure sport lifestyle* ($p < 0.025$) and *positive adventure sport stress* ($p < 0.007$) than male respondents. The effect size of *positive adventure sport lifestyle* was small ($d = 0.34$), whereas *positive adventure sport stress* ($d = 0.48$) tended towards medium practical significance.

As shown in *negative adventure sport experience*, a significant difference ($p \leq 0.05$) was identified between male and female respondents in which female respondents were in practice more positive regarding the *negative pressure* ($p \leq 0.004$) of paintball than male respondents. The effect size was medium ($d = 0.54$).

With reference to *positive affect in life domains*, a significant difference ($p \leq 0.05$) was found between male and female respondents, with female respondents in practice more positive regarding the *positive affect in emotional life* ($p \leq 0.004$), *positive affect in family life* ($p < 0.017$), *positive affect in social life* ($p < 0.041$) and *positive affect in health and safety life* ($p \leq 0.003$) than male respondents. The effect size of *positive affect in social life* ($d = 0.36$) is considered to be small, whereas *positive affect in family life* ($d = 0.43$), *positive affect in health and safety life* ($d = 0.43$) and *positive affect in emotional life* ($d = 0.48$) tended towards medium practical significance.

With reference to *negative affect in life domains*, a significant difference ($p \leq 0.05$) was found between male and female respondents, with female respondents in practice more positive concerning *negative affect in leisure and recreation life* ($p < 0.027$) when compared to male respondents. The effect size difference was found to be medium ($d = 0.40$).

As can be seen in *QoL*, a significant difference ($p \leq 0.05$) was identified between male and female, with female respondents in practice more positive regarding their *QoL* ($p < 0.035$) than male respondents. Specifically, the effect size difference was found to be small ($d = 0.34$) and therefore not practically significant.

Table 5.21: *t*-test between gender and the identified aspects (factors) of paintball

Section	Identified aspects of paintball	Gender	N	Mean	Std. deviation	Sig. (2-tailed) <i>p</i> -value	Cohen's <i>D</i> -values
Leisure aspects of paintball	Leisure aspects of paintball	Male	472	4.40	0.49	.025	0.38*
		Female	34	4.58	0.45		
Activity theory aspect of paintball	Positive internal activity aspects	Male	472	4.39	0.48	.008	0.45*
		Female	34	4.60	0.43		
	Positive impact of rules	Male	472	4.06	0.69	.015	0.36*
		Female	34	4.31	0.54		
	Negative external impact	Male	472	4.27	0.60	.000	0.57**
		Female	34	4.61	0.50		
	Positive impact of community	Male	472	4.42	0.79	.002	0.37*
		Female	34	4.71	0.46		
Positive adventure sport	Positive adventure sport	Male	472	3.85	0.76	.025	0.34*
		Female	34	4.10	0.61		

experience	lifestyle						
	Positive adventure sport stress	Male	472	3.93	0.72	.007	0.48*
		Female	34	4.27	0.69		
Negative adventure sport experience	Negative pressure	Male	472	2.39	1.13	.004	0.54**
		Female	34	3.00	1.10		
Positive affect in life domains	Positive affect in emotional life	Male	472	3.78	0.81	.004	0.48*
		Female	34	4.17	0.70		
	Positive affect in family life	Male	472	3.32	1.05	.017	0.43*
		Female	34	3.76	1.00		
	Positive affect in social life	Male	472	4.13	0.60	.041	0.36*
		Female	34	4.35	0.56		
	Positive affect in health and safety life	Male	472	4.35	0.66	.003	0.43**
		Female	34	4.63	0.48		
Negative affect in life domains	Negative affect in leisure and recreation life	Male	472	2.98	0.91	.027	0.40*
		Female	34	3.34	0.88		
QoL	Quality of life	Male	472	3.64	0.84	.035	0.34*
		Female	34	3.93	0.74		

Note. Effect sizes: *0.2: Small, not significant; **0.5: Medium or visible difference; ***0.8: Large difference

5.3.3.2 *t*-test of respondents with and without military/law enforcement/formal tactical training and the identified aspects of paintball

With reference to the above *respondents* (please refer to Table 5.22), respondents who did not have MLT represented the majority with 383, whereas those with MLT made up the remaining 123. A significant difference ($p \leq 0.05$) concerning *leisure-based activity* was found between respondents with and respondents without MLT, with those with MLT more positive in practice regarding *leisure aspects of paintball* ($p < 0.014$) than those with no MLT. Specifically, the effect size of the difference was found to be small ($d = 0.21$) according to the interpretation guidelines; therefore, it was not practically significant ($d \geq 0.8$).

With reference to the *activity theory aspect of paintball*, a significant difference ($p \leq 0.05$) was identified between respondents with and those without MLT, where those with MLT were stronger in practice, specifically in *aspects impacting MILSIM* ($p \leq 0.000$), than those without MLT. The effect size of the difference was medium ($d = 0.66$)

according to the interpretation guidelines; therefore, it was of some practical significance ($d \geq 0.8$).

Negative adventure sport experience showed a significant difference ($p \leq 0.05$) between respondents with and those without MLT, where those without MLT were more positive in practice regarding *negative stresses* ($p < 0.023$), *negative commitment* ($p < 0.023$) and *negative pressure* ($p \leq 0.000$) than those with MLT. The related affect size of *negative stresses* ($d = 0.24$) and *negative commitment* ($d = 0.24$) is considered small and therefore not practically significant ($d \geq 0.8$), whereas the related affect size of *negative pressure* ($d = 0.39$) tended towards medium practical significance.

Negative affect in life domains showed a significant difference ($p \leq 0.05$) between respondents with and without MLT, where those without MLT were more positive in practice regarding *negative affect in travel life* ($p < 0.002$) and *negative affect in leisure and recreation life* ($p < 0.007$) than those with MLT. With regard to effect sizes, *negative affect in travel life* ($d = 0.28$) and *negative affect in leisure and recreation life* ($d = 0.28$) are considered small and therefore not practically significant ($d \geq 0.8$).

As can be seen in *life domains*, a significant difference ($p \leq 0.05$) was identified between respondents with and without MLT, where those with MLT were more positive with regard to *life domains overall* ($p < 0.003$) than those without MLT. Specifically, the effect size difference was found to be small ($d = 0.26$) and therefore not practically significant ($d \geq 0.8$).

Table 5.22: *t*-test of respondents with and without military/law enforcement/formal tactical training and the identified aspects (factors) of paintball

Section	Identified aspects of paintball	MLT	N	Mean	Std. deviation	Sig. (2-tailed) <i>p</i> -value	Cohen's D-values
Leisure aspects of paintball	Leisure aspects of paintball	Yes	123	4.49	0.39	.014	0.21*
		No	383	4.38	0.52		
Activity theory aspect of paintball	Aspects impacting MILSIM	Yes	123	3.45	0.74	.000	0.66**
		No	383	2.90	0.82		
Negative adventure sport	Negative stresses	Yes	123	3.55	0.79	.023	0.24*
		No	383	3.74	0.78		

experience	Negative commitment	Yes	123	2.54	1.12	.023	0.24*
		No	383	2.27	1.10		
	Negative pressure	Yes	123	2.10	1.02	.000	0.39*
		No	383	2.54	1.15		
Negative affect in life domains	Negative affect in travel life	Yes	123	2.33	0.79	.002	0.29*
		No	383	2.60	0.93		
	Negative affect in leisure and recreation life	Yes	123	2.81	0.90	.007	0.28*
		No	383	3.07	0.91		
Life domains	Life domains overall	Yes	123	4.13	0.52	.003	0.26*
		No	383	3.95	0.66		

Note. Effect sizes: *0.2: Small, not significant; **0.5: Medium or visible difference; ***0.8: Large difference

5.3.4 Analysis of variance

The purpose of this section was to compare the demographic characteristics of respondents, based on home language, current working station, marital status, type of paintballer and style of paintball with the identified aspects of paintball (cf. 5.3.2) in accordance with ANOVA criteria (discussed in 1.6.2.4.6). For the purpose of the comparisons, only identified aspects of paintball that generated a significant difference ($p \leq 0.05$) are discussed and tabled below.

5.3.4.1 Analysis of variance to explore home language and the identified aspects of paintball

With reference to Table 5.23, English was the most prominent home language of respondents (417), followed by Afrikaans (36); the remaining 53 respondents spoke various different languages. This cannot be generalized to larger study populations, however the results can be viewed as a trend in this study.

Concerning the *activity theory aspect of paintball*, it was found that those who speak Afrikaans ($\bar{x} = 3.48$) were more positive in practice regarding *aspects impacting MILSIM* ($p < 0.000$) than English speakers ($\bar{x} = 2.96$) and those speaking other languages ($\bar{x} = 3.32$). Specifically, the effect size of Afrikaans speakers was found to be medium ($d = 0.63$), whereas the effect size of those who speak other languages was found to be small ($d = 0.42$) according to the interpretation guidelines. Therefore, Afrikaans-speaking respondents' answers had some practical significance ($d \geq 0.8$), whereas the answers of those speaking other languages had no practical significance ($d \geq 0.8$). The

effect-size difference between Afrikaans speakers and those speaking other languages was less ($d = 0.18$) than the recommended difference in 1.6.2.4.4 and thus has no practical significance ($d \geq 0.8$).

It has to be noted that Afrikaans ($\bar{x} = 3.37$) and English ($\bar{x} = 3.05$)-speaking respondents were more positive in practice regarding the *negative impact of rules* ($p < 0.000$) than respondents speaking other languages ($\bar{x} = 2.72$). Specifically, the effect sizes of Afrikaans respondents and those speaking other languages, compared to English respondents, were both found to be leaning toward medium effect ($d = 0.45$ and $d = 0.42$, respectively) according to the interpretation guidelines; therefore, both Afrikaans respondents and those speaking other languages have a medium practical significance ($d \geq 0.8$). However, the effect-size difference between Afrikaans speakers and those speaking other languages was $d = 0.79$ and thus tends towards high practical significance, as categorised in 1.6.2.4.4.

Continuing with the *activity theory aspect of paintball*, Afrikaans ($\bar{x} = 3.05$)-speaking respondents and those speaking other languages ($\bar{x} = 2.85$) were more positive in practice regarding the *positive impact of gear* ($p < 0.051$) than English-speaking respondents ($\bar{x} = 2.77$). Specifically, the effect size of Afrikaans speakers was found to be small ($d = 0.41$) according to the interpretation guidelines; therefore, Afrikaans-speaking respondents' answers had no practical significance ($d \geq 0.8$). The effect size between respondents speaking other languages and English speaking respondents was found to be less ($d = 0.13$) than the recommended difference in 1.6.2.4.4 and thus has no practical significance ($d \geq 0.8$). The effect size difference between those speaking other languages and Afrikaans was $d = 0.29$ and therefore has a small significance, as categorised in 1.6.2.4.4.

With reference to the *positive adventure sport experience*, it was found that those who speak Afrikaans ($\bar{x} = 4.01$) were more positive in practice, specifically regarding a *positive adventure sport lifestyle* ($p < 0.004$), than those who speak English ($\bar{x} = 3.89$) and those speaking other languages ($\bar{x} = 3.55$). The effect size of respondents speaking other languages, compared to English-speaking respondents, tended towards medium ($d = 0.38$), whereas the effect size between Afrikaans- and English-speaking

respondents was found to be less ($d = 0.17$) than the recommended difference in 1.6.2.4.4 and thus has no practical significance ($d \geq 0.8$). The effect-size difference between those speaking other languages and Afrikaans-speaking respondents was $d = 0.51$ and can be categorised as having a medium effect on practical significance, as categorised in 1.6.2.4.4.

With regard to a *negative adventure sport experience*, it was found that those speaking English ($\bar{x} = 1.58$) were less negative in practice regarding *negative memories* ($p < 0.005$) compared to those who speak Afrikaans ($\bar{x} = 1.51$) and those speaking other languages ($\bar{x} = 1.34$). Specifically, the effect size of Afrikaans speakers, compared to English speakers, was found to be less ($d = 0.14$) than the recommended size in 1.6.2.4.4 and thus has no practical significance. However, the effect size of respondents speaking other languages, compared to English-speaking respondents, tended towards being medium ($d = 0.46$) according to the interpretation guidelines and therefore has a medium practical significance. The effect size difference between Afrikaans speakers and those speaking other languages was small ($d = 0.34$) according to the requirements in 1.6.2.4.4 and is thus of small practical significance.

Continuing with a *negative adventure sport experience*, Afrikaans ($\bar{x} = 3.91$)- and English ($\bar{x} = 3.71$)-speaking respondents were less negative in practice regarding *negative stresses* ($p < 0.008$) than respondents speaking other languages ($\bar{x} = 3.42$). Specifically, the effect sizes of Afrikaans speakers and those speaking other languages, compared to English, were both found to be small ($d = 0.24$ and $d = 0.37$, respectively) according to the interpretation guidelines; therefore, neither Afrikaans-speaking respondents nor those speaking other languages have any practical significance ($d \geq 0.8$). The effect size difference between Afrikaans speakers and those speaking other languages was $d = 0.68$ and is thus of medium practical significance, as categorised in 1.6.2.4.4.

Regarding *positive affect in life domains*, it was found that those respondents who speak Afrikaans ($\bar{x} = 4.19$) and those who speak English ($\bar{x} = 3.79$) were more positive in practice regarding *positive affect in emotional life* ($p < 0.009$) than those speaking other languages ($\bar{x} = 3.69$). Specifically, the effect size of Afrikaans speakers, compared

to English speakers, was found to be tending towards medium effect ($d = 0.48$) according to the interpretation guidelines; therefore, Afrikaans-speaking respondents' answers have a medium practical significance ($d \geq 0.8$). The effect size of respondents speaking other languages, compared to English-speaking respondents, was found to be less ($d = 0.12$) than the recommended size in 1.6.2.4.4 and thus has no practical significance. However, the effect size of respondents speaking other languages, compared to Afrikaans-speaking respondents, tended towards being high ($d = 0.73$) according to the interpretation guidelines and is therefore of high practical significance ($d \geq 0.8$).

Continuing with *positive affect in life domains*, it was found that those respondents who speak Afrikaans ($\bar{x} = 3.63$) and those who speak English ($\bar{x} = 3.37$) were more positive in practice regarding *positive affect in family life* ($p < 0.014$) than respondents speaking other languages ($\bar{x} = 3.00$). Specifically, the effect sizes of Afrikaans speakers and those speaking other languages, compared to English speakers, were both found to be small ($d = 0.24$ and $d = 0.34$, respectively) according to the interpretation guidelines; therefore, neither Afrikaans respondents nor those speaking other languages have any practically significant effect size ($d \geq 0.8$). However, the effect size of respondents speaking other languages, compared to Afrikaans-speaking respondents, had a medium effect ($d = 0.67$) according to the interpretation guidelines and is therefore of medium practical significance ($d \geq 0.8$).

Concerning *negative affect in life domains*, it was found that those respondents who speak other languages ($\bar{x} = 2.00$) and those who speak English ($\bar{x} = 1.87$) were less negative in practice regarding *negative affect in family life* ($p < 0.026$) than those who speak Afrikaans ($\bar{x} = 1.61$). Specifically, the effect size of Afrikaans speakers, compared to English speakers, was found to be tending towards medium effect ($d = 0.39$) according to the interpretation guidelines; therefore, the effect size of Afrikaans-speaking respondents has a medium practical significance ($d \geq 0.8$). The effect size of respondents speaking other languages, compared to English-speaking respondents, was found to be less ($d = 0.17$) than the recommended size in 1.6.2.4.4 and thus has no practical significance. However, the effect size of respondents speaking other languages, compared to Afrikaans-speaking respondents, tended towards being

medium ($d = 0.52$) according to the interpretation guidelines and is therefore of medium practical significance ($d \geq 0.8$).

Table 5.23: Analysis of variance to explore differences between respondents' home language and the identified aspects (factors) of paintball

Section	Identified aspects of paintball	Language	N	Mean	Std. deviation	Sig. p-value	Cohen's D-values	
							English, Afrikaans & Other	Afrikaans & Other
Activity theory aspect of paintball	Aspects impacting MILSIM	English	417	2.96	0.83	.000		
		Afrikaans	36	3.48	0.70		0.63**	
		Other	53	3.32	0.86		0.42*	0.18
		Total	506	3.03	0.84			
	Negative impact of rules	English	417	3.05	0.72	.000		
		Afrikaans	36	3.37	0.61		0.45*	
		Other	53	2.72	0.82		0.40*	0.79**
		Total	506	3.04	0.74			
	Positive impact of gear	English	417	2.77	0.70	.051		
		Afrikaans	36	3.05	0.61		0.41*	
		Other	53	2.85	0.68		0.13	0.29*
		Total	506	2.79	0.69			
Positive adventure sport experience	Positive adventure sport lifestyle	English	417	3.89	0.73	.004		
		Afrikaans	36	4.01	0.70		0.17	
		Other	53	3.55	0.91		0.38*	0.51**
		Total	506	3.86	0.76			
Negative adventure sport experience	Negative memories	English	417	1.58	0.52	.005		
		Afrikaans	36	1.51	0.50		0.14	
		Other	53	1.34	0.40		0.46*	0.34*
		Total	506	1.55	0.51			
	Negative stresses	English	417	3.71	0.80	.008		
		Afrikaans	36	3.91	0.72		0.24*	
		Other	53	3.42	0.67		0.37*	0.68**
		Total	506	3.70	0.79			
Positive affect in life domains	Positive affect in emotional life	English	417	3.79	0.83	.009		
		Afrikaans	36	4.19	0.61		0.48*	
		Other	53	3.69	0.69		0.12	0.73**
		Total	506	3.81	0.81			

	Positive affect in family life	English	417	3.37	1.08	.014		
		Afrikaans	36	3.63	0.93		0.24*	
		Other	53	3.00	0.81		0.34*	0.67**
		Total	506	3.35	1.05			
Negative affect in life domains	Negative affect in family life	English	417	1.87	0.67	.026		
		Afrikaans	36	1.61	0.63		0.39*	
		Other	53	2.00	0.75		0.17	0.52**
		Total	506	1.87	0.68			

Note. Effect sizes: *0.2: Small, not significant; **0.5: Medium or visible difference; ***0.8: Large difference

5.3.4.2 Analysis of variance to explore respondents' work station and the identified aspects of paintball

With reference to Table 5.24, *full-timer* (417) was the most represented work station chosen by respondents, followed by *other* (39), *part-timer* (30) and *unemployed* (21).

Concerning the *activity theory aspect of paintball*, it was found between respondents with different work stations that those who selected *other* ($\bar{x} = 4.55$) were more positive in practice regarding *positive internal activity aspects* ($p < 0.047$) than those who selected *full-timer* ($\bar{x} = 4.39$), *part-timer* ($\bar{x} = 4.24$) and *unemployed* ($\bar{x} = 4.24$). Specifically, the effect size of *other*, *unemployed* and *part-timer*, compared to *full-timer*, were all found to be small ($d = 0.32$, $d = 0.21$ and $d = 0.22$, respectively) according to the interpretation guidelines; therefore, neither *other*, *unemployed* nor *part-timer* respondents have any practical significance ($d \geq 0.8$). The effect size of respondents who are *unemployed* was small ($d = 0.37$), whereas *other* respondents tended towards a medium significance ($d = 0.44$) when compared to *part-timer* respondents. The effect size of respondents who chose *other*, compared to *unemployed*, was found to be less ($d = 0.15$) than the recommended size in 1.6.2.4.4 and thus has no practical significance.

With reference to the *negative adventure sport experience*, it was found that those who selected *other* ($\bar{x} = 1.23$) were less negative in practice regarding *negative commitment* ($p < 0.013$) than those who selected *full-timer* ($\bar{x} = 1.11$), *part-timer* ($\bar{x} = 0.86$) and *unemployed* ($\bar{x} = 1.03$). Specifically, the effect size of *part-timer* was found to be tending towards medium significance ($d = 0.41$), whereas *other* was found to be small ($d = 0.34$) according to the interpretation guidelines; therefore, neither *part-timer* nor *other* has any

practical significance ($d \geq 0.8$). The effect size of respondents who are *unemployed*, compared to *full-timers*, was found to be less ($d = 0.09$) than the recommended size in 1.6.2.4.4 and thus has no practical significance ($d \geq 0.8$). However, the effect size of respondents who chose *unemployed* ($d = 0.55$) and *other* ($d = 0.71$), compared to *part-timer* respondents, had a medium effect according to the interpretation guidelines and therefore has a visible difference ($d \geq 0.8$). A small effect size ($d = 0.26$) was identified when comparing *other* with *unemployed* respondents, which indicates a small practical significance ($d \geq 0.8$).

Regarding *positive affect in life domains*, it was found that those who are *unemployed* ($\bar{x} = 4.69$) were more positive in practice regarding *positive affect in health and safety life* ($p < 0.000$) than those who chose *full-timer* ($\bar{x} = 4.37$), *part-timer* ($\bar{x} = 4.00$) and *other* ($\bar{x} = 4.55$).

Specifically when compared to *full-timers*, the effect size of the *unemployed* was found to have a medium effect ($d = 0.51$) according to the interpretation guidelines, which indicates a medium practical significance ($d \geq 0.8$). *Part-timer* ($d = 0.38$) and *other* ($d = 0.29$) only generated a small effect when compared to *full-timer*, which indicates a small practical significance ($d \geq 0.8$). The effect size of *unemployed*, compared to *part-timer*, tended towards high ($d = 0.70$), whereas *other* generated a medium ($d = 0.56$) effect size, which indicates a visible practical significance ($d \geq 0.8$). The effect size of *other*, compared to *unemployed*, was small ($d = 0.28$) according to the interpretation guidelines and is therefore not significant ($d \geq 0.8$).

Table 5.24: Analysis of variance to explore differences between respondents' work station and the identified aspects (factors) of paintball

Section	Identified aspects of paintball	Current working station	N	Mean	Std. deviation	Sig. p-value	Cohen's D-values		
							Full-timer, part-timer, unemployed & other	Part-timer, unemployed & other	Unemployed & other
Activity theory aspect of paintball	Positive internal activity aspects	Full-timer	411	4.39	0.48	.047			
		Part-timer	30	4.24	0.70		0.22*		
		Unemployed	21	4.49	0.37		0.21*	0.37*	
		Other	39	4.55	0.35		0.32*	0.44*	0.15
		Total	501	4.40	0.48				
Negative adventure sport experience	Negative commitment	Full-timer	411	2.33	1.11	.013			
		Part-timer	30	1.87	0.86		0.41*		
		Unemployed	21	2.43	1.03		0.09	0.55**	
		Other	39	2.74	1.23		0.34*	0.71**	0.26*
		Total	501	2.34	1.11				
Positive affect in life domains	Positive affect in health and safety life	Full-timer	411	4.37	0.63	.000			
		Part-timer	30	4.00	0.98		0.38*		
		Unemployed	21	4.69	0.40		0.51**	0.70**	
		Other	39	4.55	0.50		0.29*	0.56**	0.28*
		Total	501	4.37	0.65				

Note. Effect sizes: *0.2: Small, not significant; **0.5: Medium or visible difference; ***0.8: Large difference

5.3.4.3 Analysis of variance to explore marital status and the identified aspects of paintball

With reference to Table 5.25, *married* was the most represented marital status (417) chosen by respondents, followed by *single* (165), *living together* (100) and *other* (15). A significant difference ($p \leq 0.05$) is found in all of the following:

Concerning *positive adventure sport experience*, it was found that those who chose *single* ($\bar{x} = 4.59$) were more positive in practice regarding *positive adventure sport camaraderie* ($p < 0.003$) than those who chose *married* ($\bar{x} = 4.40$), *living together* ($\bar{x} = 4.47$) or *other* ($\bar{x} = 4.52$). Specifically, the effect sizes of *married* ($d = 0.36$) and *living together* ($d = 0.23$), compared to *single*, were all found to be small according to the interpretation guidelines; therefore, neither *married* nor *living together* has any practical significance ($d \geq 0.8$). The effect size of respondents who chose *other*, compared to *single*, was found to be less ($d = 0.13$) than the recommended size in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. The effect size of respondents who chose *other* ($d = 0.25$), compared to *single*, was found to be small according to the interpretation guidelines and is therefore of small practical significance ($d \geq 0.8$) in comparison with those who chose *living together*; the latter's effect was found to be less ($d = 0.14$) than the recommended value in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. Similarly, when comparing *other* with *living together*, the effect was found to be less ($d = 0.11$) than the recommended value and therefore does not constitute a significant value.

Continuing with *positive adventure sport experience*, respondents who chose *single* ($\bar{x} = 4.10$) were more positive in practice regarding *positive adventure sport stress* ($p < 0.006$) than respondents who chose *married* ($\bar{x} = 3.84$), *living together* ($\bar{x} = 3.94$) or *other* ($\bar{x} = 4.08$). Specifically, the effect sizes of *married* and *living together*, compared to *other*, were both found to be small ($d = 0.34$ and $d = 0.22$, respectively) according to the interpretation guidelines; therefore, neither *married* nor *living together* has any practical significance ($d \geq 0.8$). The effect size of respondents who chose *other*, compared to *single*, was found to be less ($d = 0.02$) than the recommended size in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. The effect size of respondents who selected *other*, compared to those who selected *married*, had a small effect ($d = 0.34$) according to the interpretation guidelines and is therefore of small practical significance ($d \geq 0.8$), as

opposed to those who are *living together*, whose effect was found to be less ($d = 0.13$) than the recommended value in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. However, when comparing those who selected *other* with respondents who chose *living together*, a small effect value ($d = 0.21$) was found that equates to a small practical significance ($d \geq 0.8$).

With reference to *negative adventure sport experience*, *married* ($\bar{x} = 1.61$) respondents were less negative with regard to *negative memories* ($p < 0.029$) than those who are *living together* ($\bar{x} = 1.59$), *single* ($\bar{x} = 1.47$) or selected *other* ($\bar{x} = 1.39$). The effect sizes of respondents who are *married* ($d = 0.25$) and *living together* ($d = 0.23$) were small when compared to *single* respondents. The effect size of respondents who chose *other*, compared to *single*, was found to be less ($d = 0.18$) than the recommended size in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. When comparing *other* with *married* respondents, a small effect ($d = 0.39$) is measured according to the interpretation guidelines; it thus has a small practical significance ($d \geq 0.8$). Comparing those *living together* with *married* respondents, no meaningful effect ($d = 0.04$) was measured. Lastly, *other* was compared with *living together*, yielding a small effect ($d = 0.39$) according to the interpretation guidelines; it thus is of small practical significance ($d \geq 0.8$).

Concerning *positive affect in life domains*, respondents who selected *other* ($\bar{x} = 4.10$) were the most positive with regard to *positive affect in emotional life* ($p \leq 0.000$), followed by *single* ($\bar{x} = 3.98$), *living together* ($\bar{x} = 3.85$) and *married* ($\bar{x} = 3.65$). The effect size of respondents who are *married* ($d = 0.41$), compared to *single*, was inclining towards medium effect, whereas the effect sizes of respondents who are *living together* ($d = 0.17$) and those who chose *other* ($d = 0.15$) had no meaningful effect. However, when comparing those *living together* with those who are *married*, a small effect ($d = 0.25$) was measured, whereas *other* generated a medium effect ($d = 0.56$) according to the interpretation guidelines, which has a medium visible practical significance ($d \geq 0.8$). A small effect ($d = 0.33$) was measured between *other* and those *living together*; it thus has a small visible practical significance ($d \geq 0.8$).

Continuing with *positive affect in life domains*, respondents who are *single* ($\bar{x} = 4.31$) were more positive in practice regarding *positive affect in travel life* ($p < 0.016$) than respondents who are *married* ($\bar{x} = 4.06$), *living together* ($\bar{x} = 4.06$) or those who selected *other* ($\bar{x} = 3.79$). When compared to respondents who are *single*, the effect sizes of respondents who are *married* ($d = 0.30$) and those *living together* ($d = 0.30$) were both found to be small according to the interpretation guidelines; therefore, both *married* and *living together* have a small practical significance ($d \geq 0.8$). The effect size of respondents who chose *other*, compared to *single*, was found to be less ($d = 0.013$) than the recommended size in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. The effect sizes of respondents who selected *living together* ($d = 0.01$) and *other* ($d = 0.17$), compared to *married* respondents, were found to be less than the recommended value in 1.6.2.4.4 and thus have no significance ($d \geq 0.8$) at all. The same conclusion is reached when comparing *other* ($d = 0.17$) with *living together* ($d = 0.01$).

Continuing with *positive affect in life domains*, respondents who selected *other* ($\bar{x} = 4.32$) were more positive in practice regarding *positive affect in social life* ($p < 0.025$) than respondents who are *single* ($\bar{x} = 4.25$), *married* ($\bar{x} = 4.08$) or *living together* ($\bar{x} = 4.13$). The effect size of *married* ($d = 0.26$), compared to *single*, was found to be small according to the interpretation guidelines; therefore, it has a small practical significance ($d \geq 0.8$). Neither *living together* ($d = 0.18$) nor *other* ($d = 0.10$) generated a meaningful effect size; they thus have no significance ($d \geq 0.8$) at all. The effect size of respondents who chose *other*, compared to *married*, generated an effect size of $d = 0.42$, tending towards a visible difference according to 1.6.2.4.4. The effect size of those who selected *living together* ($d = 0.09$) was found to be below the recommended value in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. The effect size of respondents who selected *other* ($d = 0.35$), compared to *living together*, was found to be small according to the interpretation guidelines and is therefore of small practical significance ($d \geq 0.8$).

Concerning *positive affect in life domains*, respondents who selected *other* ($\bar{x} = 4.60$) were the most positive with regard to *positive affect in health and safety life* ($p \leq 0.039$), followed by *single* ($\bar{x} = 4.44$), *living together* ($\bar{x} = 4.44$) and *married* ($\bar{x} = 4.29$). The effect sizes of respondents who are *married* ($d = 0.22$) and those who selected *other* ($d = 0.23$) were small according to the interpretation guidelines when compared to *single*

respondents and are therefore of small practical significance ($d \geq 0.8$). The effect size of those who selected *living together* ($d = 0.01$) was found to be below the recommended value in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. However, when comparing those *living together* with those being *married*, a small effect ($d = 0.23$) was measured, whereas *other* generated a medium effect ($d = 0.50$) according to the interpretation guidelines; it thus has a medium visible practical significance ($d \geq 0.8$). A small effect ($d = 0.27$) was measured between *other* and *living together*; it thus has a small visible practical significance ($d \geq 0.8$).

Regarding *negative affect in life domains*, it was found that those who are *married* ($\bar{x} = 2.34$) were less negative regarding *negative affect in financial life* ($p < 0.003$) than those who are *single* ($\bar{x} = 2.05$), *living together* ($\bar{x} = 2.05$) or selected *other* ($\bar{x} = 2.24$). Specifically, the effect sizes of *married* ($d = 0.33$) and *other* ($d = 0.24$), compared to *single*, were all found to be small according to the interpretation guidelines; therefore, neither *married* nor *other* has any practical significance ($d \geq 0.8$). The effect size of respondents who *live together*, compared to being *single*, was found to be less ($d = 0.01$) than the recommended size in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. Respondents who *live together* ($d = 0.32$), compared to those who are *married*, generated a small affect according to the interpretation guidelines and is therefore of small practical significance ($d \geq 0.8$). When comparing *other* with *married*, a small effect was observed ($d = 0.11$) that is less than the recommended size in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. However, when comparing *other* with *living together*, a small effect ($d = 0.23$) was measured that is of small significance ($d \geq 0.8$).

With reference to *QoL*, it was found that those who are *married* ($\bar{x} = 3.79$) were more positive regarding *quality of life* ($p < 0.02$) than those who are *single* ($\bar{x} = 3.56$), *living together* ($\bar{x} = 3.57$) or selected *other* ($\bar{x} = 3.41$). Specifically, the effect size of *married* ($d = 0.23$) was found to be small according to the interpretation guidelines; therefore, *married* only has a small practical significance ($d \geq 0.8$). The effect sizes of respondents who *live together* ($d = 0.01$) and those who selected *other* ($d = 0.16$), compared to *single* respondents, were found to be less than the recommended size in 1.6.2.4.4 and thus have no significance ($d \geq 0.8$) at all. Respondents who *live together* ($d = 0.28$), compared to those who are *married*, generated a small effect, whereas *other* tended

towards medium effect ($d = 0.49$) according to the interpretation guidelines and is therefore of small to medium practical significance ($d \geq 0.8$). Lastly, when comparing *other* with *married*, a small effect is observed ($d = 0.20$) that is of small significance ($d \geq 0.8$).

Table 5.25: Analysis of variance to explore differences between marital status and identified aspects (factors) of paintball

Section	Identified aspects of paintball	Marital status	N	Mean	Std. deviation	Sig. p-value	Cohen's D-values		
							Single, married, living together & other	Married, living together & other	Living together & other
Positive adventure sport experience	Positive adventure sport camaraderie	Single	165	4.59	0.53	.003			
		Married	223	4.40	0.48		0.36*		
		Living together	100	4.47	0.51		0.23*	0.14	
		Other	15	4.52	0.40		0.13	0.25*	0.11
		Total	503	4.48	0.51				
	Positive adventure sport stress	Single	165	4.10	0.74	.006			
		Married	223	3.84	0.71		0.34*		
		Living together	100	3.94	0.68		0.22*	0.13	
		Other	15	4.08	0.70		0.02	0.34*	0.21*
		Total	503	3.95	0.72				
Negative adventure sport experience	Negative memories	Single	165	1.47	0.44	.029			
		Married	223	1.61	0.56		0.25*		
		Living together	100	1.59	0.51		0.23*	0.04	
		Other	15	1.39	0.42		0.18	0.39*	0.39*
		Total	503	1.55	0.51				
Positive affect in life domains	Positive affect in emotional life	Single	165	3.98	0.81	.000			
		Married	223	3.65	0.81		0.41*		
		Living together	100	3.85	0.77		0.17	0.25*	
		Other	15	4.10	0.70		0.15	0.56**	0.33*
		Total	503	3.81	0.81				
	Positive affect in travel life	Single	165	4.31	0.82	.016			
		Married	223	4.06	0.83		0.30*		
		Living together	100	4.06	0.79		0.30*	0.01	
		Other	15	4.20	0.76		0.13	0.17	0.17
		Total	503	4.15	0.82				

	Positive affect in social life	Single	165	4.25	0.66	.025			
		Married	223	4.08	0.57		0.26*		
		Living together	100	4.13	0.54		0.18	0.09	
		Other	15	4.32	0.51		0.10	0.42*	0.35*
		Total	503	4.15	0.60				
	Positive affect in health and safety life	Single	165	4.44	0.69	.039			
		Married	223	4.29	0.62		0.22*		
		Living together	100	4.44	0.61		0.01	0.23*	
		Other	15	4.60	0.47		0.23*	0.50**	0.27*
		Total	503	4.38	0.64				
Negative affect in life domains	Negative affect in financial life	Single	165	2.05	0.81	.003			
		Married	223	2.34	0.91		0.33*		
		Living together	100	2.05	0.84		0.01	0.32*	
		Other	15	2.24	0.76		0.24*	0.11	0.23*
		Total	503	2.18	0.87				
QoL	Quality of life	Single	165	3.56	0.96	.020			
		Married	223	3.79	0.76		0.23*		
		Living together	100	3.57	0.78		0.01	0.28*	
		Other	15	3.41	0.73		0.16	0.49*	0.20*
		Total	503	3.66	0.84				

Note. Effect sizes: *0.2: Small, not significant; **0.5: Medium or visible difference; ***0.8: Large difference

5.3.4.4 Analysis of variance to explore the type of paintballer and the identified aspects of paintball

With reference to Table 5.26, *dabblers* was the most represented type of paintballer (248), followed by *enthusiasts* (163) and *learners* (95). The following sections contain the identified aspects of paintball (cf. 5.3.2) with a significant difference ($p \leq 0.05$), which will be discussed.

With reference to *leisure aspects of paintball*, it was found that *enthusiasts* ($\bar{x} = 4.49$) were more positive in practice regarding *leisure aspects of paintball* ($p < 0.002$) than *learners* ($\bar{x} = 4.26$) or *dabblers* ($\bar{x} = 4.41$). Specifically, the effect size of *dabblers* ($d = 0.26$) was found to be small, whereas that of *enthusiasts* ($d = 0.42$) tended towards medium effect; therefore, the effect size of *learners* has a small practical significance ($d \geq 0.8$). The effect size difference between *enthusiasts* and *dabblers* was less ($d = 0.16$) than the recommended size in 1.6.2.4.4 and thus has no practical significance ($d \geq 0.8$) at all.

Regarding the *activity theory aspect of paintball*, it was established that *enthusiasts* ($\bar{x} = 4.49$) were more positive in practice regarding *positive internal activity aspects* ($p < 0.000$) than *learners* ($\bar{x} = 4.22$) or *dabblers* ($\bar{x} = 4.41$). Specifically, the effect size of *dabblers* ($d = 0.35$) was found to be small, whereas that of *enthusiasts* ($d = 0.49$) tended towards medium effect; therefore, the effect size of *learners* has a small practical significance ($d \geq 0.8$), whereas that of *enthusiasts* tends to be of medium practical significance. The effect size difference between *enthusiasts* and *dabblers* was less ($d = 0.16$) than the recommended size in 1.6.2.4.4 and thus has no practical significance ($d \geq 0.8$) at all.

Continuing with the *activity theory aspect of paintball*, *enthusiasts* ($\bar{x} = 3.20$) were less negative in practice regarding the *negative impact of rules* ($p < 0.000$) than *dabblers* ($\bar{x} = 3.04$) or *learners* ($\bar{x} = 2.74$). Specifically, the effect size of *dabblers*, compared to *learners*, was found to be small ($d = 0.35$) according to the interpretation guidelines; therefore, the effect size of *dabblers* has a small practical significance ($d \geq 0.8$). However, the effect size of *enthusiasts*, compared to *learners*, was found to be of medium effect ($d = 0.60$) according to the recommendation in 1.6.2.4.4 and is therefore of visible significance ($d \geq 0.8$). The effect size of *enthusiasts*, compared to *dabblers*, has a small effect ($d = 0.23$) according to the interpretation guidelines and is therefore of small practical significance ($d \geq 0.8$).

With reference to the *activity theory aspect of paintball*, *enthusiasts* ($\bar{x} = 2.94$) were more positive in practice regarding the *positive impact of gear* ($p < 0.005$) than *dabblers* ($\bar{x} = 2.73$) or *learners* ($\bar{x} = 2.71$). The effect size of *dabblers*, compared to *learners*, was found to be less ($d = 0.04$) than the recommended size in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. However, the effect size of *enthusiasts*, compared to that of *learners*, was found to have a small effect ($d = 0.35$) according to the recommendation as stated above and is therefore of small significance ($d \geq 0.8$). Likewise, the effect size of *enthusiasts*, compared to that of *dabblers*, had a small effect ($d = 0.23$) and is therefore of small practical significance ($d \geq 0.8$).

Positive adventure sport experience showed that *enthusiasts* ($\bar{x} = 4.59$) were more positive in practice regarding *positive adventure sport camaraderie* ($p < 0.000$) than

learners ($\bar{x} = 4.30$) or *dabblers* ($\bar{x} = 4.47$). Specifically, the effect size of *dabblers* ($d = 0.30$) was found to be small, whereas that of *enthusiasts* ($d = 0.50$) was of medium effect; therefore, the effect size of *learners* has a small practical significance ($d \geq 0.8$), whereas that of *enthusiasts* shows a visible significant difference. The effect size difference between *enthusiasts* and *dabblers* was small ($d = 0.22$) according to the recommendations in 1.6.2.4.4 and is therefore of small practical significance ($d \geq 0.8$).

Continuing with *positive adventure sport experience*, it was found that *enthusiasts* ($\bar{x} = 4.09$) were more positive in practice regarding *positive adventure sport stress* ($p < 0.001$) than *learners* ($\bar{x} = 3.73$) or *dabblers* ($\bar{x} = 3.94$). Specifically, the effect size of *dabblers* ($d = 0.27$) was found to be small, whereas that of *enthusiasts* ($d = 0.52$) was of medium effect; therefore, the effect size of *learners* has a small practical significance ($d \geq 0.8$), whereas that of *enthusiasts* shows a visible significant difference. The effect size difference between *enthusiasts* and *dabblers* was small ($d = 0.20$) according to the recommendations in 1.6.2.4.4 and is therefore of small practical significance ($d \geq 0.8$).

Positive affect in life domains showed that *enthusiasts* ($\bar{x} = 3.93$) were more positive in practice regarding *positive affect in emotional life* ($p < 0.000$) than *learners* ($\bar{x} = 3.48$) or *dabblers* ($\bar{x} = 3.85$). Specifically, the effect size of *dabblers* ($d = 0.43$) tended towards being medium, whereas that of *enthusiasts* ($d = 0.54$) was of medium effect; therefore, the effect size of *learners* tends towards being of visible practical significance ($d \geq 0.8$), whereas that of *enthusiasts* shows a visible significant difference. The effect size difference between *enthusiasts* and *dabblers* was less ($d = 0.10$) than the recommended size in 1.6.2.4.4 and thus has no practical significance ($d \geq 0.8$) at all.

With reference to *positive affect in life domains*, *enthusiasts* ($\bar{x} = 4.23$) were more positive in practice regarding *positive affect in travel life* ($p < 0.005$) than *learners* ($\bar{x} = 3.90$) or *dabblers* ($\bar{x} = 4.18$). Compared to *learners*, the effect sizes of *dabblers* ($d = 1.11$) and *enthusiasts* ($d = 0.89$) were both found to have a small effect according to the interpretation guidelines; therefore, both *dabblers* and *enthusiasts* are of small practical significance ($d \geq 0.8$). Lastly, comparing *enthusiasts* with *dabblers* yielded an effect that was less ($d = 0.06$) than the recommended size in 1.6.2.4.4 and thus has no practical significance ($d \geq 0.8$) at all.

Concerning *positive affect in life domains*, enthusiasts ($\bar{x} = 4.28$) were more positive in practice regarding *positive affect in leisure and recreation life* ($p < 0.000$) than learners ($\bar{x} = 3.88$) or dabblers ($\bar{x} = 4.13$). Specifically, the effect size of dabblers ($d = 0.37$) was found to be small, whereas that of enthusiasts ($d = 0.64$) was of medium effect; therefore, the effect size of learners is of small practical significance ($d \geq 0.8$) and that of enthusiasts has a medium practical significance. Lastly, when comparing enthusiasts with dabblers, a small effect ($d = 0.22$) was observed according to the interpretation guidelines; it is thus of small practical significance ($d \geq 0.8$).

Continuing with *positive affect in life domains*, enthusiasts ($\bar{x} = 4.22$) were more positive in practice regarding *positive affect in social life* ($p < 0.001$) than learners ($\bar{x} = 3.94$) or dabblers ($\bar{x} = 4.18$). Compared to learners, the effect sizes of dabblers ($d = 0.37$) and enthusiasts ($d = 0.45$) were both found to have a small effect according to the interpretation guidelines (cf. 1.6.2.4.4); therefore, both dabblers and enthusiasts are of small practical significance ($d \geq 0.8$). Lastly, comparing enthusiasts with dabblers yielded an effect that was less ($d = 0.08$) than the recommended size in 1.6.2.4.4; and thus has no practical significance ($d \geq 0.8$) at all.

Concluding *positive affect in life domains*, it can be said that enthusiasts ($\bar{x} = 4.46$) were more positive in practice regarding *positive affect in health and safety life* ($p < 0.010$) than learners ($\bar{x} = 4.21$) and dabblers ($\bar{x} = 4.38$). Specifically, the effect sizes of dabblers ($d = 0.24$) and enthusiasts ($d = 0.34$) were found to be small and therefore of small practical significance ($d \geq 0.8$). The effect size difference between enthusiasts and dabblers was less ($d = 0.12$) than the recommended size in 1.6.2.4.4 and thus has no practical significance ($d \geq 0.8$) at all.

Concerning *life domains*, enthusiasts ($\bar{x} = 4.06$) were the most positive with regard to *life domains overall* ($p \leq 0.021$), followed by dabblers ($\bar{x} = 4.02$) and learners ($\bar{x} = 3.84$). Compared to learners, the effect sizes of enthusiasts ($d = 0.33$) and dabblers ($d = 0.27$) were found to be small and therefore of small practical significance ($d \geq 0.8$). When comparing enthusiasts to dabblers, the effect was found to be less ($d = 0.06$) than the recommended value (cf. 1.6.2.4.4) and therefore does not constitute a practical significant ($d \geq 0.8$) value. It could be interpreted that enthusiast paintballers participate

in the adventure sport on a professional level and therefore are more invested physically, emotionally and socially.

Table 5.26: Analysis of variance to explore the differences between the type of paintballer and the identified aspects (factors) of paintball

Section	Identified aspects of paintball	Type of paint-baller	N	Mean	Std. deviation	Sig. p-value	Cohen's D-values	
							Learner, dabbler & enthusiast	Dabbler & enthusiast
Leisure aspects of paintball	Leisure aspects of paintball	Learner	95	4.26	0.55	.002		
		Dabbler	248	4.41	0.53		0.26*	
		Enthusiast	163	4.49	0.37		0.42*	0.16
		Total	506	4.41	0.49			
Activity theory aspect of paintball	Positive internal activity aspects	Learner	95	4.22	0.56	.000		
		Dabbler	248	4.41	0.50		0.35*	
		Enthusiast	163	4.49	0.37		0.49*	0.16
		Total	506	4.40	0.48			
	Negative impact of rules	Learner	95	2.74	0.77	.000		
		Dabbler	248	3.04	0.71		0.39*	
		Enthusiast	163	3.20	0.70		0.60**	0.23*
		Total	506	3.04	0.74			
	Positive impact of gear	Learner	95	2.71	0.64	.005		
		Dabbler	248	2.73	0.71		0.04	
		Enthusiast	163	2.94	0.67		0.35*	0.29*
		Total	506	2.79	0.69			
Positive adventure sport experience	Positive adventure sport camaraderie	Learner	95	4.30	0.59	.000		
		Dabbler	248	4.47	0.54		0.30*	
		Enthusiast	163	4.59	0.37		0.50**	0.22*
		Total	506	4.48	0.51			
	Positive adventure sport stress	Learner	95	3.73	0.69	.001		
		Dabbler	248	3.94	0.75		0.27*	
		Enthusiast	163	4.09	0.65		0.52**	0.20*
		Total	506	3.95	0.72			
Positive affect in life domains	Positive affect in emotional life	Learner	95	3.48	0.83	.000		
		Dabbler	248	3.85	0.82		0.43*	
		Enthusiast	163	3.93	0.73		0.54**	0.10

Life domains	Positive affect in travel life	Total	506	3.81	0.81	.005		
		Learner	95	3.90	0.92			
		Dabbler	248	4.18	0.80		0.30*	
		Enthusiast	163	4.23	0.76		0.36*	0.06
	Positive affect in leisure and recreation life	Total	506	4.14	0.82	.000		
		Learner	95	3.88	0.62			
		Dabbler	248	4.13	0.67		0.37*	
		Enthusiast	163	4.28	0.53		0.64**	0.22*
	Positive affect in social life	Total	506	4.13	0.64	.001		
		Learner	95	3.94	0.63			
		Dabbler	248	4.18	0.61		0.37*	
		Enthusiast	163	4.22	0.54		0.45*	0.08
	Positive affect in health and safety life	Total	506	4.15	0.60	.010		
		Learner	95	4.21	0.74			
		Dabbler	248	4.38	0.65		0.24*	
		Enthusiast	163	4.46	0.58		0.34*	0.12
	Life domains overall	Total	506	4.37	0.65	.021		
		Learner	95	3.84	0.66			
		Dabbler	248	4.02	0.65		0.27*	
		Enthusiast	163	4.06	0.58		0.33*	0.06
	Life domains overall	Total	506	4.00	0.63	.021		
		Learner	95	3.84	0.66			
		Dabbler	248	4.02	0.65		0.27*	
		Enthusiast	163	4.06	0.58		0.33*	0.06

Note. Effect sizes: *0.2: Small, not significant; **0.5: Medium or visible difference; ***0.8: Large difference

5.3.4.5 Analysis of variance to explore the style of play and the identified aspects of paintball

With reference to Table 5.27, the *MILSIM/scenario* (MILSIM-S) was the most represented style of paintball (281) chosen by respondents, followed by the *both* category (156) that consists of MILSIM-S and speedball, and *speedball* itself (69). A significant difference ($p \leq 0.05$) was found in the following identified aspects of paintball (cf. 5.3.2):

In the *activity theory aspect of paintball*, it was found that those who play *speedball* ($\bar{x} = 4.60$) were more positive in practice regarding *positive internal activity aspects* ($p < 0.000$) than those who chose *both* ($\bar{x} = 4.46$) and *MILSIM-S* ($\bar{x} = 4.32$). Specifically, compared to *MILSIM-S*, the effect sizes of *speedball* ($d = 0.49$) and *both* ($d = 0.28$) were all found to be small according to the interpretation guidelines; therefore, *speedball* and *both* have a small practical significance ($d \geq 0.8$). Compared to *speedball*, the effect size of respondents who chose *both* ($d = 0.25$) was found to be small according to the

recommended interpretation guidelines (cf. 1.6.2.4.4) and is therefore of small practical significance ($d \geq 0.8$).

Speedballers ($\bar{x} = 2.24$) were less negative in practice regarding *negative internal activity aspects* ($p < 0.041$) than respondents who play *MILSIM-S* ($\bar{x} = 2.06$) or those who selected *both* ($\bar{x} = 2.01$). Specifically, the effect size of *speedball*, compared to *MILSIM-S*, was found to be small ($d = 0.28$) according to the interpretation guidelines; therefore, *speedball* has a small practical significance ($d \geq 0.8$). The effect size of *both*, compared to *MILSIM-S*, was found to be less ($d = 0.07$) than the recommended size in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. The effect size of respondents who selected *both*, compared to that of *speedball* respondents, has a small effect ($d = 0.36$) according to the interpretation guidelines and is therefore of small practical significance ($d \geq 0.8$).

Continuing with the *activity theory aspect of paintball*, respondents who selected *MILSIM-S* ($\bar{x} = 3.37$) were more positive in practice regarding *aspects impacting MILSIM* ($p < 0.000$) than respondents who selected *speedball* ($\bar{x} = 2.66$) and those who selected *both* ($\bar{x} = 2.49$). When compared to respondents who selected *MILSIM-S*, the effect sizes of those who selected *speedball* ($d = 1.11$) and *both* ($d = 0.89$) were found to have a large difference according to the interpretation guidelines; therefore, both *speedball* and *both* have a large practical significance ($d \geq 0.8$). The effect size of respondents who selected *both*, compared to those who selected *speedball*, was found to be small ($d = 0.21$) and has therefore a small significance ($d \geq 0.8$).

With reference to a *negative adventure sport experience*, *speedballers* ($\bar{x} = 1.88$) were less negative with regard to *negative emotion* ($p < 0.001$), compared to respondents who selected *MILSIM-S* ($\bar{x} = 1.51$) and those who selected *both* ($\bar{x} = 1.49$). Specifically, the effect size of *speedball* was found to be small ($d = 0.373$) according to the interpretation guidelines; therefore, *speedball* respondents' answers have a small practical significance ($d \geq 0.8$). The effect size difference between *both* and *MILSIM-S* was less ($d = 0.02$) than the recommended size in 1.6.2.4.4 and thus has no practical significance ($d \geq 0.8$) at all. Lastly, comparing *both* with *MILSIM-S* yielded a small effect

($d = 0.39$) according to the interpretation guidelines and is therefore of small practical significance ($d \geq 0.8$).

Concerning *positive affect in life domains*, speedballers ($\bar{x} = 4.29$) were the most positive with regard to *positive affect in travel life* ($p \leq 0.041$), followed by respondents who selected *both* ($\bar{x} = 4.22$) and *MILSIM-S* ($\bar{x} = 4.06$). The effect size of *speedball* ($d = 0.27$), compared to *MILSIM-S*, was inclining towards small effect, whereas *both* ($d = 0.17$) was found to be less than the recommended value in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. Similarly, when comparing *both* with *speedball*, the effect was found to be less ($d = 0.08$) than the recommended value and therefore does not constitute a practical significant ($d \geq 0.8$) value.

Concerning *negative affect in life domains*, speedballers ($\bar{x} = 3.27$) were the most positive with regard to *negative affect in leisure and recreation life* ($p \leq 0.013$), followed by respondents who selected *both* ($\bar{x} = 3.05$) and *MILSIM-S* ($\bar{x} = 2.92$). The effect size of *speedball* ($d = 0.37$), compared to *MILSIM-S*, was inclining towards small effect, whereas *both* ($d = 0.15$) was found to be less than the recommended value in 1.6.2.4.4 and thus has no significance ($d \geq 0.8$) at all. Lastly, comparing *both* with *MILSIM-S* yielded a small effect ($d = 0.23$) according to the interpretation guidelines and is therefore of small practical significance ($d \geq 0.8$).

Table 5.27: Analysis of variance to explore the differences between the style of play and the identified aspects (factors) of paintball

Section	Aspects of the study	Style of play	N	Mean	Std. deviation	Sig. p-value	Cohen's D-values	
							MILSIM/ scenario, speedball & both	Speedball & both
Activity theory aspect of paintball	Positive internal activity aspects	MILSIM/ scenario	281	4.32	0.47	.000		
		Speedball	69	4.60	0.56		0.49*	
		Both	156	4.46	0.44		0.28*	0.25*
		Total	506	4.40	0.48			
	Negative internal activity aspects	MILSIM/ scenario	281	2.06	0.64	.041		

		Speedball	69	2.24	0.63		0.28*	
		Both	156	2.01	0.62		0.07	0.36*
		Total	506	2.07	0.64			
	Aspects impacting MILSIM	MILSIM/ scenario	281	3.37	0.70	.000		
		Speedball	69	2.49	0.79		1.11***	
		Both	156	2.66	0.80		0.89***	0.21*
		Total	506	3.03	0.84			
	Negative adventure sport experience	MILSIM/ scenario	281	1.51	0.73	.001		
		Speedball	69	1.88	1.01		0.37*	
		Both	156	1.49	0.74		0.02	0.39*
		Total	506	1.56	0.78			
Positive affect in life domains	Positive affect in travel life	MILSIM/ scenario	281	4.06	0.82	.041		
		Speedball	69	4.29	0.85		0.27*	
		Both	156	4.22	0.79		0.19	0.08
		Total	506	4.14	0.82			
Negative affect in life domains	Negative affect in leisure and recreation life	MILSIM/ scenario	281	2.92	0.91	.013		
		Speedball	69	3.27	0.95		0.37*	
		Both	156	3.05	0.90		0.15	0.23*
		Total	506	3.01	0.92			

Note. Effect sizes: *0.2: Small, not significant; **0.5: Medium or visible difference; ***0.8: Large difference

5.3.5 Correlations

The purpose of this section is to describe the strength and linear relationship between the identified aspects of paintball (cf. 5.3.2) and the demographic characteristics of respondents. Only identified aspects that have a significant correlation coefficient (cf. 1.6.2.4.5) with the demographic characteristics of respondents are tabled, reported and discussed.

5.3.5.1 Spearman's rank correlation coefficient of the identified aspects between paintball and the demographic characteristics of respondents

According to Pallant (2010), a Spearman's rank correlation coefficient analysis is used to describe the strength and linear relationship between two variables. Table 5.28

interprets the strength of the relationships between the *r*-values (cf. 1.6.2.4.5) of the identified aspects of the study and the demographic characteristics of respondents, namely age, highest level of education, years playing paintball, and times played in last six months. For the purpose of this analysis, the correlation coefficient will be reported sequentially as in Table 5.28.

Table 5.28: Spearman's rank correlation coefficient between identified aspects (factors) of paintball and the demographic characteristics of respondents

Identified aspects (factors) of paintball	Measurement	Age	Highest level of education	Years playing paintball	Times played in last six months
Leisure aspects of paintball	CC	-0.03	-0.03	-.096*	.163**
	Sig. (2-tailed)	0.55	0.46	0.03	0.00
Positive internal activity aspects	CC	-.213**	-0.07	-0.08	.139**
	Sig. (2-tailed)	0.00	0.11	0.06	0.00
Aspects impacting MILSIM	CC	-0.03	-0.06	-.160**	-0.01
	Sig. (2-tailed)	0.51	0.16	0.00	0.84
Negative impact of rules	CC	-.251**	-0.05	-.141**	.202**
	Sig. (2-tailed)	0.00	0.29	0.00	0.00
Positive impact of gear	CC	0.08	0.07	.186**	0.00
	Sig. (2-tailed)	0.06	0.14	0.00	0.95
Negative external impact	CC	-.097*	-0.05	-.131**	.124**
	Sig. (2-tailed)	0.03	0.23	0.00	0.01
Positive impact of community	CC	0.00	0.03	.121**	-0.08
	Sig. (2-tailed)	0.93	0.48	0.01	0.08
Positive adventure sport camaraderie	CC	-.214**	-0.05	-.096*	.141**
	Sig. (2-tailed)	0.00	0.31	0.03	0.00
Positive adventure sport lifestyle	CC	-.159**	0.00	-0.02	0.04
	Sig. (2-tailed)	0.00	0.92	0.71	0.41
Positive adventure sport stress	CC	-.269**	-0.09	-0.08	.199**
	Sig. (2-tailed)	0.00	0.05	0.06	0.00
Negative memories	CC	0.02	0.08	0.05	-.119**
	Sig. (2-tailed)	0.69	0.09	0.22	0.01
Negative commitment	CC	0.02	-0.03	-.148**	-0.01
	Sig. (2-tailed)	0.73	0.44	0.00	0.80
Positive affect in emotional life	CC	-.272**	-.088*	-0.08	.248**
	Sig. (2-tailed)	0.00	0.05	0.08	0.00
Positive affect in family life	CC	-0.07	-0.09	-0.03	.133**
	Sig. (2-tailed)	0.10	0.06	0.51	0.00

Positive affect in travel life	CC	-.167**	-0.05	-0.04	.093*
	Sig. (2-tailed)	0.00	0.27	0.34	0.04
Positive affect in leisure and recreation life	CC	-.233**	-0.09	-.105*	.292**
	Sig. (2-tailed)	0.00	0.05	0.02	0.00
Positive affect in social life	CC	-.259**	-0.08	-0.09	.098*
	Sig. (2-tailed)	0.00	0.06	0.06	0.03
Positive affect in health and safety life	CC	-.161**	-0.03	-.173**	.171**
	Sig. (2-tailed)	0.00	0.56	0.00	0.00
Negative affect in family life	CC	.134**	0.04	0.05	-.156**
	Sig. (2-tailed)	0.00	0.38	0.27	0.00
Negative affect in social life	CC	.101*	0.06	-0.02	-0.03
	Sig. (2-tailed)	0.02	0.15	0.73	0.49
Negative affect in leisure and recreation life	CC	-.154**	-0.04	-0.04	-0.04
	Sig. (2-tailed)	0.00	0.40	0.38	0.37
Life domains overall	CC	-0.06	0.07	-0.03	.151**
	Sig. (2-tailed)	0.20	0.10	0.44	0.00
QoL	CC	-0.04	0.04	-0.01	.092*
	Sig. (2-tailed)	0.39	0.34	0.83	0.04

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed). CC – Correlation coefficient

There was a small positive correlation between *leisure aspects of paintball* and *times played in the last six months* ($r = .163$). A negative correlation was also observed with *years playing paintball* ($r = -.096$). With regard to *positive internal activity aspects*, there was a small negative correlation with *age* ($r = -.213$), whereas *times played in the last six months* presented as a small positive correlation ($r = .139$). *Aspects impacting MILSIM* showed a small correlation with *years playing paintball* ($r = -.160$).

The *negative impact of rules* revealed several small negative correlations, namely *age* ($r = -.251$) and *years playing paintball* ($r = -.141$), whereas *times played in last six months* produced a small correlation ($r = -.202$). *Positive impact of gear* revealed a small correlation with *years playing paintball* ($r = .186$). *Negative external impact* showed two small negative correlations, namely *age* ($r = -.097$) and *years playing paintball* ($r = -.131$), whereas *times played in last six months* ($r = .124$) presented a small correlation. *Positive impact of community* displayed a small correlation with *years playing paintball* ($r = .121$).

The *positive adventure sport camaraderie* indicated a small negative correlation with *age* ($r = -.214$) and *years playing paintball* ($r = -.096$), whereas *times played in last six months* revealed a small correlation ($r = .141$). *Positive adventure sport stress* showed a small negative correlation with *age* ($r = -.269$), whereas *times played in last six months* presented as a small positive correlation ($r = .199$). A small negative correlation was observed between *negative memories* and *times played in last six months* ($r = -.119$) as well as *negative commitment* ($r = -.148$).

Positive affect in emotional life showed two small negative correlations, namely *age* ($r = -.272$) and *highest level of education* ($r = -.088$), whereas a small positive correlation was observed with *times played in last six months* ($r = -.248$). A small positive correlation was observed between *positive affect in family life* and *times played in last six months* ($r = .133$). *Positive affect in travel life* showed a small negative correlation with *age* ($r = -.167$), whereas *times played in last six months* presented positively ($r = .093$).

Positive affect in leisure and recreation life revealed two small negative correlations, namely *age* ($r = -.233$) and *years playing paintball* ($r = -.105$), whereas *times played in last six months* presented positively ($r = .292$). *Positive affect in social life* showed a small negative correlation with *age* ($r = -.259$), whereas *times played in last six months* presented positively ($r = .098$). Two small negative correlations were observed with regard to *positive affect in health and safety life*, namely *age* ($r = -.161$) and *years playing paintball* ($r = -.173$), whereas *times played in last six months* presented positively ($r = .171$). *Negative affect in family life* showed a small positive correlation with *age* ($r = .134$), whereas *times played in last six months* presented negatively ($r = -.156$). A small positive correlation was observed between *negative affect in social life* and *age* ($r = .101$).

Negative affect in leisure and recreation life revealed a small negative correlation with *age* ($r = -.154$). *Life domains overall* showed a small positive correlation with *times played in last six months* ($r = .151$). Similarly, *QoL* showed a small positive correlation with *times played in last six months* ($r = .092$).

5.3.5.2 Spearman's rank correlation coefficient between individual aspects (factors) of paintball

The following section will interpret the strength of the relationships between the r -values (cf. 1.6.2.4.5) of each individual identified aspect and the remaining aspects of the study. Based on the other aspects of the study, each individual aspect will be named and correlations will be reported. Due to the length of the table, it will be subdivided into three tables, namely Tables 29a, 29b and 29c. For the purpose of this analysis, the correlation coefficient will be reported sequentially as shown in Table 5.29a (5.3.5.2.1-5.3.5.2.12), Table 5.29b (5.3.5.2.13-5.3.5.2.22) and Table 5.29c (5.3.5.2.23-5.3.5.2.33). Only identified aspects that can be classified as having a significant medium or large correlation coefficient (cf. 1.6.2.4.5) will be reported and discussed.

5.3.5.2.1 *Leisure aspects of paintball*

A medium positive correlation was identified between *leisure aspects of paintball* and *aspects impacting MILSIM* ($r = .327$), *negative impact of rules* ($r = .383$), *negative impact of gear* ($r = .415$), *positive affect in family life* ($r = .346$), *positive affect in travel life* ($r = .424$), *positive affect in leisure and recreation life* ($r = .489$) and *life domains overall* ($r = .309$). A medium negative correlation was observed with *negative affect in family life* ($r = -.349$). There was a large positive correlation between *leisure aspects of paintball* and *positive internal activity aspects* ($r = .590$), *negative external impact* ($r = .582$), *positive adventure sport camaraderie* ($r = .539$), *positive adventure sport stress* ($r = .590$), *positive affect in emotional life* ($r = .553$), *positive affect in social life* ($r = .523$) and *positive affect in health and safety life* ($r = .528$).

The field of leisure is well researched in literature and several theories were analysed in 2.3; however, the extent to which adventure sport is affected as part of leisure (cf. 4.3) has not been well tested until recently. Leisure's relationships with QoL (cf. 2.2) and life domains were identified. Of interest is the finding by Kyle *et al.* (2007) that there exists a symbolic value in leisure activities and choice of leisure that provides individuals with an opportunity to express their identity to those around them and to improve their QoL.

From the above results, it can be seen that there are many medium and large correlations between leisure aspects of paintball, life domains and QoL, which reinforces the literature on leisure's importance to QoL (Sato, *et al.*, 2014; Sirgy, 2012).

More interestingly, the results also show the positive relationship found in adventure sport as a leisure activity. In Sato *et al.* (2014), the researchers point out that adventure events occurring only once do not contribute to the achievement of QoL and they therefore recommend a longitudinal study. Given the number of years that paintballers have been playing and the number of times that they have played (cf. 5.3.1.1), it would be safe to acknowledge that the recommendation has been carried out and the results thereof validate the findings of Sato *et al.* (2014) that leisure contributes to QoL.

5.3.5.2.2 *Positive internal activity aspects*

A medium positive correlation was observed between *negative impact of rules* ($r = .358$), *negative impact of gear* ($r = .442$), *positive affect in family life* ($r = .323$), *positive affect in leisure and recreation life* ($r = .489$) and *positive affect in health and safety life* ($r = .454$). A medium negative correlation was identified between *negative memories* ($r = -.323$) and *negative affect in family life* ($r = -.314$). There was a large positive correlation between *positive internal activity aspects* and *leisure aspects of paintball* ($r = .590$), *negative external impact* ($r = .586$), *positive adventure sport camaraderie* ($r = .640$), *positive adventure sport stress* ($r = .561$), *positive affect in emotional life* ($r = .583$), *positive affect in travel life* ($r = .530$) and *positive affect in social life* ($r = .585$).

The above focused on the positive internal activity aspect, whereas the next heading focuses on the negative internal activity, both of which are based on the activity theory as discussed in 2.4.2. Literature searches revealed many studies (cf. Bengtson & DeLiema, 2016; Johnson, *et al.*, 2014) that are dedicated to gerontology and the positive links formed between active involvement and QoL among the elderly. However, to the best knowledge of the author, there has not yet been an attempt to apply activity theory to adventure sport; the following results (cf. 5.3.5.2.3), as well as the above results, thus make the first successful, practical application of its kind possible.

5.3.5.2.3 *Negative internal activity aspects*

A medium positive correlation exists between *negative internal activity aspects* and *negative memories* ($r = .390$), *negative emotion* ($r = .403$), *negative affect in family life* ($r = .324$) and *negative affect in social life* ($r = .319$).

5.3.5.2.4 *Aspects impacting MILSIM*

There was a medium positive correlation between *aspects impacting MILSIM* and *leisure aspects of paintball* ($r = .327$). This aspect is unique to military simulation (which is practiced in paintball) and is very important to those participating in MILSIM-S, as stated in 5.2.2.2.2.

5.3.5.2.5 *The positive impact of rules*

There was a medium positive correlation between *positive impact of rules* and *negative challenge* ($r = .429$). A large positive correlation exists between *positive impact of rules* and *positive impact of community* ($r = .656$). Rules form an intricate part of leisure and society (cf. 4.2.3), as well as having a positive adventure sport experience, as highlighted during the interviews (cf. 5.2.2.2.5); this is echoed by the above correlations.

5.3.5.2.6 *The negative impact of rules*

There was a medium positive correlation between *negative impact of rules* and *leisure aspects of paintball* ($r = .383$), *positive internal activity aspects* ($r = .358$), *positive affect in emotional life* ($r = .415$), *positive affect in leisure and recreation life* ($r = .430$) and *positive affect in social life* ($r = .330$). A large positive correlation exists between *negative impact of rules* and *positive adventure sport stress* ($r = .562$). As mentioned above (cf. 5.3.5.2.6) and shown here, the absence of rules has a negative impact on the adventure sport experience. *Negative impact of rules* adversely affects several aspects (as listed above and stressed during the interviews – cf. 5.2.2.2.5).

5.3.5.2.7 *The positive impact of gear*

There was a medium positive correlation between the *positive impact of gear* and *negative challenge* ($r = .313$). Gear's inclusion originates from the activity theory's tools (cf. 2.4.2) and forms an important part in adventure sport participants' ability to achieve their objectives. Gear's importance was also reinforced by interviewees (cf. 5.2.2.2.4), who assigned great reliance on their gear for a positive adventure sport experience.

5.3.5.2.8 *The negative impact of gear*

A medium positive correlation was observed between the *negative impact of gear* and *leisure aspects of paintball* ($r = .415$), *positive internal activity aspects* ($r = .442$), *negative external impact* ($r = .465$), *positive adventure sport camaraderie* ($r = .488$),

positive adventure sport stress ($r = .445$), *positive affect in emotional life* ($r = .412$), *positive affect in family life* ($r = .312$), *positive affect in travel life* ($r = .328$), *positive affect in leisure and recreation life* ($r = .419$), *positive affect in social life* ($r = .486$) and *positive affect in health and safety life* ($r = .350$). Gear's origin and its importance in the study have been mentioned above (cf. 5.3.5.2.7). Interviewees' perception (cf. 5.2.2.2.4) of non-functioning or unreliable gear has now been proven as having an impact on various other aspects of the study.

5.3.5.2.9 *The negative external impact*

There exists a medium positive correlation between a *negative external impact* and *negative impact of gear* ($r = .465$), *positive adventure sport stress* ($r = .472$), *positive affect in family life* ($r = .336$), *positive affect in travel life* ($r = .445$), *positive affect in leisure and recreation life* ($r = .452$), *positive affect in health and safety life* ($r = .457$) and *life domains overall* ($r = .341$). A medium negative correlation exists between *negative memories* ($r = -.371$) and *negative affect in family life* ($r = -.379$). There was a large positive correlation between *leisure aspects of paintball* ($r = .582$), *positive internal activity aspects* ($r = .586$), *positive adventure sport camaraderie* ($r = .621$), *positive affect in emotional life* ($r = .584$) and *positive affect in social life* ($r = .636$). Negative external impact is composed of various statements that were made (cf. 5.3.2.2), for example that there are politics in paintball and that there is friction between different styles of paintball, which all have a negative impact on the adventure sport. As can be seen from the above results, there is indeed an impact on other aspects as voiced by interviewees (cf. 5.2.3.3).

5.3.5.2.10 *The positive impact of community*

A large positive correlation was observed between the *positive impact of community* and *positive impact of rules* ($r = .656$). This validates the finding of Cini *et al.* (2012:45) that being part of a community or group and adhering to the norms and rules form part of the human being's essential psychological need. The importance of community is also highlighted as part of themes that emerged from respondents in 4.4.3. The positive impact of rules conforms to the norm that is highlighted in 4.3.1 and 4.4.4.3 regarding the assurance of a safe environment.

5.3.5.2.11 *Positive internal activity aspects*

There exists a positive medium correlation coefficient between *positive internal activity aspects* and *negative challenge* ($r = .369$). With reference to 4.4.4.4, the challenge theme is proven to be of medium importance and impact to respondents with regard to paintball. If paintballers do not feel challenged, it has a negative impact on their positive internal activity aspects.

5.3.5.2.12 *Positive adventure sport camaraderie*

A medium positive correlation coefficient exists between *positive adventure sport camaraderie* and *negative impact of gear* ($r = .488$), *positive affect in travel life* ($r = .468$) and *life domains overall* ($r = .398$). A negative medium correlation coefficient exists with *negative memories* ($r = -.433$) and *negative affect in family life* ($r = -.404$). There exists a large positive correlation coefficient with *leisure aspects of paintball* ($r = .539$), *positive internal activity aspects* ($r = .640$), *negative external impact* ($r = .621$), *positive adventure sport stress* ($r = .548$), *positive affect in emotional life* ($r = .572$), *positive affect in leisure and recreation life* ($r = .526$), *positive affect in social life* ($r = .686$) and *positive affect in health and safety life* ($r = .506$). These results give a clear picture of camaraderie's importance towards a positive paintball experience and paintballers' QoL. As previously highlighted (cf. 3.2) by Kruger *et al.* (2014:649), camaraderie enhances QoL when people are pursuing a shared passion. Similarly, the importance of camaraderie was highlighted in 4.4.3 and 4.4.4.5.

5.3.5.2.13 *The positive adventure sport lifestyle*

The *positive adventure sport lifestyle* aspect yielded no correlation coefficient with any other identified aspect of the study that fits the medium or large parameter.

5.3.5.2.14 *Positive adventure sport stress*

Positive adventure sport stress shows a medium positive correlation with *negative impact of gear* ($r = .445$), *negative external impact* ($r = .472$), *positive affect in family life* ($r = .344$), *positive affect in travel life* ($r = .434$) and *positive affect in health and safety life* ($r = .484$). A large positive correlation exists with *leisure aspects of paintball* ($r = .590$), *positive internal activity aspects* ($r = .561$), *negative impact of rules* ($r = .562$), *positive adventure sport camaraderie* ($r = .548$), *positive affect in emotional life* ($r = .662$), *positive affect in leisure and recreation life* ($r = .574$) and *positive affect in social*

life ($r = .571$). The above results give credence to the findings of Vujko and Plavša (2011:96), which state that adventure sport has a positive impact on participants' physical and psychological health and is a way in which modern society seeks to combat stress.

5.3.5.2.15 *Negative memories*

A medium positive correlation exists between *negative memories* and *negative internal activity aspects* ($r = .574$), *negative affect in family life* ($r = .574$) and *negative affect in social life* ($r = .574$). Furthermore, a medium negative correlation exists between *negative memories* and *positive internal activity aspects* ($r = -.323$), *negative external impact* ($r = -.371$), *positive adventure sport camaraderie* ($r = -.433$), *positive affect in leisure and recreation life* ($r = -.316$) and *positive affect in social life* ($r = -.364$). It can therefore be seen that the *negative memories* factor has a medium negative effect on various positive and negative aspects of paintball. According to Sirgy (2012:37), memories have a vital role to play in evaluating one's different life domains, as memories help an individual to recall particular experiences; this affects the way in which they view a life domain and their QoL overall.

5.3.5.2.16 *Negative stresses*

The *negative stresses aspect* has a medium positive correlation with *positive impact of rules* ($r = .429$). With reference to the above and the analysis of statements that make up each of the aspects (Table 5.10 and 5.14a), a suppression effect was found between *negative stresses* and *positive impact of rules*. The *negative stresses aspect* is concealed by the *positive impact of rules* in paintball.

5.3.5.2.17 *A negative challenge*

A *negative challenge* has a medium positive correlation with the *positive impact of gear* ($r = .313$). With reference to the above and the analysis of the statements that make up each of the aspects (Table 5.16 and 5.14a), it was found that *negative challenge* is minimised by the positive impact of gear.

5.3.5.2.18 *A negative commitment*

The *negative commitment* aspect yielded no correlation coefficient with any other identified aspects of the study that fit the medium or large parameter.

5.3.5.2.19 *Negative emotion*

A medium positive correlation exists between *negative emotion* and *negative internal activity aspects* ($r = .403$). The correlation stated above has not yet been measured in any other study and therefore sets the benchmark for future studies in adventure sport.

5.3.5.2.20 *Negative pressure*

A medium positive correlation exists between *negative pressure* and *negative affect in travel life* ($r = .314$). To the knowledge of the author, the correlation stated above has not yet been measured in any other studies and therefore sets the benchmark for future studies in adventure sport.

5.3.5.2.21 *Positive affect in emotional life*

Positive affect in emotional life has a medium positive correlation with the *negative impact of rules* ($r = .415$), *negative impact of gear* ($r = .412$), *positive affect in family life* ($r = .451$), *positive affect in travel life* ($r = .492$), *life domains overall* ($r = .336$) and *QoL* ($r = .305$). A medium negative correlation exists with *negative affect in family life* ($r = -.384$). There exists a large positive correlation with *leisure aspects of paintball* ($r = .553$), *positive internal activity aspects* ($r = .583$), *negative external impact* ($r = .584$), *positive adventure sport camaraderie* ($r = .572$), *positive adventure sport stress* ($r = .662$), *positive affect in leisure and recreation life* ($r = .572$), *positive affect in social life* ($r = .660$) and *positive affect in health and safety life* ($r = .547$). Various authors have written on the importance of the emotional life domain towards QoL, for example Jepson and Sharpley (2015), Kim *et al.* (2013) and Sirgy (2012). Of particular note are the findings of Sato *et al.* (2014) with regard to adventure (sport) activities in which emotional life strongly contributes to an individual's QoL. With reference to the above results, the findings of Sato *et al.* (2014) validate this study's findings with regard to the positive effect that paintball as an adventure-based sport has on participants' emotional life domain and its importance towards other life domains and QoL.

5.3.5.2.22 *Positive affect in family life*

There exists a medium positive correlation between *positive affect in family life* and *leisure aspects of paintball* ($r = .346$), *positive internal activity aspects* ($r = .323$), *negative impact of gear* ($r = .312$), *negative external impact* ($r = .336$), *positive adventure sport stress* ($r = .344$), *positive affect in emotional life* ($r = .451$), *positive*

affect in social life ($r = .387$), *positive affect in health and safety life* ($r = .309$), *life domains overall* ($r = .417$) and *QoL* ($r = .386$). Numerous authors have written on the significance of the family life domain, for example McCabe and Johnson (2013) and Sirgy (2010); however, Sato *et al.* (2014) specifically identified the importance of the family life domains as part of adventure (sport) activity towards QoL. As noted by Sato *et al.* (2014) with regard to adventure (sport) activity, family life is regarded as one of the five prominent life domains that are affected positively when participating in adventure (sport) activities. Furthermore, Sato *et al.* (2014) concluded that the effect that adventure (sport) activities have on participants should be researched further. Subsequently, this study has answered that call towards identifying the impacts that are associated with family life in adventure sport. The above results serve as proof of the positive effect that paintball as an adventure-based sport has on participants' family life domain as well as the positive link it has with other identified aspects.

5.3.5.2.23 *Positive affect in travel life*

A medium positive correlation exists between *positive affect in travel life* and *leisure aspects of paintball* ($r = .424$), *negative impact of gear* ($r = .328$), *negative external impact* ($r = .445$), *positive adventure sport camaraderie* ($r = .468$), *positive adventure sport stress* ($r = .434$), *positive affect in emotional life* ($r = .492$), *positive affect in leisure and recreation life* ($r = .465$), *positive affect in health and safety life* ($r = .386$) and *life domains overall* ($r = .324$). There exists a large positive correlation with *positive internal activity aspects* ($r = .530$) and *positive affect in social life* ($r = .522$). The positive medium and large affect correlation of travel life with the identified aspects of paintball as an adventure-based sport is proven above. The importance of the travel life domain towards QoL has been highlighted by authors such as Kruger *et al.* (2014), Sato *et al.* (2014) and Sirgy (2011). Of particular note is that Sirgy (2011) found a positive link between travel life and QoL. With specific reference to adventure (sport) activity, Sato *et al.* (2014) also found a positive link between travel life and QoL, but pointed out that more research is necessary. Therefore, the findings as stated above fulfil the call for further research into the travel life domain that, in this case, influences other life domains positively.

5.3.5.2.24 *Positive affect in leisure and recreation life*

There exists a medium positive correlation between *positive affect in leisure and recreation life* and *leisure aspects of paintball* ($r = .489$), *positive internal activity aspects* ($r = .489$), *negative impact of rules* ($r = .430$), *negative impact of gear* ($r = .419$), *negative external impact* ($r = .452$), *positive affect in family life* ($r = .332$), *positive affect in travel life* ($r = .465$), *positive affect in health and safety life* ($r = .475$), *life domains overall* ($r = .384$) and *QoL* ($r = .304$). A large positive correlation exists with *positive adventure sport camaraderie* ($r = .526$), *positive adventure sport stress* ($r = .574$), *positive affect in emotional life* ($r = .572$) and *positive affect in social life* ($r = .534$). The positive role of leisure and recreation life towards QoL has been proven by Dolnicar et al. (2012), Mackenzie et al. (2013), Sato et al. (2014) and Sirgy (2011). Of particular note are the findings of Sato et al. (2014) and Sirgy (2011) regarding leisure activities; they proved that the latter influence various domains in life, which, in turn, promote QoL. The above results endorse their findings and provide continued evidence of the leisure and recreation life domain's importance towards individuals' QoL and, in this case, paintball participants' QoL.

5.3.5.2.25 *Positive affect in social life*

Positive affect in social life has a medium positive correlation with the *negative impact of rules* ($r = .330$), *negative impact of gear* ($r = .486$), *positive affect in family life* ($r = .387$), *positive affect in health and safety life* ($r = .475$), *life domains overall* ($r = .379$) and *QoL* ($r = .314$). A medium negative correlation exists with *negative affect in family life* ($r = -.400$). There exists a large positive correlation with *leisure aspects of paintball* ($r = .523$), *positive internal activity aspects* ($r = .585$), *negative external impact* ($r = .636$), *positive adventure sport camaraderie* ($r = .686$), *positive adventure sport stress* ($r = .571$), *positive affect in emotional life* ($r = .660$), *positive affect in travel life* ($r = .522$) and *positive affect in leisure and recreation life* ($r = .534$). The medium and large positive affect correlation of social life (domain) with the identified aspects in paintball can be seen above. Social life has been discussed by authors such as Burk et al. (2013), Carless et al. (2013) and Kruger et al. (2013). Of note is the importance of social life towards combat veterans (Burk, et al., 2013) and adventure training for military personnel (Carless, et al., 2013). The above results lend credence to the importance of positive affect of social life towards paintball participants' QoL.

5.3.5.2.26 *Positive affect in health and safety life*

There exists a medium positive correlation between *positive affect in health and safety life* and *positive internal activity aspects* ($r = .454$), *negative impact of gear* ($r = .350$), *negative external impact* ($r = .457$), *positive adventure sport stress* ($r = .484$), *positive affect in family life* ($r = .309$), *positive affect in travel life* ($r = .386$), *positive affect in leisure and recreation life* ($r = .475$), *positive affect in social life* ($r = .475$) and *life domains overall* ($r = .415$). A large positive correlation was observed with *leisure aspects of paintball* ($r = .528$), *positive adventure sport camaraderie* ($r = .506$) and *positive affect in emotional life* ($r = .547$). The importance of the health and safety life domain in paintball can be seen from the previously reported medium and large positive correlations of *positive affect in health and safety* with other life domains. Established researchers such as Sirgy *et al.* (2011) and Uysal *et al.* (2016) have written on the importance of the health and safety life domain towards QoL. A study conducted by Yazicioglu *et al.* (2012) specifically found that participants in (adventure) sport have significantly higher QoL and satisfaction with life than those who do not participate. Similarly, Vujo *et al.* (2011) and Boyes (2013) found that the health benefits associated with (adventure) sport is a strong motivator for participation in order to combat modern day stresses and inactivity.

5.3.5.2.27 *Negative affect in family life*

There exists a medium positive correlation between *negative affect in family life* and *negative internal activity aspects* ($r = .324$), *negative memories* ($r = .417$) and *negative affect in social life* ($r = .340$). A medium negative correlation exists with *leisure aspects of paintball* ($r = -.349$), *positive internal activity aspects* ($r = -.314$), *negative external impact* ($r = -.379$), *positive adventure sport camaraderie* ($r = -.404$), *positive affect in emotional life* ($r = -.384$) and *positive affect in social life* ($r = -.400$). The importance of the family life domain (as part of the adventure sport activity) towards QoL has been discussed by Sato *et al.* (2014). Of particular note is that the results highlight the medium positive and negative correlation established between negative affect in family life and aspects of paintball that serve as a benchmark for future studies in adventure sport, as called for by Sato *et al.* The importance of the family life domain has been discussed as part of a positive affect in family life (cf. 5.3.5.2.22).

5.3.5.2.28 *Negative affect in financial life*

A medium positive correlation exists between *negative affect in financial life* and *negative affect in social life* ($r = .350$) as well as *negative affect in leisure and recreation life* ($r = .343$). With regard to the financial life domain, it was established early on that paintball has no positive effect on participants' financial life, as there is rarely any financial gain (with the exception of professional paintball players). With reference to the results, participants spend money on paintball in turn for the experience associated with the adventure sport, namely social experience (social life) and leisure and recreation (life). In view thereof, the absence of more medium correlations in which paintball's financial costs (financial life) impact negatively on other life domains is surprising. This, in turn, reflects positively on the adventure sport, as it indicates that participants do not surpass their financial limitations in order to participate; to put it differently, frequency of participation does not exceed financial limitations. This fact is also highlighted by interviewees (cf. 5.2.4.5) who are satisfied with their overall financial life. Authors such as Sato *et al.* (2014), Shim *et al.* (2012) and Sirgy *et al.* (2011) have shown that individuals who are not satisfied with their financial life overall will carry that negativity over to their QoL overall. The above results set a benchmark for future studies with regard to adventure sport and QoL.

5.3.5.2.29 *Negative affect in travel life*

The *negative affect in travel life* aspect yielded no correlation coefficient with any other identified aspects of the study that fit the medium or large parameter.

5.3.5.2.30 *Negative affect in social life*

A medium positive correlation exists between *negative affect in social life* and *negative internal activity aspects* ($r = .319$), *negative memories* ($r = .343$), *negative affect in family life* ($r = .340$) and *negative affect in financial life* ($r = .350$). The importance of social life towards an individual's QoL was raised in 5.3.5.2.25. The above finding sets the standard for future adventure sport studies to compare their findings with.

5.3.5.2.31 *Negative affect in leisure and recreation life*

The *negative affect in leisure and recreation life* yielded a medium positive correlation with *negative affect in financial life* ($r = .343$). There was one negative aspect identified that shared a medium positive correlation with *negative affect in leisure and recreation*

life, namely *negative affect in financial life*. Not surprisingly, this indicates that by participating in a leisure and recreation activity, there will be an associated financial cost that impacts the participant's financial life negatively. The importance of *leisure and recreation life* towards an individual's QoL was discussed in 5.3.5.2.24. The above finding sets the benchmark for future studies in adventure sport.

5.3.5.2.32 *Life domains overall*

An analysis of *life domains overall* revealed that a medium positive correlation exists with *leisure aspects of paintball* ($r = .309$), *negative external impact* ($r = .341$), *positive adventure sport camaraderie* ($r = .398$), *positive affect in emotional life* ($r = .336$), *positive affect in family life* ($r = .417$), *positive affect in travel life* ($r = .324$), *positive affect in leisure and recreation life* ($r = .384$), *positive affect in social life* ($r = .379$) and *positive affect in health and safety life* ($r = .415$). A large positive correlation exists with QoL ($r = .700$). The findings regarding life domains overall are validated by Smith and Puczkó (2009:7), who stated that the greater the level of satisfaction in the various life domains is, the greater the QoL overall will be, which implies a balance of different life domains (as shown above). Of particular interest is the large positive correlation that exists between *life domains overall* and QoL, which is also well documented by Kruger *et al.* (2014), Kruger *et al.* (2013) and Sirgy (2012).

5.3.5.2.33 *Quality of life*

A medium positive correlation exists between QoL and *positive affect in emotional life* ($r = .305$), *positive affect in family life* ($r = .386$), *positive affect in leisure and recreation life* ($r = .304$) and *positive affect in social life* ($r = .314$). A large positive correlation exists with *life domains overall* ($r = .700$). With regard to QoL, the above results show a medium positive correlation with four of the life domains that have been measured in the study. The large two-way correlation between QoL and *life domains overall* was discussed in 5.3.5.2.32.

Table 5.29a: Spearman's rank correlation coefficient between individual aspects (factors) of paintball

Aspects of the study	Measurement	Leisure aspects of paintball	Positive internal activity aspects	Negative internal activity aspects	Aspects impacting MILSIM	Positive impact of rules	Negative impact of rules	Positive impact of gear	Negative impact of gear	Negative external impact	Positive impact of community	Positive internal activity aspects
Leisure aspects of paintball	CC	1.00	.590**	-.128**	.327**	.123**	.383**	-0.08	.415**	.582**	.183**	-.100*
	Sig. (2-tailed)		0.00	0.00	0.00	0.01	0.00	0.08	0.00	0.00	0.00	0.02
Positive internal activity aspects	CC	.590**	1.00	-0.09	0.06	.159**	.358**	-0.07	.442**	.586**	.213**	-0.08
	Sig. (2-tailed)	0.00		0.05	0.18	0.00	0.00	0.11	0.00	0.00	0.00	0.07
Negative internal activity aspects	CC	-.128**	-0.09	1.00	.107*	.194**	.170**	.289**	-.116**	-.177**	0.07	.200**
	Sig. (2-tailed)	0.00	0.05		0.02	0.00	0.00	0.00	0.01	0.00	0.10	0.00
Aspects impacting MILSIM	CC	.327**	0.06	.107*	1.00	.187**	.190**	0.03	.132**	.115**	0.08	0.06
	Sig. (2-tailed)	0.00	0.18	0.02		0.00	0.00	0.52	0.00	0.01	0.06	0.19
Positive impact of rules	CC	.123**	.159**	.194**	.187**	1.00	.176**	.199**	.214**	.102*	.656**	.134**
	Sig. (2-tailed)	0.01	0.00	0.00	0.00		0.00	0.00	0.00	0.02	0.00	0.00
Negative impact of rules	CC	.383**	.358**	.170**	.190**	.176**	1.00	0.08	.295**	.228**	.164**	0.01
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00		0.09	0.00	0.00	0.00	0.87
Positive impact of gear	CC	-0.08	-0.07	.289**	0.03	.199**	0.08	1.00	-0.08	-.159**	.118**	.205**
	Sig. (2-tailed)	0.08	0.11	0.00	0.52	0.00	0.09		0.07	0.00	0.01	0.00
Negative impact of gear	CC	.415**	.442**	-.116**	.132**	.214**	.295**	-0.08	1.00	.465**	.282**	-0.01
	Sig. (2-tailed)	0.00	0.00	0.01	0.00	0.00	0.00	0.07		0.00	0.00	0.82

Negative external impact	CC	.582**	.586**	-.177**	.115**	.102*	.228**	-.159**	.465**	1.00	.195**	-.119**
	Sig. (2-tailed)	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00		0.00	0.01
Positive impact of community	CC	.183**	.213**	0.07	0.08	.656**	.164**	.118**	.282**	.195**	1.00	.111*
	Sig. (2-tailed)	0.00	0.00	0.10	0.06	0.00	0.00	0.01	0.00	0.00		0.01
Positive internal activity aspects	CC	-.100*	-0.08	.200**	0.06	.134**	0.01	.205**	-0.01	-.119**	.111*	1.00
	Sig. (2-tailed)	0.02	0.07	0.00	0.19	0.00	0.87	0.00	0.82	0.01	0.01	
Positive adventure sport camaraderie	CC	.539**	.640**	-.186**	.160**	.210**	.297**	-0.08	.488**	.621**	.228**	-.091*
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.04
Positive adventure sport lifestyle	CC	.116**	.235**	.116**	0.06	.180**	.215**	0.08	.139**	.098*	.141**	0.05
	Sig. (2-tailed)	0.01	0.00	0.01	0.18	0.00	0.00	0.09	0.00	0.03	0.00	0.22
Positive adventure sport stress	CC	.590**	.561**	-0.04	.156**	.121**	.562**	-.102*	.445**	.472**	.163**	-0.03
	Sig. (2-tailed)	0.00	0.00	0.38	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.48
Negative memories	CC	-.284**	-.323**	.390**	0.00	-0.02	-0.04	.267**	-.258**	-.371**	-0.03	.170**
	Sig. (2-tailed)	0.00	0.00	0.00	0.97	0.73	0.41	0.00	0.00	0.00	0.49	0.00
Negative stresses	CC	0.02	.097*	.094*	-0.02	.429**	.119**	.184**	.145**	-0.04	.297**	.161**
	Sig. (2-tailed)	0.59	0.03	0.04	0.70	0.00	0.01	0.00	0.00	0.34	0.00	0.00
Negative challenge	CC	-0.06	-0.02	.279**	0.03	.157**	0.08	.313**	-0.07	-.126**	.092*	.369**
	Sig. (2-tailed)	0.16	0.71	0.00	0.47	0.00	0.06	0.00	0.14	0.00	0.04	0.00
Negative commitment	CC	.091*	0.03	.249**	.165**	.180**	.192**	.139**	-0.01	.087*	0.07	0.04
	Sig. (2-tailed)	0.04	0.53	0.00	0.00	0.00	0.00	0.00	0.85	0.05	0.10	0.34
Negative emotion	CC	-0.08	-0.02	.403**	0.07	0.03	.115**	.124**	-.126**	-.109*	-.096*	0.08
	Sig. (2-tailed)	0.06	0.61	0.00	0.12	0.53	0.01	0.01	0.00	0.01	0.03	0.06
Negative pressure	CC	-0.02	0.03	.261**	0.03	.100*	0.03	.091*	-0.03	0.00	0.01	0.07
	Sig. (2-	0.676	0.552	0.000	0.554	0.025	0.443	0.040	0.486	0.989	0.839	0.136

	tailed)											
Positive affect in emotional life	CC	.553**	.583**	-.090*	.158**	.111*	.415**	-0.05	.412**	.584**	.153**	-0.06
	Sig. (2-tailed)	0.00	0.00	0.04	0.00	0.01	0.00	0.23	0.00	0.00	0.00	0.15
Positive affect in family life	CC	.346**	.323**	-0.08	.153**	0.05	.219**	-0.07	.312**	.336**	.106*	-0.05
	Sig. (2-tailed)	0.00	0.00	0.09	0.00	0.26	0.00	0.13	0.00	0.00	0.02	0.22
Positive affect in travel life	CC	.424**	.530**	-.103*	.100*	0.05	.283**	-0.01	.328**	.445**	.127**	-.089*
	Sig. (2-tailed)	0.00	0.00	0.02	0.02	0.30	0.00	0.77	0.00	0.00	0.00	0.05
Positive affect in leisure and recreation life	CC	.489**	.489**	-.191**	.118**	0.04	.430**	-0.06	.419**	.452**	.151**	-0.05
	Sig. (2-tailed)	0.00	0.00	0.00	0.01	0.32	0.00	0.16	0.00	0.00	0.00	0.23
Positive affect in social life	CC	.523**	.585**	-.167**	.119**	.151**	.330**	-.109*	.486**	.636**	.197**	-.106*
	Sig. (2-tailed)	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.02
Positive affect in health and safety life	CC	.528**	.454**	-.169**	.122**	0.05	.287**	-.107*	.350**	.457**	.100*	-.110*
	Sig. (2-tailed)	0.00	0.00	0.00	0.01	0.26	0.00	0.02	0.00	0.00	0.02	0.01
Negative affect in family life	CC	-.349**	-.314**	.324**	-.097*	0.01	-.133**	.133**	-.252**	-.379**	-0.06	.164**
	Sig. (2-tailed)	0.00	0.00	0.00	0.03	0.79	0.00	0.00	0.00	0.00	0.21	0.00
Negative affect in financial life	CC	-.094*	-.104*	.259**	0.03	-0.03	0.08	.162**	-.200**	-.168**	-0.02	.091*
	Sig. (2-tailed)	0.04	0.02	0.00	0.47	0.51	0.06	0.00	0.00	0.00	0.69	0.04
Negative affect in travel life	CC	-.172**	-.137**	.258**	-0.02	0.08	0.01	.156**	-0.08	-.128**	0.05	.128**
	Sig. (2-tailed)	0.00	0.00	0.00	0.65	0.09	0.88	0.00	0.08	0.00	0.25	0.00
Negative affect in social life	CC	-.142**	-.153**	.319**	0.08	0.05	-0.04	.205**	-.147**	-.161**	0.00	.164**
	Sig. (2-tailed)	0.00	0.00	0.00	0.09	0.26	0.37	0.00	0.00	0.00	0.91	0.00
Negative affect in leisure and recreation life	CC	0.06	.109*	.228**	0.00	.094*	.168**	.147**	0.00	0.01	0.05	-0.03
	Sig. (2-tailed)	0.15	0.01	0.00	0.95	0.04	0.00	0.00	0.96	0.91	0.30	0.51
Life domains	CC	.309**	.273**	-.232**	.110*	0.02	.096*	-.088*	.256**	.341**	0.07	0.02

overall	Sig. (2-tailed)	0.00	0.00	0.00	0.01	0.59	0.03	0.05	0.00	0.00	0.10	0.73
QoL	CC	.232**	.226**	-.215**	0.07	0.00	.093*	-.101*	.213**	.275**	0.08	0.01
	Sig. (2-tailed)	0.00	0.00	0.00	0.14	0.96	0.04	0.02	0.00	0.00	0.09	0.74

****** Correlation is significant at the 0.01 level (2-tailed).

***** Correlation is significant at the 0.05 level (2-tailed).

Table 5.29b: Spearman's rank correlation coefficient between individual aspects of paintball

Aspects of the study	Measurement	Positive adventure sport camaraderie	Positive adventure sport lifestyle	Positive adventure sport stress	Negative memories	Negative stresses	Negative challenge	Negative commitment	Negative emotion	Negative pressure	Positive affect in emotional life	Positive affect in family life
Leisure aspects of paintball	CC	.539**	.116**	.590**	-.284**	0.02	-0.06	.091*	-0.08	-0.02	.553**	.346**
	Sig. (2-tailed)	0.00	0.01	0.00	0.00	0.59	0.16	0.04	0.06	0.68	0.00	0.00
Positive internal activity aspects	CC	.640**	.235**	.561**	-.323**	.097*	-0.02	0.03	-0.02	0.03	.583**	.323**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.03	0.71	0.53	0.61	0.55	0.00	0.00
Negative internal activity aspects	CC	-.186**	.116**	-0.04	.390**	.094*	.279**	.249**	.403**	.261**	-.090*	-0.08
	Sig. (2-tailed)	0.00	0.01	0.38	0.00	0.04	0.00	0.00	0.00	0.00	0.04	0.09
Aspects impacting MILSIM	CC	.160**	0.06	.156**	0.00	-0.02	0.03	.165**	0.07	0.03	.158**	.153**
	Sig. (2-tailed)	0.00	0.18	0.00	0.97	0.70	0.47	0.00	0.12	0.55	0.00	0.00
Positive impact of rules	CC	.210**	.180**	.121**	-0.02	.429**	.157**	.180**	0.03	.100*	.111*	0.05
	Sig. (2-tailed)	0.00	0.00	0.01	0.73	0.00	0.00	0.00	0.53	0.02	0.01	0.26
Negative impact of rules	CC	.297**	.215**	.562**	-0.04	.119**	0.08	.192**	.115**	0.03	.415**	.219**
	Sig. (2-tailed)	0.00	0.00	0.00	0.41	0.01	0.06	0.00	0.01	0.44	0.00	0.00
Positive impact of gear	CC	-0.08	0.08	-.102*	.267**	.184**	.313**	.139**	.124**	.091*	-0.05	-0.07
	Sig. (2-tailed)	0.06	0.09	0.02	0.00	0.00	0.00	0.00	0.01	0.04	0.23	0.13
Negative impact of gear	CC	.488**	.139**	.445**	-.258**	.145**	-0.07	-0.01	-.126**	-0.03	.412**	.312**
	Sig. (2-	0.00	0.00	0.00	0.00	0.00	0.14	0.85	0.00	0.49	0.00	0.00

	tailed)											
Negative external impact	CC	.621**	.098*	.472**	-.371**	-0.04	-.126**	.087*	-.109*	0.00	.584**	.336**
	Sig. (2-tailed)	0.00	0.03	0.00	0.00	0.34	0.00	0.05	0.01	0.99	0.00	0.00
Positive impact of community	CC	.228**	.141**	.163**	-0.03	.297**	.092*	0.07	-.096*	0.01	.153**	.106*
	Sig. (2-tailed)	0.00	0.00	0.00	0.49	0.00	0.04	0.10	0.03	0.84	0.00	0.02
Positive internal activity aspects	CC	-.091*	0.05	-0.03	.170**	.161**	.369**	0.04	0.08	0.07	-0.06	-0.05
	Sig. (2-tailed)	0.04	0.22	0.48	0.00	0.00	0.00	0.34	0.06	0.14	0.15	0.22
Positive adventure sport camaraderie	CC	1.00	.219**	.548**	-.433**	.093*	-0.08	0.02	-.147**	-0.02	.572**	.283**
	Sig. (2-tailed)		0.00	0.00	0.00	0.04	0.07	0.72	0.00	0.63	0.00	0.00
Positive adventure sport lifestyle	CC	.219**	1.00	.258**	.087*	.221**	.157**	-0.07	.105*	.293**	.232**	0.08
	Sig. (2-tailed)	0.00		0.00	0.05	0.00	0.00	0.10	0.02	0.00	0.00	0.08
Positive adventure sport stress	CC	.548**	.258**	1.00	-.261**	0.07	-0.01	.091*	0.03	.096*	.662**	.344**
	Sig. (2-tailed)	0.00	0.00		0.00	0.09	0.79	0.04	0.47	0.03	0.00	0.00
Negative memories	CC	-.433**	.087*	-.261**	1.00	.118**	.151**	.116**	.248**	.204**	-.249**	-.117**
	Sig. (2-tailed)	0.00	0.05	0.00		0.01	0.00	0.01	0.00	0.00	0.00	0.01
Negative stresses	CC	.093*	.221**	0.07	.118**	1.00	.188**	.100*	0.03	.167**	0.06	0.06
	Sig. (2-tailed)	0.04	0.00	0.09	0.01		0.00	0.02	0.48	0.00	0.17	0.18
Negative challenge	CC	-0.08	.157**	-0.01	.151**	.188**	1.00	.148**	.127**	.147**	-0.07	-0.07
	Sig. (2-tailed)	0.07	0.00	0.79	0.00	0.00		0.00	0.00	0.00	0.10	0.10
Negative commitment	CC	0.02	-0.07	.091*	.116**	.100*	.148**	1.00	.147**	.129**	0.09	0.05
	Sig. (2-tailed)	0.72	0.10	0.04	0.01	0.02	0.00		0.00	0.00	0.05	0.22
Negative emotion	CC	-.147**	.105*	0.03	.248**	0.03	.127**	.147**	1.00	.255**	0.01	0.04
	Sig. (2-tailed)	0.00	0.02	0.47	0.00	0.48	0.00	0.00		0.00	0.87	0.39

Negative pressure	CC	-0.02	.293**	.096*	.204**	.167**	.147**	.129**	.255**	1.00	0.08	0.04
	Sig. (2-tailed)	0.632	0.000	0.031	0.000	0.000	0.001	0.004	0.000		0.080	0.380
Positive affect in emotional life	CC	.572**	.232**	.662**	-.249**	0.06	-0.07	0.09	0.01	0.08	1.00	.451**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.17	0.10	0.05	0.87	0.08		0.00
Positive affect in family life	CC	.283**	0.08	.344**	-.117**	0.06	-0.07	0.05	0.04	0.04	.451**	1.00
	Sig. (2-tailed)	0.00	0.08	0.00	0.01	0.18	0.10	0.22	0.39	0.38	0.00	
Positive affect in travel life	CC	.468**	.140**	.434**	-.242**	-0.07	0.01	0.03	-0.03	-0.03	.492**	.294**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.11	0.85	0.44	0.47	0.56	0.00	0.00
Positive affect in leisure and recreation life	CC	.526**	.179**	.574**	-.316**	0.06	-0.04	0.01	-.101*	-0.04	.572**	.332**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.19	0.43	0.88	0.02	0.37	0.00	0.00
Positive affect in social life	CC	.686**	.225**	.571**	-.364**	0.07	-.101*	0.01	-0.08	0.02	.660**	.387**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.13	0.02	0.83	0.06	0.71	0.00	0.00
Positive affect in health and safety life	CC	.506**	.190**	.484**	-.258**	0.06	-0.05	0.06	-.111*	0.00	.547**	.309**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.20	0.28	0.17	0.01	0.92	0.00	0.00
Negative affect in family life	CC	-.404**	0.01	-.257**	.417**	.108*	.159**	.103*	.263**	.199**	-.384**	-.180**
	Sig. (2-tailed)	0.00	0.89	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00
Negative affect in financial life	CC	-.228**	0.07	0.02	.241**	0.03	.126**	.139**	.272**	.202**	-0.05	-.229**
	Sig. (2-tailed)	0.00	0.09	0.74	0.00	0.52	0.00	0.00	0.00	0.00	0.26	0.00
Negative affect in travel life	CC	-.131**	.200**	-0.05	.281**	.103*	.175**	.087*	.141**	.314**	-0.07	-0.06
	Sig. (2-tailed)	0.00	0.00	0.23	0.00	0.02	0.00	0.05	0.00	0.00	0.13	0.15
Negative affect in social life	CC	-.231**	.097*	-.122**	.369**	.097*	.192**	.141**	.278**	.261**	-.114*	-0.08
	Sig. (2-tailed)	0.00	0.03	0.01	0.00	0.03	0.00	0.00	0.00	0.00	0.01	0.07
Negative affect in leisure and recreation life	CC	0.04	.152**	.165**	.180**	0.08	0.01	0.09	.174**	.214**	.094*	-0.02
	Sig. (2-	0.39	0.00	0.00	0.00	0.08	0.79	0.05	0.00	0.00	0.03	0.73

	tailed)											
Life domains overall	CC	.398**	.095*	.256**	-.188**	0.01	-0.06	0.00	-0.03	-0.04	.336**	.417**
	Sig. (2-tailed)	0.00	0.03	0.00	0.00	0.87	0.18	0.93	0.55	0.32	0.00	0.00
QoL	CC	.277**	0.06	.217**	-.146**	0.06	-0.08	0.05	0.05	0.04	.305**	.386**
	Sig. (2-tailed)	0.00	0.20	0.00	0.00	0.18	0.07	0.27	0.29	0.38	0.00	0.00

**** Correlation is significant at the 0.01 level (2-tailed).**

*** Correlation is significant at the 0.05 level (2-tailed).**

Table 5.29c: Spearman's rank correlation coefficient between individual aspects (factors) of paintball

Aspects of the study	Measurement	Positive affect in travel life	Positive affect in leisure and recreation life	Positive affect in social life	Positive affect in health and safety life	Negative affect in family life	Negative affect in financial life	Negative affect in travel life	Negative affect in social life	Negative affect in leisure and recreation life	Life domains overall	QoL
Leisure aspects of paintball	CC	.424**	.489**	.523**	.528**	-.349**	-.094*	-.172**	-.142**	0.06	.309**	.232**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.15	0.00	0.00
Positive internal activity aspects	CC	.530**	.489**	.585**	.454**	-.314**	-.104*	-.137**	-.153**	.109*	.273**	.226**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00	0.00
Negative internal activity aspects	CC	-.103*	-.191**	-.167**	-.169**	.324**	.259**	.258**	.319**	.228**	-.232**	-.215**
	Sig. (2-tailed)	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aspects impacting MILSIM	CC	.100*	.118**	.119**	.122**	-.097*	0.03	-0.02	0.08	0.00	.110*	0.07
	Sig. (2-tailed)	0.02	0.01	0.01	0.01	0.03	0.47	0.65	0.09	0.95	0.01	0.14
Positive impact of rules	CC	0.05	0.04	.151**	0.05	0.01	-0.03	0.08	0.05	.094*	0.02	0.00
	Sig. (2-tailed)	0.30	0.32	0.00	0.26	0.79	0.51	0.09	0.26	0.04	0.59	0.96
Negative impact of rules	CC	.283**	.430**	.330**	.287**	-.133**	0.08	0.01	-0.04	.168**	.096*	.093*
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.06	0.88	0.37	0.00	0.03	0.04
Positive impact of gear	CC	-0.01	-0.06	-.109*	-.107*	.133**	.162**	.156**	.205**	.147**	-.088*	-.101*
	Sig. (2-tailed)	0.77	0.16	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.05	0.02
Negative	CC	.328**	.419**	.486**	.350**	-.252**	-.200**	-0.08	-.147**	0.00	.256**	.213**

impact of gear	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.96	0.00	0.00
Negative external impact	CC	.445**	.452**	.636**	.457**	-.379**	-.168**	-.128**	-.161**	0.01	.341**	.275**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91	0.00	0.00
Positive impact of community	CC	.127**	.151**	.197**	.100*	-0.06	-0.02	0.05	0.00	0.05	0.07	0.08
	Sig. (2-tailed)	0.00	0.00	0.00	0.02	0.21	0.69	0.25	0.91	0.30	0.10	0.09
Positive internal activity aspects	CC	-.089*	-0.05	-.106*	-.110*	.164**	.091*	.128**	.164**	-0.03	0.02	0.01
	Sig. (2-tailed)	0.05	0.23	0.02	0.01	0.00	0.04	0.00	0.00	0.51	0.73	0.74
Positive adventure sport camaraderie	CC	.468**	.526**	.686**	.506**	-.404**	-.228**	-.131**	-.231**	0.04	.398**	.277**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00
Positive adventure sport lifestyle	CC	.140**	.179**	.225**	.190**	0.01	0.07	.200**	.097*	.152**	.095*	0.06
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.89	0.09	0.00	0.03	0.00	0.03	0.20
Positive adventure sport stress	CC	.434**	.574**	.571**	.484**	-.257**	0.02	-0.05	-.122**	.165**	.256**	.217**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.74	0.23	0.01	0.00	0.00	0.00
Negative memories	CC	-.242**	-.316**	-.364**	-.258**	.417**	.241**	.281**	.369**	.180**	-.188**	-.146**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Negative stresses	CC	-0.07	0.06	0.07	0.06	.108*	0.03	.103*	.097*	0.08	0.01	0.06
	Sig. (2-tailed)	0.11	0.19	0.13	0.20	0.02	0.52	0.02	0.03	0.08	0.87	0.18
Negative challenge	CC	0.01	-0.04	-.101*	-0.05	.159**	.126**	.175**	.192**	0.01	-0.06	-0.08
	Sig. (2-tailed)	0.85	0.43	0.02	0.28	0.00	0.00	0.00	0.00	0.79	0.18	0.07
Negative commitment	CC	0.03	0.01	0.01	0.06	.103*	.139**	.087*	.141**	0.09	0.00	0.05
	Sig. (2-tailed)	0.44	0.88	0.83	0.17	0.02	0.00	0.05	0.00	0.05	0.93	0.27
Negative emotion	CC	-0.03	-.101*	-0.08	-.111*	.263**	.272**	.141**	.278**	.174**	-0.03	0.05
	Sig. (2-tailed)	0.47	0.02	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.55	0.29

	tailed)											
Negative pressure	CC	-0.03	-0.04	0.02	0.00	.199**	.202**	.314**	.261**	.214**	-0.04	0.04
	Sig. (2-tailed)	0.563	0.367	0.709	0.919	0.000	0.000	0.000	0.000	0.000	0.319	0.380
Positive affect in emotional life	CC	.492**	.572**	.660**	.547**	-.384**	-0.05	-0.07	-.114*	.094*	.336**	.305**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.26	0.13	0.01	0.03	0.00	0.00
Positive affect in family life	CC	.294**	.332**	.387**	.309**	-.180**	-.229**	-0.06	-0.08	-0.02	.417**	.386**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.07	0.73	0.00	0.00
Positive affect in travel life	CC	1.00	.465**	.522**	.386**	-.281**	-0.02	-.115**	-.136**	.090*	.324**	.260**
	Sig. (2-tailed)		0.00	0.00	0.00	0.00	0.70	0.01	0.00	0.04	0.00	0.00
Positive affect in leisure and recreation life	CC	.465**	1.00	.534**	.475**	-.256**	-0.07	-.119**	-.207**	0.03	.384**	.304**
	Sig. (2-tailed)	0.00		0.00	0.00	0.00	0.12	0.01	0.00	0.57	0.00	0.00
Positive affect in social life	CC	.522**	.534**	1.00	.475**	-.400**	-.131**	-.116**	-.172**	0.04	.379**	.314**
	Sig. (2-tailed)	0.00	0.00		0.00	0.00	0.00	0.01	0.00	0.35	0.00	0.00
Positive affect in health and safety life	CC	.386**	.475**	.475**	1.00	-.293**	-.098*	-.170**	-.147**	0.01	.415**	.277**
	Sig. (2-tailed)	0.00	0.00	0.00		0.00	0.03	0.00	0.00	0.75	0.00	0.00
Negative affect in family life	CC	-.281**	-.256**	-.400**	-.293**	1.00	.203**	.296**	.340**	.106*	-.247**	-.178**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.02	0.00	0.00
Negative affect in financial life	CC	-0.02	-0.07	-.131**	-.098*	.203**	1.00	.272**	.350**	.343**	-.257**	-.167**
	Sig. (2-tailed)	0.70	0.12	0.00	0.03	0.00		0.00	0.00	0.00	0.00	0.00
Negative affect in travel life	CC	-.115**	-.119**	-.116**	-.170**	.296**	.272**	1.00	.276**	.279**	-.219**	-.185**
	Sig. (2-tailed)	0.01	0.01	0.01	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Negative affect in social life	CC	-.136**	-.207**	-.172**	-.147**	.340**	.350**	.276**	1.00	.134**	-.184**	-.135**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Negative	CC	.090*	0.03	0.04	0.01	.106*	.343**	.279**	.134**	1.00	-.199**	-.157**

affect in leisure and recreation life	Sig. (2-tailed)	0.04	0.57	0.35	0.75	0.02	0.00	0.00	0.00		0.00	0.00
Life domains overall	CC	.324**	.384**	.379**	.415**	-.247**	-.257**	-.219**	-.184**	-.199**	1.00	.700**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
QoL	CC	.260**	.304**	.314**	.277**	-.178**	-.167**	-.185**	-.135**	-.157**	.700**	1.00
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

**** Correlation is significant at the 0.01 level (2-tailed).**

*** Correlation is significant at the 0.05 level (2-tailed).**

The following section will explore the results of the SEM analysis.

5.3.6 Structural equation model

The initial analysis of SEM testing for statistical significance found nine latent variables. There were 13 relationships identified between the nine latent variables (aspects), of which 12 were statistically significant (as shown in Table 5.30). These aspects were labelled *leisure aspects of paintball*, *positive activity theory aspects of paintball*, *negative activity theory aspects of paintball*, *positive adventure sport experience*, *negative adventure sport experience*, *positive affect in life domains*, *negative affect in life domains*, *life domains overall* and *QoL*. The relationships between the aspects will be discussed next.

Table: 5.30: Standardised regression weights (β) between the latent variables

Latent variable	Relationship	Latent variable	β -weights ¹	Sig ²
Leisure aspects of paintball	--->	Negative activity theory aspects of paintball	-0.90	0.001
Leisure aspects of paintball	--->	Positive activity theory aspects of paintball	0.98	0.001
Negative activity theory aspects of paintball	--->	Positive adventure sport experience	-1.05	0.002
Positive activity theory aspects of paintball	--->	Positive adventure sport experience	2.02	0.037
Negative activity theory aspects of paintball	--->	Negative adventure sport experience	1.07	0.016
Positive activity theory aspects of paintball	--->	Negative adventure sport experience	3.07	0.027
Leisure aspects of paintball	--->	Negative adventure sport experience	-2.18	0.024
Leisure aspects of paintball	--->	Positive adventure sport experience	-2.07	0.033
Negative adventure sport experience	--->	Positive affect in life domains	-0.11	0.03
Negative adventure sport experience	--->	Negative affect in life domains	0.96	0.001
Positive adventure sport experience	--->	Positive affect in life domains	1.33	0.001
Positive adventure sport experience	--->	Negative affect in life domains	-0.10	0.078
Leisure aspects of paintball	--->	Positive affect in life domains	-0.42	0.001
Positive affect in life domains	--->	Life domains overall	0.55	0.001
Negative affect in life domains	--->	Life domains overall	-0.14	0.007
Life domains overall	--->	Quality of life	0.82	0.001

¹ Standard regression weights (estimates)

² $p \leq 0.05$

5.3.6.1 The relationship between latent variables

5.3.6.1.1 *Leisure aspects of paintball and the negative activity theory aspects of paintball*

In Table 5.30, the standardised regression weight (β) indicates that *leisure aspects of paintball* had a statistically significant negative relationship with the *negative activity theory aspects of paintball* ($\beta = -0.90$). Therefore, the leisure aspects of paintball reduce the negative activity aspects experienced in paintball according to respondents. Due to the unique nature of this comparison, the findings set the standard to compare with for similar future adventure sport research.

5.3.6.1.2 *Leisure aspects of paintball and the positive activity theory aspects of paintball*

The β -weight in Table 5.30 indicates that *leisure aspects of paintball* had a statistically significant positive relationship with the *positive activity theory aspects of paintball* ($\beta = 0.98$). Consequently, respondents experienced that the leisure aspects of paintball have a significant positive influence on the positive activity theory aspects of paintball. Due to the uniqueness of this link, the results set the standard to compare with for related research in the adventure sport field.

5.3.6.1.3 *Negative activity theory aspects of paintball and a positive adventure sport experience*

In Table 5.30, *negative activity theory aspects of paintball* (β -weight) had a statistically significant negative relationship with the *positive adventure sport experience* ($\beta = -1.05$). Thus, negative activity theory aspects of paintball have a significant negative affect on the positive adventure sport experience. Due to the unique nature of this comparison, the findings set the standard to compare with for similar future adventure sport research.

5.3.6.1.4 *Positive activity theory aspects of paintball and a positive adventure sport experience*

Positive activity theory aspects of paintball (β -weight) in Table 30 obtained a statistically significant positive relationship with the *positive adventure sport experience* ($\beta = 2.02$). It can therefore be concluded that the positive activity theory of paintball has a significant positive effect on respondents' positive adventure sport experience. This

means that a paintballer who has positive experiences with regard to an activity theory aspect is likely to have a positive adventure sport experience. The distinct nature of the comparison sets the benchmark for future studies in adventure sport.

5.3.6.1.5 *Negative activity theory aspects of paintball and the negative adventure sport experience*

In Table 5.30, *negative activity theory aspects of paintball* (β -weight) had a statistically significant negative effect on the *negative adventure sport experience* ($\beta = 2.02$). Consequently, the negative activity theory aspects of paintball are carried over to the negative sport experience as experienced by respondents. Therefore, a paintballer who has a negative experience with regard to an activity theory aspect is likely to have a negative adventure sport experience.

5.3.6.1.6 *Positive activity theory aspects of paintball and the negative adventure sport experience*

The standardised regression weight (β) in Table 5.30 indicates that *positive activity theory aspects of paintball* had a statistically significant positive relationship with the *negative adventure sport experience* ($\beta = 3.07$). Consequently, the positive activity theory aspects have a significant positive effect on the negative adventure sport experience. This means that a paintballer who has a positive experience with regard to an activity theory aspect is likely to negate the negative adventure sport experience he or she had.

5.3.6.1.7 *Leisure aspects of paintball and the negative adventure sport experience*

The β -weight in Table 5.30 indicates that *leisure aspects of paintball* had a statistically significant negative relationship with the *negative adventure sport experience* ($\beta = -2.18$). Thus, the leisure aspects of paintball significantly reduce the negative adventure sport experience. This means that the leisure aspects of paintball help to negate the negative adventure sport experience that a paintballer might have had.

5.3.6.1.8 *Leisure aspects of paintball and the positive adventure sport experience*

In Table 5.30, *leisure aspects of paintball* (β -weight) had a statistically significant negative relationship with the *positive adventure sport experience* ($\beta = -2.07$). This can be attributed to the suppression effect (Cohen & Cohen, 1975) that, in this case,

indicates that the leisure aspects of paintball are indicative and have no additional positive contributions to a positive adventure experience.

5.3.6.1.9 *The negative adventure sport experience and positive affect in life domains*

The standardised coefficient (β) In Table 5.30 indicates that the *negative adventure sport experience* had a statistically significant negative effect on the *positive affect in life domains* ($\beta = -0.11$). This means that a paintballer who has a negative adventure sport experience is likely to carry that negative experience over to his or her life domains. Therefore, a negative adventure sport experience has a statistically negative affect on the positive affect in life domains overall.

5.3.6.1.10 *The negative adventure sport experience and negative affect in life domains*

The β -weight in Table 5.30 indicates that the *negative adventure sport experience* had a statistically significant relationship with the *negative affect in life domains* ($\beta = 0.96$). Therefore, a paintballer who has a negative adventure sport experience is likely to experience a negative affect in his or her life domains. Consequently, a negative adventure sport experience contributes significantly to a negative affect in life domains.

5.3.6.1.11 *The positive adventure sport experience and positive affect in life domains*

The *positive adventure sport experience* (β -weight) in Table 5.30 had a statistically significant positive contributory relationship with the *positive affect in life domains* ($\beta = 1.33$). Consequently, a paintballer who has a positive adventure sport experience is likely to experience a positive affect in his or her life domains. Therefore, the positive adventure sport experience has a significant contributory effect on a positive affect in life domains.

5.3.6.1.12 *The positive adventure sport experience and negative affect in life domains*

In Table 5.30, the *positive adventure sport experience* (β -weight) had a non-statistically significant negative affect on the *negative affect in life domains* ($\beta = -0.10$). This means that a paintballer who has a positive adventure sport experience is likely to experience a

negative affect in his or her life domains (to a lesser degree). Although the aspects statistic Sig. (-0.78) is low, it has been included for testing in future studies.

5.3.6.1.13 *Leisure aspects of paintball and positive affect in life domains*

The β -weight in Table 5.30 indicates that *leisure aspects of paintball* had a statistically significant negative effect on the *positive affect in life domains* ($\beta = -0.42$). This relation was the opposite of what could be expected from the leisure aspects of paintball and positive affect in life domains. It can be attributed to the suppression effect (Cohen, et al., 1975) that, in this case, indicates that the leisure aspects of paintball are indicative and have no additional positive contributions to a positive affect in life domains.

5.3.6.1.14 *The positive affect in life domains and life domains overall*

In Table 5.30, the *positive affect in life domains* (β -weight) had a statistically significant positive relationship with *life domains overall* ($\beta = 0.55$). This means that a paintballer who experiences a positive affect in any of his or her life domains has a significant chance to carry over that experience to life domains overall. Therefore, the positive affect in life domains has a significant positive effect on life domains overall.

5.3.6.1.15 *The negative affect in life domains and life domains overall*

In Table 5.30, the *negative affect in life domains* (β -weight) had a statistically significant negative affect on *life domains overall* ($\beta = -0.14$). For example, a paintballer who experiences a negative affect in any of his or her life domains has a significant chance to carry over that negative experience to his or her life domains overall. Thus, the negative affect in life domains has a significant negative effect on life domains overall.

5.3.6.1.16 *Life domains overall and quality of life*

Life domains overall (β -weight) in Table 5.30 had a statistically significant positive affect on QoL ($\beta = 0.82$). It can therefore be concluded that a respondent's life domains overall have a significant affect on his or her QoL.

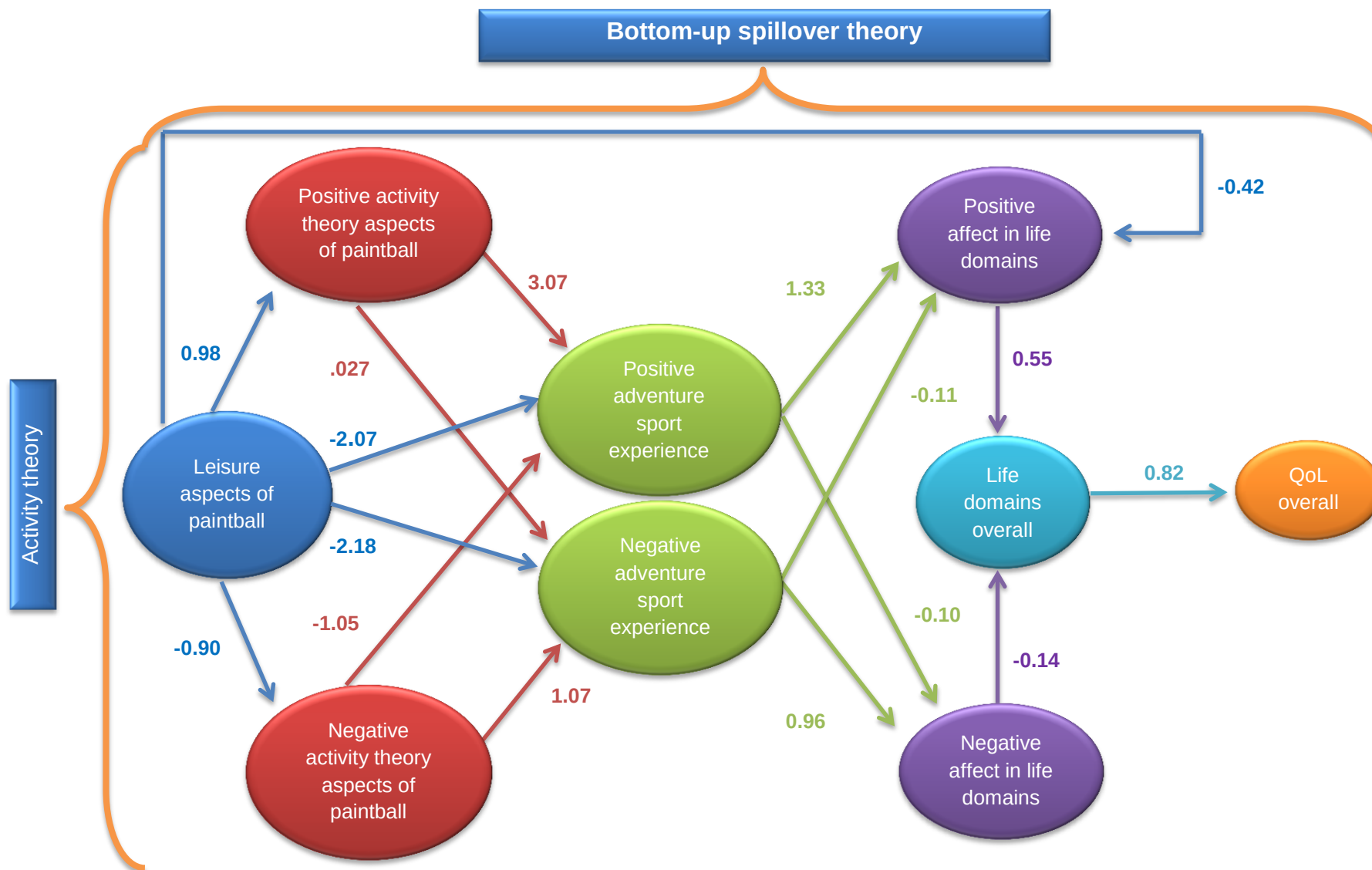


Figure 5.2 Representation of the structural relationship (standardised coefficients), indicating the linear relationship between an adventure-based sport and quality of life without the measuring model

5.3.6.2 Model fit

Based on the empirical results, the model (cf. 1.2) was tested by combining the bottom-up spillover theory and activity theory as depicted in Figure 5.2, as well as the structural relationship indicating the linear relationship between adventure-based sport and QoL. Hancock and Mueller (2010) suggest that when reporting the model fit of the SEM, it is good practice to report three broad classes of parsimonious fit. Based on the guidelines found in 1.6.2.4.7 regarding the SEM model fit, it can be reported that the χ^2/df obtained for the SEM was 3.5, which suggests an adequate fit when compared to the recommended fit of between 2 to 5 (Wheaton, *et al.*, 1977; Tabachnick, *et al.*, 2007). The 13-aspects model produced a borderline satisfactory CFI = 0.727 and a satisfactory RMSEA = 0.071 with a 90% confidence interval of 0.069; 0.073, based on the work of Steiger (2007), who recommends an interval close to 0.06 or below, or an upper limit of 0.07.

5.4 CONCLUSION

The goal of this chapter was to provide the empirical results of the sequential exploratory mixed methods design, which entailed that a qualitative section should be done first, followed by a quantitative section. Once the result of each section was completed, a QoL framework for an adventure-based sport activity was completed by means of an SEM as the main goal of the study (cf. 1.4.1).

First, the qualitative section of the study was carried out by transcribing the interviews with paintballers to create an interviewee profile that is based on the demographic information that was provided by them (cf. 5.2.1). Deductive and inductive analysis techniques were used to help establish initial and final coding among aspects which made up the framework of the study. Furthermore the analysis helped to identify key aspects related to paintball as an adventure-based sport, based on the themes identified in Chapter 4, in preparation for the quantitative section that entailed an online questionnaire.

Second, the descriptive results of the online questionnaire were presented. The descriptive results analysed the demographic characteristics of respondents, which revealed several norms associated with paintball, for example that it is a male-dominated sport, that the United States was the biggest contributor to the study and that

MILSIM-S was the most popular form of paintball. Interestingly, South Africa was revealed to be on par with Canada with which it shared a second place, followed by the United Kingdom.

The demographic characteristics were followed by an in-depth descriptive analysis of the statistics of each identified aspect of the questionnaire, which consisted of *leisure aspects of paintball* (cf. 5.3.1.2.1), *activity aspects of paintball* (cf. 5.3.1.2.2), the *adventure sport experience* (cf. 5.3.1.2.3), *life domains* (cf. 5.3.1.2.4) and *QoL* (cf. 5.3.1.2.5). The *leisure aspects of paintball* revealed, amongst other, that paintball is an excellent social platform, whereas the *activity aspects of paintball* set the bar to compare with for future studies. With regard to the *adventure sport experience*, the findings that *camaraderie between paintballers embodies the core spirit of the sport* and that *memories* are an important part of paintball validate the authors' and interviewees' experiences of paintball as an adventure-based sport. Referring to *life domains*, it was established that the *leisure and recreation life domain* was the most important, followed sequentially by *health and safety life*, *travel life*, *social life*, *financial life*, *emotional life*, *family life* and *life overall*. Lastly, *QoL* revealed that, on average, respondents agreed that they were satisfied with their *QoL*.

An EFA was conducted of each of the identified aspects of paintball and the findings presented as *leisure aspects of paintball* (cf. 5.3.2.1), *activity aspects of paintball* (cf. 5.3.2.2), the *adventure sport experience* (cf. 5.3.2.3), *life domains* (cf. 5.3.2.4) and *QoL* (cf. 5.3.2.5). With regard to *leisure aspects of paintball*, it was deduced that paintball as a leisure time activity is indeed pursued as an outlet for stress and to break away from the routine of daily life. The *activity aspect of paintball* successfully adapted the themes found in the activity theory (cf. 1.2 & 2.4.2) to paintball, which produced reliable α coefficients. As no precedent exists where the activity theory has been applied to an adventure-based sport, the results set the bar for future studies to compare with

The analysis of adventure sport experience revealed two separate analyses, namely the *positive adventure sport experience* and the *negative adventure sport experience*. The analysis of the *positive adventure sport experience* revealed that *camaraderie* was the most important positive adventure sport experience in paintball. The *negative adventure sport experience* revealed that *negative stresses* emerged as the most important

negative adventure sport experience in paintball, including items such as *childish behaviour by some paintballers detracts from the overall experience; negative comments by fellow paintballers detract from the social experience; screaming, shouting and cursing while playing paintball detract from the overall experience; and unsportsmanlike behaviour causes unnecessary stress.*

The analysis of *life domains* revealed three separate analyses, namely *positive life domain contributions*, *negative life domain contributions* and *life domains overall*. With regard to *positive life domain contributions*, *positive fitness life* emerged as the most important positive life domain contributor in paintball. *Negative life domain contributions* found that *negative affect in financial life* emerged as the most important negative life domain contributor. Referring to *life domains overall*, *I am satisfied with my social life* emerged as the most important life domain overall, based on the α coefficient (.666) in paintball. Lastly, *QoL* revealed that the statements measured a high α coefficient level of reliability (0.89), which indicates a high internal consistency.

Third, the inferential results were presented, which entailed an analysis making use of *t*-tests, ANOVA and correlations. The *t*-test's purpose was to compare the demographic characteristics of respondents, namely gender (cf. 5.3.3.1) and MLT (cf. 5.3.3.2), with the identified aspects of paintball. With regard to gender, it was found that females were more positive on average than their male counterparts regarding the identified aspects of paintball. With regard to MLT, it was found that those with MLT were more positive on average than those without MLT regarding the identified aspects of paintball.

The purpose of the ANOVA was to compare the demographic characteristics of respondents, based on home language (cf. 5.3.4.1), current work station (cf. 5.3.4.2), marital status (cf. 5.3.4.3), type of paintballer (cf. 5.3.4.4) and style of paintball (cf. 5.3.4.5), with the identified aspects of paintball (cf. 5.3.2). With regard to home language, respondents who spoke Afrikaans were more positive in general than those who spoke English or other languages concerning the identified aspects of paintball. An analysis of respondents' current work station showed that those who selected *other* were more positive in general than full-timers, part-timers or those who were unemployed. Reviewing marital status indicated different responses to the identified aspects, with those who are single being the most positive with regard to positive

adventure sport camaraderie, positive adventure sport stress and positive affect in travel life. Married respondents were more positive with regard to negative memories, a negative affect in financial life and QoL. Those who selected *other* were most positive in positive affect in emotional life, positive affect in health and safety life, and positive affect in social life. When reviewing the findings of the type of paintballers, enthusiasts emerged as the most positive in all the aspects of paintball. With regard to the style of paintball, speedballers were the most positive in the aspects of paintball, with the exception of the aspects impacting MILSIM, in which MILSIM-S was most positive.

The correlations' purpose was to describe the strength and linear relationship between the identified aspects of paintball (cf. 5.3.2) and the demographic characteristics of respondents (cf. 5.3.5.1). This was followed by the interpretation of the strength of the relationships between the r-values (cf. 1.6.2.4.5) of each individually identified aspect and the remaining aspects of the study, which were presented from 5.3.5.2.1 to 5.3.5.2.33.

Fourth, the results of the SEM were presented (cf. 5.3.6) and the relationship between the latent variables discussed (cf. 5.3.6.1). A total of nine latent variables were identified, which were connected by 13 relationships of which 12 were statistically significant. The representation of the structural relationship (standardised coefficients) indicated the linear relationship between an adventure-based sport and quality of life (Figure 5.2). The relationship between leisure aspects of paintball translates into both positive and negative activity theory aspects of paintball, which results in either a positive or negative adventure sport experience. This, in turn, either affects paintballers' life domains positively or negatively, which results in a view of their life domains overall, ultimately leading to an evaluation of their QoL.

The model fit indices of the SEM were presented last (cf. 5.3.6.2) and were found to be successful. The final model convincingly shows that the bottom-up spillover theory and activity theory were successfully combined in the SEM.

The limitations of this study include a lower than expected response from Singapore, which represents the largest contingent of Asian paintballers and is well known for its active speedball community. Furthermore, the statements that were used in the

questionnaire cannot be generalised in their present format to other adventure sport study samples that do not contain an element of simulated combat. A suggestion for future research would be to rework the measuring instrument and test it again on the individual styles found in paintball (speedballers, MILSIM and scenario) as well as in airsoft, which is similar to paintball and simulates combat.

Based on the empirical analyses, it is evident that playing (participating in) paintball as an adventure-based sport regularly could enhance participants' QoL. It can therefore be reported that the goal of the study to develop a QoL framework for an adventure-based sport has been successful. Therefore, it is proper to present the conclusions, contributions, recommendations and limitations of the study in the following chapter, based on the reviewed literature and empirical survey that has been conducted.

6

CHAPTER 6

CONCLUSIONS, CONTRIBUTIONS, RECOMMENDATIONS AND LIMITATIONS

6.1 INTRODUCTION

The main goal of this study (cf. 1.4.1) was to develop a QoL framework for an adventure-based sport. The framework included leisure-based activity, activity theory, adventure sport experience, life domains, sources of positive and negative affect in life domains, life domains overall and QoL overall.

In order to achieve the goal of the study, various objectives were formulated in Chapter 1 (cf. 1.4.2). The first three objectives were addressed in Chapters 2, 3 and 4 to provide a literature overview of the most important aspects in the field of study and subsequently to lay the foundation for testing the consulted literature. As recommended by Clark and Creswell (2008:180), a sequential exploratory mixed methods design was followed (cf. 1.6.2.1), as it best suited the intended goals. This ultimately led to Chapter 5 and the development of a QoL framework for an adventure-based sport activity by means of a SEM (cf. 5.3.6), which supports the main goal of this study (cf. 1.4.1). Table 6.1 shows the objectives as set out in 1.4.1 and the chapters in which those objectives have been addressed.

Table 6.1 Summary of objectives per chapter

OBJECTIVES (cf. 1.4.1)	CHAPTER	HEADINGS
Objective 1 To analyse popular theoretical frameworks of QoL, leisure and activities related to the study.	Chapter 2	THEORIES RELATED TO QOL (cf. 2.2) • Situational theories (cf. 2.2.1). • Dispositional theories (cf. 2.2.2). • Interactive theories (cf. 2.2.3). • Theories related to life domains (cf. 2.2.4). THEORIES RELATED TO LEISURE (cf. 2.3) • Physiology and genetics (cf. 2.3.1). • Social motivation (cf. 2.3.2). • Goal theory (cf. 2.3.3). THEORIES RELATED TO ACTIVITIES (cf. 2.4) • Classical conditioning theory (cf. 2.4.1). • Activity theory (cf. 2.4.2). • Flow theory (cf. 2.4.3). • Personal expressiveness (cf. 2.4.4).

Objective 2 To analyse QoL in relation to adventure sport by means of a literature review.	Chapter 3	UNDERSTANDING THE QOL CONCEPT (cf. 3.2) • Subjective and objective indicators (cf. 3.2.1). • Inputs and outcomes (cf. 3.2.2). • Satisfaction with life (cf. 3.2.3). • Inner and outer aspects (cf. 3.2.4). • Subjective well-being (cf. 3.2.5). • Subjective well-being and eudaimonia (cf. 3.2.6). • Subjective well-being and psychological well-being (cf. 3.2.7). THE PSYCHOLOGY OF QOL (cf. 3.3) • Satisfaction of development needs (cf. 3.3.1). • Significant life domains (cf. 3.3.2). • Life domains (cf. 3.3.3). QOL AND LEISURE (cf. 3.4) QOL AND SPORT (cf. 3.5) QOL AND ADVENTURE ACTIVITIES (cf. 3.6)
Objective 3 To analyse leisure, adventure sport and the adventure sport experience by means of a literature review.	Chapter 4	LEISURE (cf. 4.2) • History of leisure in a westernised world (cf. 4.2.1). • Defining leisure (cf. 4.2.2). • A theoretical approach to leisure in society (cf. 4.2.3). • Approaches that are used to define leisure (cf. 4.2.4). • Leisure as a modern phenomenon (cf. 4.2.5). • The relationship between leisure, recreation and tourism (cf. 4.2.6). ADVENTURE SPORT (cf. 4.3) • Adventure tourism (cf. 4.3.1). • Adventure travel (cf. 4.3.2). • Sport tourism (cf. 4.3.3). • Adventure sport (cf. 4.3.4). ADVENTURE SPORT EXPERIENCE (cf. 4.4) • Tourism experience based on literature (cf. 4.4.1). • Adventure sport experience based on literature (cf. 4.4.2). • Adventure sport experience based on internet questions (cf. 4.4.3). • Themes to be explored in the empirical survey (cf. 4.4.4).
Objective 4 To provide the results of the statistical analysis and thereafter develop a QoL framework for an adventure-based sport activity by means of a SEM.	Chapter 5	QUALITATIVE ANALYSIS (cf. 5.2) • Interviewee profile (cf. 5.2.1). • Leisure-based activity (cf. 5.2.2). • Results of the adventure sport experience (cf. 5.2.3). • Results of life domains (cf. 5.2.4). • Results of QoL (cf. 5.2.5). QUANTITATIVE ANALYSIS (cf. 5.3) • Descriptive statistics (cf. 5.3.1). • Exploratory factor analysis (cf. 5.3.2). • <i>t</i>-test (cf. 5.3.3). • Analysis of variance (cf. 5.3.4). • Correlations (cf. 5.3.5). • Structural equation model (cf. 5.3.6). CONCLUSION (cf. 5.4)

Objective 5 To draw conclusions, make the necessary recommendations, present limitations of the study and make suggestions for future research in terms of the empirical findings.	Chapter 6	CONCLUSIONS DRAWN FROM LITERATURE REVIEW (cf. 6.3) CONCLUSIONS DRAWN FROM EMPIRICAL RESULTS (cf. 6.4) CONTRIBUTION (cf. 6.5) RECOMMENDATIONS (cf. 6.6) LIMITATIONS (cf. 6.7)

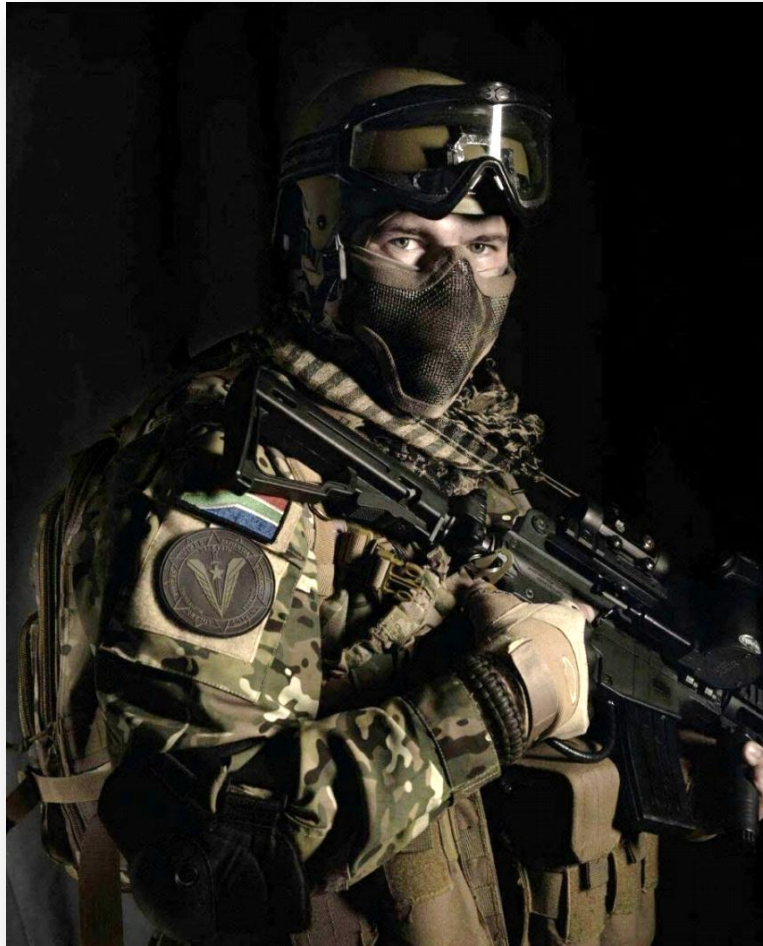
With reference to the goal of the study and the objectives that have been achieved in Chapters 2 to 5, the conclusions, recommendations and contributions can now be presented in Chapter 6. The limitations of this study will also be covered. The goal of Chapter 6 is therefore to draw conclusions based on the findings of the previous four chapters, make contributions to literature (concerning QoL and adventure sport) and make recommendations to the paintball industry (as well as any other adventure [combat] sport). This will ensure that Chapter 6 meets the goals that are listed in Table 6.1.

6.2 MY PERSONAL JOURNEY AND INVOLVEMENT IN PAINTBALL

In order to understand why I became so addicted to paintball, I will provide some historical perspective. I received my first air rifle (Daisy) from my grandfather when I was four years old. From a young age, I became infatuated with all things military and spent endless hours when in primary school reading military history books and spending all my pocket money on toy guns. My first taste of paintball was in 1997 at a friend's birthday party, held at an informal bush range, which turned out to be one of my most memorable memories, as I ambushed all my friends by being sneaky. As paintball was an expensive sport and not yet well developed, I was led to a substitute in the form of airsoft, which only differs in that small plastic balls are shot instead of large balls filled with paint.

My love for military machinery grew and I attended many military exhibitions and shows such as African Aerospace and Defence biannually. Many simulated wars followed and my love for small unit tactics grew. In 2003, as part of my in-service training for my National Diploma in Tourism Management, I spent six months on a game reserve where I learned, among other things, to track spoor and shoot a rifle, which I managed easily

and successfully. My application to join the British Armed Forces in 2005 was cut short when I was asked to substitute as a lecturer in Tourism Management at the Vaal University of Technology (VUT), a position that I have held ever since; this put me on a career path in academics and research.



I met my wife-to-be, Carina, in 2005, which changed my life priorities away from a military career overseas to something more local. In 2010, I simultaneously completed my MTech in Tourism Management at the VUT and an Advanced Degree in Higher Education at the University of the Free State. In 2011, I purchased a paintball marker for home defence and only played socially at a local field with my brother a year later.

Suffice to say that paintball was in my blood and I played at least once every two months locally or in a neighbouring town. My social life increased a thousand fold and I could finally partake in a sport that made me happy. I have never had more dedicated and trusting friends than those whom I have met by playing paintball. Funding the sport

proves to be a challenge, as it is somewhat expensive. Nevertheless, I have never been as motivated as I have been since I started playing paintball. I joined overseas paintball groups and celebrities via Facebook and saw how big the sport was globally and the camaraderie expressed by a multitude of different people.

In 2012, I started pondering why paintball had such a positive effect, not only on me but on other players as well. To solve the question, I enrolled for my PhD in Tourism Management at the North-West University with the express goal of answering those questions and, in doing so, contributing towards the growth of paintball. In 2013, I organised the first-ever public demonstration of paintball in South Africa in front of a 40 000-strong crowd attending the Swartkops Air show in Pretoria. In the same year, I arranged a training course in small-unit tactics for paintballers, hosted by a former South African Special Task Force instructor. In 2014, I qualified with said instructor as an intermediate in CQB and small unit tactics with real firearms. I also wrote an accredited article on paintball as an adventure-based sport. The camaraderie in paintball is truly amazing, something which, in my humble opinion (and expressed by some of the interviewees), can only be forged in combat and which I believe is the reason that most players embody the spirit of helping others. I also believe that camaraderie is the reason for the growth of the adventure sport.

This study is my contribution and legacy towards the adventure sport that I love so much. It will help those who haven't yet played it to understand why it is so addictive, break the stereotypes that exist around the adventure (combat) sport, prove the paintball cynics wrong and help the paintball industry to understand paintballers better and, in doing so, help paintball to grow even more.

6.3 CONCLUSIONS DRAWN FROM THE LITERATURE REVIEW

The following section will cover the conclusions that are based on the literature review and the empirical results that were found and reported on in Chapters 2 to 4.

6.3.1 Conclusions drawn from the literature review in Chapter 2

The author will now focus on the literature that has been reviewed in Chapter 2 of this study (as set in Objective 1) to analyse popular theoretical frameworks of QoL, leisure and activities related to the study. The literature review provided the author with the

necessary background to embark on the empirical analysis in Chapter 5, which contributed to the achievement of the main goal of the study. The author will follow the chronology of objectives as provided in Table 6.1.

6.3.1.1 Conclusions drawn from theories related to QoL (cf. 2.2)

The author identified four popular theories that are related to QoL (cf. 2.2) and are popular in the field of tourism, namely situational theories (cf. 2.2.1), dispositional theories (cf. 2.2.2), interactive theories (cf. 2.2.3) and theories related to life domains (cf. 2.2.4).

- Situational theories (cf. 2.2.1) focus on identifying satisfaction with specific services based on the human condition. In this study, they were focused on paintball as an adventure-based sport and its different formats (speedball, MILSIM and scenario).
- Disposition theory (cf. 2.2.2) briefly covers personality characteristics, where satisfaction depends on internal motivational drive of, in this case, paintball participants.
- Interactive theory (cf. 2.2.3) looks at the interaction between situations and personal facets. Four sub-theories were identified, namely expectancy theory (cf. 2.2.3.1), norms theory (cf. 2.2.3.2), equity theory (cf. 2.2.3.3) and self-congruity theory (cf. 2.2.3.4).
 - Expectancy theory (cf. 2.2.3.1) explains participants' evaluation of whether their expectations were met or were not based on what they perceived it to be.
 - Norms theory (cf. 2.2.3.2) explains that participants' perception of what is expected is based on what is perceived to be the normal standard.
 - Equity theory (cf. 2.2.3.3) is based on people's perception that the object which they invested in (financially or timewise) was either worth the input or a waste of it. Satisfaction arises from the affirmative, whereas dissatisfaction arises from the negative.
 - Self-congruity theory (cf. 2.2.3.4) is based on the participants' perception that their feelings regarding a subject (such as paintball) are echoed by the service provider.

- It was concluded that interactive theories were best suited to investigate and extract the QoL aspects that are found in paintball, as it simulates combat.
- Theories related to life domains (cf. 2.2.4) explain that QoL can be divided into several hierarchical levels of need satisfaction. QoL overall is situated at the top. Directly below are subordinate life domains, which can be experienced either positively or negatively, depending on the satisfaction with components and concerns within each life satisfaction (Figure 2.9). Below the subordinate life domains are the lower sub-domains. Three life domain theories were identified, namely the top-down spillover (cf. 2.2.4.1), horizontal spillover (cf. 2.2.4.2) and bottom-up spillover theory (cf. 2.2.4.3).
 - The top-down spillover theory (cf. 2.2.4.1) postulates that the affect found in QoL overall spills over into the subordinate life domains, be it positive or negative. It was concluded that, based on the required psychosomatic factors and variance of the participant's personality, the theory would be too difficult to determine empirically.
 - The horizontal spillover theory (cf. 2.2.4.2) discusses the effect of satisfaction or dissatisfaction with one life domain spilling over into a neighbouring life domain. It was determined that, based on the required psychological views, it would be too complex to establish a link with adventure sport through the planned empirical survey.
 - The bottom-up spillover theory (cf. 2.2.4.3) is based on the requirement that, in order for QoL overall to be achieved, the lowest sub-domains need to be satisfied, which, in turn, will spill over upwards into the subordinate life domains, which then spills over into QoL overall. It was concluded that the bottom-up spillover theory would be best suited to achieve the set objective and ultimate goal of the study.

6.3.1.2 Conclusions drawn from theories related to leisure (cf. 2.3)

It was established that leisure's effect on QoL is well researched and that leisure plays an important role in QoL. Several theoretical perspectives were identified and explored, namely physiology and genetics (cf. 2.3.1), social motivation (cf. 2.3.2), and goal theory (cf. 2.3.3).

- An investigation of physiology and genetics (cf. 2.3.1) revealed that the effects of participating in an adventure-based sport such as paintball are ways in which people in modern society combat stress. The processes involve psychological and physical satisfaction through the release of endorphins that affect participants' brain chemistry positively. Additionally, the stresses experienced through simulated combat require the body to release adrenaline, which is described as a natural 'feel good' drug. Participation improves the health of the participant and reduces the chances of chronic diseases. Personal traits also play a role in a person's level and frequency of participation; it was thus concluded that intrinsic motivational factors are important in leisure time activities such as paintball.
- Social motivation (cf. 2.3.2) showed the importance of team sports such as paintball in fulfilling human social needs and serving as a catalyst and motivator for participation; this has been categorised as camaraderie (cf. 3.2 & 4.4.3).
- It was determined that goal theory (cf. 2.3.3) is a well-established theory in the field of personality and social psychology. In essence, goal theory postulates that participants in an adventure-based sport set goals against which they measure the success of participation as well as the circumstances that link the satisfaction experienced with adventure sport-related services and its contribution to QoL.

6.3.1.3 Conclusions drawn from theories related to activities (cf. 2.4)

Literature revealed several theories that explain how participation in activities enhances or detracts from an individual's leisure experience, namely the classical conditioning theory (cf. 2.4.1), activity theory (cf. 2.4.2), flow theory (cf. 2.4.3), and personal expressiveness (cf. 2.4.4).

- Classical conditioning theory (cf. 2.4.1) postulates that people seek out activities that they deem rewarding and affecting them positively and they become habitually happy when participating in their chosen activities.
- Activity theory (cf. 2.4.2) explains that activities comprise elements of several components (cf. 1.2) that interact with one another in order to reach a desired objective/goal or outcome.

- Flow theory (cf. 2.4.3) is based on participants' view that their skills successfully match the activity that they take part in. A match leads to satisfaction, whereas a mismatch creates disappointment and frustration.
- Personal expressiveness (cf. 2.4.4) has revealed that individuals identify with activities that they perceive they are best at and that personify who they are and what they want to achieve.

6.3.1.4 Conclusions drawn from the theories discussed in Chapter 2 (cf. 2.5)

- Based on the theories that were discussed in all the fields (QoL, leisure and activities) of Chapter 2 and which formed part of Objective 1, the following conclusions were drawn:
- The bottom-up spillover theory is most suitable to measure an adventure-based sport effect on participants' life domains and therefore on QoL overall.
- Although the goal theory has demonstrated a relationship with leisure well-being and achievement of QoL, the relationship between QoL and leisure (cf. 3.4) was sufficient to contribute to and achieve the overall goal of the study.
- The activity theory has offered the best fit to explain the substantial link between participant's level of activeness and their QoL overall.

6.3.2 Conclusions drawn from the literature review in Chapter 3

The author will now focus on the literature that has been reviewed in Chapter 3 of this study (as set in Objective 2) to analyse QoL in relation to adventure sport. The literature review provided the author with the necessary literary background to embark on the empirical analysis in Chapter 5, which contributed to the achievement of the main goal of the study. The author will follow the chronology of objectives as provided in Table 6.1.

6.3.2.1 Understanding the QoL concept (cf. 3.2)

Literature studies showed that QoL consists of the following various concepts:

- Subjective and objective indicators (cf. 3.2.1). They are not always compatible, but, most importantly, objective QoL is rooted in a subjective experience, which necessitates that only the subjective indicators for paintball be investigated (measured).

- Inputs and outcomes (cf. 3.2.2) directories. They are not formally agreed upon by social scientists in QoL.
- Satisfaction with life (cf. 3.2.3). This is a cognitive concept whose affect is closely linked to the various life domains (cf. 1.2).
- Inner and outer aspects (cf. 3.2.4). They refer to the input conditions that determine the ability to live a fulfilling life versus the liveability of the environment, which makes QoL possible.
- Subjective well-being (SWB) (cf. 3.2.5). It is characterised as a long-term affective state, consisting of the actual totally positive experiences and negative experiences in life domains and the overall reflection thereof. SWB comprises two underlying constructs:
 - Cognitive aspects (cf. 3.2.5.1), which refer to the total reflection that individuals have on their life, and affective aspects, consisting of the overall accumulated positive and negative experiences over a specific period of time.
 - Positive and negative affect (cf. 3.2.5.2), which do not imply opposites; the absence of one does not necessarily determine the other.
- Subjective well-being and eudaimonia (cf. 3.2.6); the latter refers to psychological well-being and can only be substituted with subjective well-being. Eudaimonia has a positive effect on QoL overall.
- Subjective well-being and psychological well-being (cf. 3.2.7); the former refers to individuals' balance of positive and negative emotions over a period of time and their subsequent satisfaction with life, whereas the latter includes effective functioning and developmental potential despite negative affect.

6.3.2.2 Understanding the psychology of QoL (cf. 3.3)

Literature points out that the psychology of QoL consists of the following concepts:

- Satisfaction of development needs (cf. 3.3.1), which states that individuals have a variety of needs that have to be satisfied. The more those needs are satisfied based on memories and recollection, the greater their QoL overall will be.
- Significant life domains (cf. 3.3.2), which are based on the premises that each individual has a different priority with regard to the life domains that he or she

finds important. That being said, individuals who share the same priorities are bound to have the similar life domain priorities, as shown in 5.3.1.4.

- Life domains (cf. 3.3.3), which are cognitive structures with affective experiences that are segmented, based on an individual's assigned importance thereof (and thus based on perceived hierarchy) and recollected through memories that are weighed up against the positive and negative experiences therein.

6.3.2.3. QoL and leisure (cf. 3.4)

- Leisure (and recreational) life is one of the life domains of QoL that can help through research and understanding to improve those individuals who regard the leisure and recreation life domain as important to their QoL overall.
- Literature searches have highlighted that the leisure and recreation life domain has become especially important to those working in urban environments under daily stresses, as it helps to combat modern physical and psychological health problems.
- The successful consumption of leisure experiences also influences social and family life domains.
- Participation in (adventure) sports has become a popular way for modern society to spend their (limited) leisure time.

6.3.2.4 QoL and sport (cf. 3.5)

- Studies have proven that individuals who engage in physically active leisure activities such as sport experiences could enhance their QoL.
- Positive affect includes the enhancement of an individual's psychological and social health. However, the impact of mass participant sports such as paintball has, until this study, not been measured.
- In literature, little was understood of how an adventure-based sport enhances participants' QoL.

6.3.2.5 QoL and adventure activities (cf. 3.6)

- The global growth in popularity of adventure sports can be attributed to a desire by members of the society to enhance their QoL.

- Modern society is burdened by modern work stress and a fast pace of life. Adventure (sport) activities are characteristically different from everyday life and allow participants an opportunity to destress.
- Emotions such as fear, anxiety and stress are evolutionary learning tools to judge whether one is experienced or competent enough to attempt an activity.
- Modern lifestyle has led humans to live civilised and sedentary lives. This has reduced the number of activities encompassing risk that generates emotions such as fear, which has, in turn, led to a decrease in physiological and psychological well-being.
- Adventure (sport) activities fill that gap by providing challenge and risk, and in so doing, affect an individual's QoL overall positively.

6.3.2.6 Conclusions regarding QoL in relation to adventure sport

- A positive link exists between QoL overall and the aspects that make up adventure sport, namely leisure, sport and adventure.
- Based on literature, an empirical test was required on how adventure sport specifically affects participants' QoL.

6.3.3 Conclusions drawn from the literature review in Chapter 4

The author will now focus on the reviewed literature in Chapter 4 of this study as set in Objective 3, to analyse leisure, adventure sport and the adventure sport experience. The literature review provided the author with the necessary literary background to embark on the empirical analysis in Chapter 5, which guided the interview guideline (Annexure B) and the online questionnaire (Annexure C), both of which contributed to the achievement of the main goal of the study. The author will follow the chronology of objectives as provided in Table 6.1.

6.3.3.1 Conclusions regarding leisure (cf. 4.2)

- The leisure (cf.4.2) concept has changed over many generations of time, making a non-period definition with specific time frames difficult, especially as historians do not agree on said time frames. The modern academic study of leisure first arose in 1988.

- The history of leisure in a westernised world (cf. 4.2.1) is highlighted by several primary philosophical influences through the ages.
- Defining leisure (cf. 4.2.2) might seem superficial, but it has a direct impact on the way role players and stakeholders conceptualise and, ultimately, implement their services. Accordingly, literature shows that leisure is a complex scientific concept that can be approached in several ways:
 - The time-based approach (cf. 4.2.2.1).
 - The activity-based approach (cf. 4.2.2.2).
 - The attitude-based approach (cf. 4.2.2.3).
 - The quality-based approach (cf. 4.2.2.4).
 - Leisure as a way of living (cf. 4.2.2.5).
 - Leisure as a state of being and freedom (cf. 4.2.2.6).
 - Leisure as a spiritual expression (cf. 4.2.2.7).
- A theoretical approach to leisure in society (cf. 4.2.3) has revealed that the terms 'play', 'leisure' and 'recreation' are used interchangeably in spite of the fact that each holds a distinctively different meaning. The term 'play' is most often associated with leisure and has been proven to be a cornerstone of human development, instilling an understanding of competitiveness and promoting cooperation, self-expression, creativity, imagination and the building of self-confidence, among other benefits.
- Approaches that are used to define leisure (cf. 4.2.4) are based on their historical context in society. 'Leisure' is a continuous term; an all-encompassing viewpoint thereof has not yet been created. It can, however, be explained by making use of several approaches:
 - It consists of a choice to undertake activities voluntarily.
 - It is objectively seen as non-work.
 - It is subjectively seen as a belief.
 - It is a period of time in which one is free from obligations.
- Leisure as a modern phenomenon (cf. 4.2.5) has evolved into a complex phenomenon that has diverse meanings for different people and groups. It is now seen as a part of modern society's daily routine and plays a key role in shaping people's lives.

- The relationship between leisure, recreation and tourism (cf. 4.2.6) is best explained with reference to Figure 4.4. Leisure is based on non-work activities (barring other responsibilities), allowing an individual freedom to participate in play/recreation or tourism. Play and recreation are activities that are voluntarily undertaken during leisure time. Tourism is the activity of travelling to a destination for more than 24 hours, requiring overnight stay and incorporating leisure and recreational activities. Importantly, it was established that adventure sport forms part of play and recreation as elements of leisure time.

6.3.3.2 Conclusions regarding adventure sport (cf. 4.3)

- Based on literature, it can be said that adventure sport (cf. 4.3) is the active, passive or nostalgic engagement in sports-related activities while away from one's normal place of residence. It combines elements of sport, travel and outdoor recreation. Adventure sport activities take place mostly in the outdoors (nature) and consist of physical activities that challenge the participants' skills with an associated element of risk. Adventure sport participants can be grouped into the following criteria:
 - Samplers.
 - Amateurs/learners.
 - Semi-professionals/dabblers.
 - Professionals/enthusiasts.
- It was established that adventure tourism (cf. 4.3.1) had multiple beginnings throughout history as equipment advanced and opportunities to participate became available. Tourists increasingly seek out more adventurous travel opportunities that provide an adrenaline rush associated with risk-taking. This has led to adventure tourism in the form of guided commercial tours based on adventure activities. Adventure tourism consists of the following four major components (Figure 4.8) that support its existence:
 - Independent travel.
 - Fully packaged commercial adventure tours.
 - Fixed-site adventure activities.
 - Ancillary business.

- In literature, adventure travel (cf. 4.3.2) is described as deliberate travelling in order to pursue and engage in either hard or soft adventure activities for the purpose of having an adventure experience.
- Sport tourism (cf. 4.3.3) is one of the oldest forms of tourism and can be seen as a union between sport activities, events and tourism, globally supported by services such as accommodation and transport. Sport tourism can take the form of either active or passive participation.
- Adventure sport (cf. 4.3.4) is the core of adventure tourism and can be seen as the alternative to traditional sport, as it features the active pursuit of elements of risk and an uncertain outcome in an outdoor setting. Adventure sport can be divided into two segments, namely hard and soft sport.
 - Hard adventure sport (cf. 4.3.4.1) is also known as extreme sport in which participants have a real chance of dying should they make a mistake.
 - Soft adventure sport (cf. 4.3.4.2) is characterised by high levels of perceived risk with a priority on safety.

6.3.3.3 Conclusions regarding adventure sport experience (cf. 4.4)

- Adventure sport experience (cf. 4.4) has not been fully researched yet and, as with the term 'experience', is in general a complex construct.
- Tourism experience is prevalent in tourism literature and is described as everything that encompasses a tourism trip (cf. 4.4.1). The following key themes were identified:
 - Ambiguous understanding of the tourism experience concept (cf. 4.4.1.1).
 - Peak experiences (cf. 4.4.1.2).
 - Marketing/management approach (cf. 4.4.1.3).
 - Involvement (cf. 4.4.1.4).
 - Emotional and spiritual elements (cf. 4.4.1.5).
 - Social experience (cf. 4.4.1.6).
 - Environment to experience (cf. 4.4.1.7).
 - Experience embedded in long-term memory (cf. 4.4.1.8).
- Literature points out that traditional explanations regarding experience are inconsistent with the adventure sport experience (cf. 4.4.2). The literature on

leisure and recreation experiences contained more suitable explanations for the adventure sport experience. Key themes include the following:

- Cultural rebellion (cf. 4.4.2.1).
- Challenge/risk experience (cf. 4.4.2.2).
- Fear, anxiety and stress experience (cf. 4.4.2.3).
- Adrenaline rush and escape experience (cf. 4.4.2.4).
- Physical and psychological conflict experience (cf. 4.4.2.5).
- Social and emotional experiences (cf. 4.4.2.6).
- Peak and optimal experiences (cf. 4.4.2.7).
- Internet questions (cf. 4.4.3) posed on Behind the Bunker (a paintball internet show) about the adventure sport experience, specifically regarding the paintball experience, revealed several themes from respondents' feedback. They are the following:
 - Community and friendship.
 - Fear.
 - Challenge.
 - Lifestyle.
 - Adrenaline rush and escape.
 - Memories.
 - Stress relief.
 - Camaraderie.
 - Place and environment.
- The themes that were identified in the tourism experience (cf. 4.4.1), adventure sport experience (cf. 4.4.2) and respondents' feedback (based on internet questions) (cf. 4.4.3) were compared for overlapping aspects that would help to better understand aspects related to an adventure-based sport experience, which could then be tested through the empirical survey (cf. 4.4.4). The following themes were identified for incorporation in the empirical survey:
 - Marketing/management approach (cf. 4.4.1.3).
 - Involvement (cf. 4.4.1.4).
 - Physical and psychological conflict (cf. 4.4.2.5).
 - Environment to experience (cf. 4.4.1.7).
 - Place/environment (cf. 4.4.3).

- Experience embedded in long-term memory (cf. 4.4.1.8).
- Memories (cf. 4.4.3).
- Cultural rebellion (cf. 4.4.2.1).
- Lifestyle (cf. 4.4.3).
- Challenge/risk experience (cf. 4.4.2.2).
- Challenge (cf. 4.4.3).
- Adrenaline rush and escape (cf. 4.4.2.4).
- Fear, anxiety and stress experience (cf. 4.4.2.3).
- Fear (cf. 4.4.3).
- Stress relief (cf. 4.4.3).
- Peak experience (cf. 4.4.1.2).
- Peak and optimal experience (cf. 4.4.2.7).
- Social experience (cf. 4.4.1.6).
- Social and emotional experience (cf. 4.4.2.6).
- Camaraderie (cf. 4.4.3).
- Community and friendship (cf. 4.4.3).

6.4 CONCLUSIONS DRAWN FROM THE EMPIRICAL RESULTS

The author will now focus on the results of the empirical survey as reported in Chapter 5 of this study and set in Objective 4 in order to provide the results of the statistical analysis. Thereafter, a QoL framework for an adventure-based sport activity will be developed by means of a structural equation model. The author will follow the chronology of objectives as provided in Table 6.1.

6.4.1 Conclusions regarding qualitative analysis (cf. 5.2)

- Interviewees were identified based on continental region of origin, social standing in the paintball community and style of paintball provided on Facebook.
- A total of 24 paintballers were approached globally, of which 12 agreed to be interviewed (Table 5.1).
- Interviews were semi-structured, one-on-one via Skype, Facebook or in person, depending on their location.
- A phenomenological approach was used, focusing on participants' paintball experiences.

- A ladder technique was used in which hierarchical questions were asked (cf. 1.6.2.3.1).
- Each interview was recorded and converted to MP4 for easier storage, and finally to mp3 audio to protect interviewees' confidentiality.

6.4.1.1 Conclusions regarding interviewees' profiles (cf. 5.2.1)

- The majority of respondents were male which was consistent with Goldbecker (2013:50).
- The youngest interviewee was 24 years old and the most senior one was 48 years old.
- Half of the interviewees originated from Africa, three from North America, two from Europe and one from Australasia.
- Eight interviewees preferred MILSIM, with five having military, security or tactical training.
- Three interviewees were dedicated speedballers.
- One interviewee played both styles of paintball.
- All interviewees had played paintball in the last six months.
- Experience varied from 3 to 31 years.
- Interviewees' own classification of which type of paintballers they are were incorrect and the author updated said types based on the classification that has been provided (cf. 4.3).

6.4.1.2 Conclusions regarding leisure-based activity (cf. 5.2.2)

According to interviewees (cf. 5.2.2.1), the leisure aspects of paintball were the following (in order of frequency):

- Improvement of fitness and exercise (cf. 4.2.3).
- The fun factor (cf. 4.2.6).
- Relaxation and stress relief (cf. 4.2.5 & cf. 4.2.6).
- The adrenaline rush (cf. 4.4.2.4).
- Mental stimulation (cf. 3.4; cf. 3.5 & 4.2.3).
- The social factor (cf. 3.4 & cf. 4.2.3).
- The challenge (cf. 3.6 & cf. 4.3).
- Escape (cf. 4.4.2.4).

- Simulation (cf. 4.2.2.5).

6.4.1.3 Conclusions regarding the activity aspects of paintball (cf. 5.2.2.3)

Interviewees associated the themes of the activity theory (cf. 1.2) with paintball. These themes were summarised and classified as the following activity themes of paintball (cf. 5.2.2.4):

- Outcome – *What they want to achieve by playing paintball* (cf. 5.2.2.3.1) revealed only positive associations such as breaking away, having fun, socialising, having a good time with the community, winning, friendship, action, being the best, recognition and growing the sport.
- Subject – *Describe the type of paintballer you are* (cf. 5.2.2.3.2) also showed a positive association of MILSIM with challenge, tactical thinking, realism, military background and military family. Speedball was associated with human chess, fast pace and intensity.
- Object(ive) – *The purpose of playing* (cf. 5.2.2.3.3) showed a positive association with planning, team work, fun, making friends, travelling, tactical thinking, simulation, inspiring others, blowing off steam, keeping one's mind sharp, discipline and health.
- Tools – *The feelings associated with their markers/uniforms/gear* (cf. 5.2.2.3.4) exposed some positive association such as an extension of themselves, identity, the pride factor, functionality and enhancement of realism.
- Rules – *Adherence to rules by players and enforcement of rules* (cf. 5.2.2.3.5) revealed that positive association with adherence consisted of the belief that rules make the sport, safety is of utmost importance, and honesty and integrity are very important. Positive association with enforcement showed that safety is paramount. Negative association with adherence showed that cheaters detract from a positive experience and ruin the sport, whereas negative association with enforcement highlighted that a lack of standardised rules, interpretation of rules, enforcement of rules, inconsistent marshalling and a lack of trained marshals detract from the sport.
- Community – *Perception of fellow paintballers* (cf. 5.2.2.3.6) showed that positive aspects include fantastic people, camaraderie, openness, incredible friendliness, helpfulness, reliability, similar interests, and an understanding that transcends

borders and language. Negative aspects include problem players, politics, and a mismatching of skilled vs. non-skilled players, who could be destroyed by it.

- Division of labour – *Organisers' ability and players' receptiveness* (cf. 5.2.2.3.7) showed a positive view with regard to organisers whose ability makes the sport special, the experience great, and enhances socialisation on and off the field, as well as charismatic individuals who motivate players. Positive player receptiveness included a demand for more challenging events and the fact that players are receptive to new ideas. Negative association with organisers' ability included a limited choice in speedball leagues in some countries, whereas negative association with players' receptiveness showed that style differences might lead to friction, an unsatisfied or overwhelming experience, a difference in the interpretation of rules and a lack of understanding of new concepts.

6.4.1.4 Conclusions regarding the adventure sport experience (cf. 5.2.3)

Interviewees viewed key themes associated with paintball as follows:

- Paintball as a peak experience (cf. 5.2.3.1 & cf. 4.4.1.2) showed a positive association with the following aspects: teamwork and skill achieve victory and generate euphoria; skilled opponents make for more memorable experiences and assist new players to ease in. Negative association included that inexperienced players can get hurt; there is childish behaviour present; cost hinders frequent play; and skilled players find inexperienced opponents frustrating (and vice versa).
- Paintball as a lifestyle (cf. 5.2.3.2 & cf. 4.4.2.1) showed that a positive association was made with aspects such as players' feeling that they are born to do it; it is some players' bread and butter; it has changed players' lives for the better; some players are sponsored; it is a substitute for previous military work; it is a learning platform that breeds tactical competency; it is a rich and positive experience; and it enhances social life. Negative aspects included the fact that commitment needs to become competence and that it requires financial investment.
- Camaraderie, friendship and community found in paintball (cf. 5.2.3.3 & cf. 4.4.2.6) consisted only of positive aspects, including that these elements embody the core spirit of the sport; enhance the feeling that players are part of a group;

make new players feel welcome and supported; allow the sharing of war stories; and fulfil the need for closeness that was previously only found in combat.

- The adrenaline rush and escape experience associated with paintball (cf. 5.2.3.4 & cf. 4.4.2.4) showed that a positive adrenaline rush is a constant and that the escape aspect is associated with an escape from reality, life and society; clearing the mind and relieving stress; and tranquillity in motion. Negative aspects with regard to adrenaline rush included that it can be too much for some; and that if the game is not challenging, experienced players do not feel the rush.
- The social and emotional experience of paintball (cf. 5.2.3.5 & cf. 4.4.1.6) revealed that the positive aspects associated with this experience include meeting new people; similar interests; becoming friends on and off the field; plenty of social interaction, which is important for sport growth; and playful bantering while being emotional, which shows that winning can build you up. Negative aspects of the social experience of paintball were highlighted by the negative comments, whereas the emotional experience is influenced by losing, which can break one down, as well as screaming, shouting and cursing.
- Memories in paintball (cf. 5.2.3.6 & cf. 4.4.1.8) showed many positive aspects, including that there are too many stories to tell; good experiences; memories' great importance to paintballers; making friends of enemies and enemies of friends. Negative aspects include scars from bad experiences.
- Fear, anxiety and stress in paintball (cf. 5.2.3.7 & cf. 4.4.2.3) showed that fear and anxiety disappear with experience, which is a positive aspect. Negative aspects such as fear are mostly felt when players are confronted with losing, making wrong decisions and when they are new to the sport. Anxiety is felt at the moment that players are under pressure and when they are inexperienced. Stress is experienced before a match and when players are faced with unsportsmanlike behaviour.

6.4.1.5 Conclusions regarding results of life domains (cf. 5.2.4)

The results revealed how paintball affected each interviewee based on the life domains that were presented.

- Social life (cf. 5.2.4.1) as a positive aspect comprises the telling of stories; meeting new people and making new friends; being more socially confident; and

the essence of paintball life. Aspects having a negative affect include equipment failure; not enough time to socialise; and friends leaving the sport.

- Emotional life (cf. 5.2.4.2) showed positive aspects that comprise excitement when players do not know what to expect; feeling distressed; learning control and calmness; emotional support of fellow players; and projecting confidence. Negative aspects impacting emotional life include the possibility of failure and nightmares about paintball.
- Health and safety life (cf. 5.2.4.3) indicated that positive health aspects include improved fitness and good exercise, whereas safety aspects comprise the reducing of risk through good management; very high standards; the teaching of firearm safety; and improvement of vigilance. Negative aspects with regard to safety aspects comprise the possibility of serious injuries; avoidance of certain types of paintball events due to risk; and poor management that increases risk.
- Leisure and recreation life (travel life included) (cf. 5.2.4.4) presented paintball as a positive leisure and recreation experience that fills one's leisure time. Negative aspects include that paintball sometimes overwhelms the players; work sometimes impedes leisure time over weekends; and there isn't always enough time for leisure.
- Financial life (cf. 5.2.4.5) showed that positive aspects of paintball for interviewees include that money spent on it is worth it; the game creates financial opportunities; the cost of playing is affordable and alternative formats that alleviate costs are available. Negative aspects include that the initial expenses for equipment are high and that paintball has a negative effect on finances.
- Other life domains (cf. 5.2.4.6) revealed that family life is also important. Positive aspects include the positive effect on family when they become involved; it increases the family bond under pressure; and it teaches what family is through shared camaraderie. Negative aspects include that paintball takes away from family time and may cause family friction because of time spent with sport.

6.4.1.6 Conclusion regarding QoL (cf. 5.2.5)

The results clarified how each interviewee's QoL overall was affected by participating in paintball during the previous six months.

- All the interviewees indicated a positive influence.

6.4.2 Conclusions regarding quantitative analysis (cf. 5.2)

6.4.2.1 Conclusions regarding descriptive results (cf. 5.3.1)

Descriptive results (cf. 5.3.1) are based on the descriptive statistics of the 506 respondents who completed the online questionnaire. A conclusion of the demographic characteristics (cf. 5.3.1.1) will be reported first, followed by leisure aspects of paintball (cf. 5.3.1.2.1) and activity aspects of paintball (cf. 5.3.1.2.2). Thereafter, the adventure sport experience (cf. 5.3.1.3) and life domains (cf. 5.3.1.4) will follow. Lastly, a conclusion of QoL (cf. 5.3.1.5) will be given. With the exception of demographic characteristics (cf. 5.3.1.1), the results (cf. 5.3.1.2-5.3.1.5) that have the heaviest mean and are therefore the most important will be presented for each.

6.4.2.1.1 Conclusions regarding the descriptive results of demographic characteristics (cf. 5.3.1.1)

- The vast majority of respondents are male (93%).
- Most respondents indicated their work station as full-timers (81%).
- The largest representative age group was between 25 and 34 years old (38%).
- More than half of the respondents (53%) indicated that they had a diploma or degree.
- Most respondents are married (44%).
- Nearly half (49%) of the respondents indicated that they regarded themselves as dabblers (semi-professionals).
- The majority of respondents (36%) have been playing paintball for between 6 and 10 years.
- Almost half of the respondents (47%) had played paintball five times or less during the previous six months.
- More than half of the respondents (55%) indicated that they preferred MILSIM/scenario paintball.
- Most paintballers (76%) have no military, law enforcement or formal tactical training (MLT) background.
- The majority of respondents (33%) originated from the USA.

6.4.2.1.2 *Conclusion regarding the descriptive results of leisure aspects of paintball (cf. 5.3.1.2.1)*

- The vast majority of respondents (90%) strongly agree ($\bar{x} = 4.87$) that paintball has a great fun factor.

6.4.2.1.3 *Conclusions regarding the descriptive results of activity aspects of paintball (cf. 5.3.1.2.2)*

- Rules are the most important activity aspect in paintball ($\bar{x} = 4.31$) and most respondents (56%) strongly agreed ($\bar{x} = 4.43$) that it is frustrating when paintball fields do not enforce the rules.
- Community was the second most important activity aspect in paintball ($\bar{x} = 3.86$) and most respondents (44%) strongly agreed ($\bar{x} = 4.24$) that paintball players are fantastic people.
- Objective is seen as the third most important activity aspect in paintball ($\bar{x} = 3.57$) and the majority of respondents (58%) strongly agreed ($\bar{x} = 4.50$) that inspiring other paintballers makes them feel good.
- Division of labour was the fourth most important activity aspect in paintball ($\bar{x} = 3.47$), which showed that the vast majority of respondents (74%) strongly agree ($\bar{x} = 4.68$) that organisers who go above and beyond what is expected of them enhance the paintball experience.
- Tools were the fifth most important activity aspect in paintball ($\bar{x} = 3.32$), which showed that most respondents (41%) agree ($\bar{x} = 4.15$) that their paintball gear gives them a sense of pride.
- Outcome was the sixth most important activity aspect in paintball ($\bar{x} = 3.31$), with the vast majority of respondents (86%) strongly agreeing ($\bar{x} = 4.84$) that playing paintball is fun.
- Subject was the seventh most important activity aspect in paintball ($\bar{x} = 3.12$), with many respondents (36%) strongly agreeing ($\bar{x} = 3.78$) that they enjoy the challenge of playing MILSIM paintball.

6.4.2.1.4 *Conclusions regarding the descriptive results of adventure sport experience (cf. 5.3.1.3)*

- Peak experience (cf. 4.4.1.2) was the most important adventure sport experience in paintball ($\bar{x} = 3.82$). More than half of the respondents (52%) strongly agreed ($\bar{x} = 4.42$) that teamwork and skill achieve victory and generate euphoria.
- Fear, anxiety and stress (cf. 4.4.2.3) was the second most important adventure sport experience in paintball ($\bar{x} = 3.56$), with most of the respondents (47%) agreeing ($\bar{x} = 4.10$) that unsportsmanlike behaviour causes unnecessary stress.
- Lifestyle (cf. 4.4.2.1) was seen as the third most important adventure sport experience in paintball ($\bar{x} = 3.24$). More than half of the respondents (54%) strongly agreed ($\bar{x} = 4.41$) that paintball had improved their lives.
- Respondents viewed social and emotional experience (cf. 4.4.1.6) as the fourth most important adventure sport experience in paintball ($\bar{x} = 3.18$), with more than half of the respondents (53%) strongly agreeing ($\bar{x} = 4.46$) that meeting people with similar interests is a positive experience.
- Memories (cf. 4.4.1.8) was the fifth most important adventure sport experience in paintball ($\bar{x} = 3.07$) and nearly three-quarters (74%) of respondents strongly agreed ($\bar{x} = 4.69$) that paintball has left them with wonderful memories.
- Camaraderie, friendship and community (cf. 4.4.2.6) was the sixth most important adventure sport experience in paintball ($\bar{x} = 2.97$). More than half of the respondents (58%) strongly agreed ($\bar{x} = 4.50$) that it feels good to be part of the paintball community.
- Adrenaline rush and escape (cf. 4.4.2.4) was the seventh most important adventure sport experience in paintball ($\bar{x} = 2.74$), with most respondents (41%) agreeing ($\bar{x} = 3.85$) that paintball helps them to escape from daily life and reality.

6.4.2.1.5 *Conclusions regarding the descriptive results of life domains and life domains overall (cf. 5.3.1.4)*

- Leisure and recreation life was the most affected life domain ($\bar{x} = 3.64$), with more than half of the respondents (51%) agreeing ($\bar{x} = 4.26$) that paintball offers various types of activities that enhance leisure and recreation life.

- Health and safety life was considered the second most affected life domain ($\bar{x} = 3.45$). More than half of the respondents (54%) strongly agreed ($\bar{x} = 4.49$) that playing paintball is good exercise.
- Travel life was the third most affected life domain ($\bar{x} = 3.41$) and nearly half of the respondents (49%) strongly agreed ($\bar{x} = 4.35$) that they enjoy new places to visit while travelling to play paintball.
- Social life has emerged as the fourth most affected life domain ($\bar{x} = 3.32$), with more than half of the respondents (55%) strongly agreeing ($\bar{x} = 4.48$) that they enjoy meeting new people while playing paintball.
- Financial life was the fifth most affected life domain ($\bar{x} = 3.28$). Nearly half of the respondents (48%) strongly agreed ($\bar{x} = 4.33$) that the money they spend on paintball is worth the experiences they get to enjoy.
- Emotional life was the sixth most affected life domain ($\bar{x} = 3.10$) and more than half of the respondents (53%) agreed ($\bar{x} = 4.04$) that they experience excitement when they do not know what to expect.
- Family life was the seventh most affected life domain ($\bar{x} = 3.05$), with most respondents (38%) agreeing ($\bar{x} = 3.83$) that they see their paintball family as their real family.

6.4.2.1.6 Conclusion regarding the descriptive results of QoL (cf. 5.3.1.5)

- More than half of the respondents (55%) agreed ($\bar{x} = 3.87$) that they are satisfied with their life.

6.4.2.2 Conclusions regarding the exploratory factor analysis (cf. 5.3.2)

- The EFA presented only one aspect with regard to leisure aspects of paintball (cf. 5.3.2.1), which was subsequently labelled *leisure aspects of paintball*. It produced a high level of reliability that is indicative of the fact that leisure is important and that individuals pursue leisure as a way to break away from their daily routine.
- Ten aspects were identified as part of the EFA of activity aspects of paintball (cf. 5.3.2.2), which were based on the themes found in the activity theory (cf. 1.2 & 2.4.2). Eight aspects generated an acceptable mean inter-item correlation, of which *positive impact of community* emerged as the most important activity

aspect of paintball. Pertaining to the previous, it is evident that being part of the paintball community has a positive impact on participants. *Negative external impact* was revealed to be the most important negative activity aspect of paintball, indicating that, among other things, friction between styles of paintball can impact the adventure sport negatively.

- The EFA of adventure sport experience, which was based on literature regarding tourism experience (cf. 4.4.1), adventure experience (cf. 4.4.2) and adventure sport experience based on internet questions (cf. 4.4.3), was grouped into two separate analyses, namely positive adventure sport experience (cf. 5.3.2.3.1) and negative adventure sport experience (cf. 5.3.2.3.2). Three aspects were extracted as part of the positive adventure sport experience (cf. 5.3.2.3.1), of which two indicated a high internal consistence. The most important conclusion with regard to positive adventure sport experience (cf. 5.3.2.3.1) was that *positive camaraderie* showed to be the main motivator for participants in paintball, which is indicative of the adventure sport. With regard to negative adventure sport experience, six aspects were extracted, of which two were deemed acceptable. The main motivator that impacts the adventure sport and participants' experience negatively was revealed to be *negative stresses* such as childish behaviour and negative comments.
- The EFA of life domains sought to analyse the life domains (cf. 1.2) that best fit paintball; they were divided into three groups, namely positive affect in life domains (cf. 5.3.2.4.1), negative affect in life domains (cf. 5.3.2.4.2) and life domains overall (cf. 5.3.2.4.3). Seven aspects were extracted from the positive affect in life domains (cf. 5.3.2.4.1), of which six had a high internal consistency. *Positive health* (physical and psychological) emerged as paintball's biggest life domain contributor. Concerning the negative affect in life domains (cf. 5.3.2.4.2), seven aspects were extracted, of which five indicated a good internal consistency. *Negative affect in financial life* emerged as paintball's most prominent negative life domain contributor. Life domains overall (cf. 5.3.2.4.3) consisted of one aspect, labelled *life domains overall*, which measured a high internal consistency. Within life domains overall, *I am satisfied with my social life* emerged as the most important life domain overall, which suggests that paintball plays a prominent role in satisfying paintballers' social needs.

6.4.2.3 Conclusions regarding the *t*-test (cf. 5.3.3)

- With reference to the *t*-test of gender and the identified aspects of paintball (cf. 5.3.3.1), it was found that female paintballers were entirely more positive compared to their male counterparts. More specifically, a medium practical significance was found in *negative external impact*, *negative pressure* and *positive adventure sport stress*. This shows that female players are less susceptible to negative external impacts and negative pressure, and experience positive adventure sport stress better. Furthermore, female players experience *positive affect in family life*, *positive affect in health and safety life* and *positive affect in emotional life* more positively than their male counterparts. Lastly, female paintballers experience less *negative affect in leisure and recreation life* than males.
- With reference to the *t*-test of respondents with and without military, law enforcement or formal tactical training and the identified aspects of paintball (cf. 5.3.3.2), it was found that with regard to *leisure aspects of paintball*, there was no practically significant difference between those with and those without MLT. This seems to indicate that both groups experience similar states of leisure while playing paintball. Those players with MLT felt much stronger about specific *aspects impacting MILSIM* than those without MLT, which signifies the importance of, among other things, the challenge, tactics and realism (associated with a MILSIM experience) for those with MLT. *Negative pressure*, on the other hand, had a medium practical significance and was viewed more positively by those players without than those with MLT. It would seem that those with MLT are more anxious when under pressure than those without MLT, most probably due to past real-world experiences. The effect size that was measured with regard to *negative affect in travel life* and *negative affect in leisure and recreation life* had no practical significance when comparing those players with MLT to those without MLT, which indicates that they all experience the said aspects very similarly. The same was observed with regard to *life domains overall*.

6.4.2.4 Conclusions regarding the analysis of variance (cf. 5.3.4)

6.4.2.4.1 *Conclusions regarding home language and the identified aspects of paintball (cf. 5.3.4.1)*

- Afrikaans speakers were found to be more positive regarding aspects such as *those ones impacting MILSIM, the negative impact of rules, adventure sport experience, the positive impact of gear, positive adventure sport lifestyle, negative adventure sport experience, positive affect in life domains and positive affect in family life* than those players who spoke any other language. The predominant positivity of Afrikaans-speaking paintballers could be attributed to the relative newness of the adventure sport on a large scale in South Africa, as well as the small but very active paintball community when compared globally.
- English-speaking paintballers were the least negative with regard to *negative memories and negative stresses*.
- Those who spoke other languages were less negative with regard to *negative affect in life domains* than any other language group.
- It can therefore be deduced that Afrikaans-speaking paintballers are the most positive with regard to the majority of identified aspects of paintball.

6.4.2.4.2 *Conclusions regarding work station and the identified aspects of paintball (cf. 5.3.4.2)*

- Respondents who chose *other* were more positive (small effect) with regard to *internal activity aspects and negative commitment* than full-timers, part-timers and those who are unemployed. Regarding the small effect difference, it would be prudent to reason that the actual effect is negligent.
- Surprisingly, those who are unemployed were more positive (medium effect) with regard to *positive affect in health and safety life* than full-timers, part-timers and those who chose *other*. This could be attributed to more free time available to take care of their health and safety requirements.
- Given the small effect size of those who chose *other* and the limited number of identified aspects of paintball, it would be reasonable to argue that work station has little effect on paintballers' overall experience.

6.4.2.4.3 Conclusions regarding marital status and the identified aspects of paintball (cf. 5.3.4.3)

- Respondents who are single were more positive (small effect) in practice regarding *positive adventure sport camaraderie*, *positive adventure sport stress* and *positive affect in travel life* than those who are married, living together or chose *other*. The same holds true regarding measured effect-size differences between the other marital statuses. It could be argued that as single persons, they have no intimate relationship responsibilities and that camaraderie fulfills their social needs. They are also more flexible with regard to travel and gain more from positive adventure sport stress.
- Married respondents were less negative (small effect) with regard to *negative memories*, *negative affect in financial life* and *quality of life* than respondents who are single, living together and chose *other*. Taking into account said effect sizes, the difference is negligible and has only a small effect.
- Respondents who selected *other* were more positive (small effect) with regard to *positive affect in emotional life*.
- Considering the small effect size of the various marital statuses above, it can be argued confidently that marital status has little effect on paintballers' overall paintball experience.

6.4.2.4.4 Conclusions regarding type of paintballers and the identified aspects of paintball (cf. 5.3.4.4)

- Across the board, respondents who classified themselves as enthusiasts were more positive than dabblers and learners when comparing identified aspects of paintball. A positive (medium effect) difference was observed when comparing enthusiasts to learners regarding the *leisure aspects of paintball*, *internal activity aspects*, *the negative impact of rules*, *positive adventure sport stress*, *the positive affect in emotional life* and *positive affect in leisure and recreation life*. Therefore, enthusiasts are more positive (medium effect) than learners regarding the above identified aspects of paintball. This can be attributed to the fact that enthusiasts have more experience and have played the game for a longer time than learners who have just entered the adventure sport.

- There is only a small effect difference between enthusiasts and dabblers throughout 5.3.4.4, which indicates a negligible difference in how the groups experience the identified aspects of paintball. Similarly, a small effect difference exists between dabblers and learners.
- It can therefore be concluded that enthusiasts are much more positive regarding the identified aspects of paintball than learners.

6.4.2.4.5 *Conclusions regarding style of play and the identified aspects of paintball (cf. 5.3.4.5)*

- Respondents who play speedball were more positive than those who play MILSIM-S or both with regard to most identified aspects of paintball.
- Those who play speedball were more positive (small effect) compared to those playing MILSIM-S or both with regard to *positive internal activity aspects, negative internal activity aspects, negative emotion, positive affect in travel life and positive affect in leisure and recreation life*. Furthermore, a small effect, or no effect at all, was recorded between those who play MILSIM-S and those who play both with regard to the above identified aspects of paintball. Conversely, the small effect size seen in the identified aspects of paintball indicates a negligible difference between the styles of paintball.
- A positive (large effect) difference was observed with regard to *aspects impacting MILSIM*, whereby those playing MILSIM-S were more positive than those playing speedball or both. Given the nature and niche of MILSIM-S, a large difference was to be expected.
- It can therefore be concluded that the *aspects impacting MILSIM* are much more important to MILSIM-S paintballers than to speedballers and those who play both. With regard to the other identified aspects of paintball, there is a negligible difference between the various styles of play.

6.4.2.5 Conclusions regarding Spearman's rank correlation coefficient between identified aspects of paintball and the demographic characteristics of respondents (cf. 5.3.5.1)

6.4.2.5.1 *Conclusions regarding Spearman's rank correlation coefficient between identified aspects of paintball and age of respondents (cf. 5.3.5.1)*

- Numerous small negative correlations exist between the identified aspects of paintball and the respondents' age, namely *positive internal activity aspects, negative impact of rules, negative external impact, positive adventure sport camaraderie, positive adventure sport stress, positive affect in emotional life, positive affect in travel life, positive affect in health and safety life, positive affect in social life, negative affect in social life and negative affect in leisure and recreation life*.
- Two small positive correlations were observed between age and the identified aspects of paintball, namely *negative affect in family life and negative affect in social life*.
- From the above, it can be reasoned that age has a predominantly negative effect on identified aspects of paintball.

6.4.2.5.2 *Conclusions regarding Spearman's rank correlation coefficient between identified aspects of paintball and highest level of education of respondents (cf. 5.3.5.1)*

- Only a small negative correlation was observed between *positive affect in emotional life* and highest level of education.
- The absence of both positive and negative correlations points to the fact that highest level of education has little relevance in paintball.

6.4.2.5.3 *Conclusions regarding Spearman's rank correlation coefficient between identified aspects of paintball and years playing paintball (cf. 5.3.5.1)*

- Small negative correlations were identified between years playing paintball and *leisure aspects of paintball, aspects impacting MILSIM, negative impact of rules, positive adventure sport camaraderie, positive affect in leisure and recreation life and positive affect in health and safety life*.
- Only one small positive correlation was identified, namely *positive impact of gear*.

- Based on the above, it can be inferred that years playing paintball has a predominantly negative effect on identified aspects of paintball.

6.4.2.5.4 Conclusions regarding Spearman's rank correlation coefficient between identified aspects of paintball and times played in last six months (cf. 5.3.5.1)

- Numerous small positive correlations were identified with regard to times played in the last six months, namely *negative external impact*, *positive adventure sport stress*, *positive affect in emotional life*, *positive affect in family life*, *positive affect in travel life*, *positive affect in leisure and recreation life*, *positive affect in social life*, *positive affect in health and safety life*, *life domains overall* and *QoL*.
- Several small negative correlations were identified between times played in the last six months, namely *negative impact of rules*, *negative memories* and *negative affect in family life*.
- Based on the above, it can be concluded that times played in the last six months has a predominantly positive effect on identified aspects of paintball.

6.4.2.6 Conclusions regarding Spearman's rank correlation coefficient between individual aspects (factors) of paintball (cf. 5.3.5.2)

More than 200 medium and large correlations were measured for this study. A breakdown presented the following:

- 130 medium positive correlations.
- 60 medium negative correlations, of which the largest two were found to exist between *positive adventure sport camaraderie* (cf. 5.3.5.2.12) and *negative memories* ($r = -.433$) as well as *negative affect in family life* ($r = -.404$).
- 22 large positive correlations, of which the largest two were found to exist between *positive affect in social life* (cf. 5.3.5.2.25) and *positive adventure sport camaraderie* ($r = .686$), as well as *life domains overall* (cf. 5.3.5.2.32) and *QoL* ($r = .700$).
- No large negative correlations were present.

For a detailed interpretation of all the above correlations, see 5.3.5.2.1-5.3.5.2.32.

6.4.2.7 Conclusions regarding the structural equation model (cf. 5.3.6)

- The SEM (cf. 5.3.6) of the study consists of nine identified latent variables (aspects) with a statistical significance (Table 5.30).
- The latent variables were labeled *leisure aspects of paintball*, *positive activity theory aspects of paintball*, *negative activity theory aspects of paintball*, *positive adventure sport experience*, *negative adventure sport experience*, *positive affect in life domains*, *negative affect in life domains*, *life domains overall* and *QoL*.
- The latent variables (aspects) were connected by 13 relationships, of which 12 were significant (Table 5.30).
- All variables (aspects) were statistically significant (cf. 5.3.6.1.1-5.3.6.1.16) with the exception of *the positive adventure sport experience and negative affect in life domains* (cf. 5.3.6.1.12), which was not statistically significant.
- All variables (aspects) (cf. 5.3.6.1.1-5.3.6.1.16) were discussed.
- In conclusion, it is evident from the empirical analysis that regular participation in paintball could enhance participants' QoL. Furthermore, the goal of the study, namely to develop a QoL framework for an adventure-based sport, was successful.

From the above conclusions (cf. 6.3.1, 6.3.2, 6.3.3, 6.4.1 & 6.4.2) and based on the objectives of the study (cf. 1.4.2), the goal of the study (cf. 1.4.1) was successfully achieved. Consequently, it is possible to present the practical contributions (cf. 6.5) and recommendations (cf. 6.6).

6.5 CONTRIBUTION

This study has made important contributions to academic methodology as well as to the adventure sport of paintball. In practice, the findings of the study can be used to improve the appeal and growth of paintball globally. This can be achieved in the following way: first, the findings of the study can be spread globally. Second, by enhancing the positive affect aspects of paintball, the negative affect aspects can be minimized. By improving the positive affect aspects that impact participants' life domains positively, a greater bottom-up spillover will occur that impacts participants' QoL overall. This section will now reflect on the important contributions that have been made to the methodology (cf. 6.5.1) as well as on the practical contributions (cf. 6.5.2).

6.5.1 Methodological contribution

- The questionnaire (Annexure C) contributes to methodology, as some of the sections, for example leisure aspects (Section A1), activity aspects of paintball (Section A2), the adventure sport experience (Section B) and life domains (Section C), have not been applied before in the context of and adventure-based sport.

6.5.2 Theoretical contributions

- With reference to the literature and data results from the study, a complete SEM can be presented as a good fit. The SEM can be used in future studies as a guideline for QoL research on adventure sport and, more specifically, adventure combat sports such as paintball.
- The principle empirical contribution pertaining to this study is the SEM (model), which was derived from a combined literature analysis in Chapters 2 to 4. The model A proposed QoL framework for adventure-based [combat] sport) shown in Figure 6.1 can be used in future research studies on the QoL impact of adventure-based (combat) sport, which can assist in understanding participants' motivation for participation and how their overall experience can be improved. The model shows the relationships between leisure aspects of adventure sport and activity aspects, subsequently affecting the adventure sport experience, which spills over into the life domains and life domains overall. This, in turn, has a direct impact on paintballers' QoL overall.
- Through a thorough analysis of theories related to life domains (cf. 2.2.4), it was revealed that the bottom-up spillover theory was the most suitable one for measuring an adventure-based sports impact on participants' QoL.
- It was determined that QoL is a suitable replacement for the goal theory when measuring the relationship with leisure (cf. 3.4).
- The activity theory (cf. 2.4.2) demonstrated a substantial link between individuals' level of activeness and how they view their QoL overall.
- The QoL concept was successfully linked with adventure sport by means of a literature review (Chapter 3).

- A successful and positive relationship was established between QoL and leisure (cf. 3.4), QoL and sport (cf. 3.5) and QoL and adventure activities (cf. 3.6), based on modern living and its associated stresses.
- It was determined that the concept of leisure is not only constantly evolving, but is also culturally different (cf. 4.2).
- It was established that individuals' need to experience adventure sport is driven on both a psychological and physical level (cf. 4.4).
- Furthermore it was shown that adventure sport is a sub field of tourism (cf. 4.4).
- Of importance is that a literature contribution was made by identifying themes that are relevant to adventure sport, based on tourism, sport and adventure literature (cf. 4.4.4.). These themes formed the cornerstone of the empirical survey.
- The results of the empirical analysis pertaining to life domains (cf. 5.3.2.4) reaffirms the choice of the life domains used in this study (cf. 1.2) and their subsequent importance to QoL measurement in adventure sport.
- Several definitions were proposed by the author, which, in his opinion, better capture the essence of the disciplines, namely QoL (cf. 3.7), leisure (cf. 4.2.6) and adventure sport (cf. 4.3.5).
- The final model (cf. 5.3.6.2) combined the bottom-up spillover theory and activity theory successfully. It also depicted the structural relationship successfully by indicating the linear relationship between adventure-based sport and QoL as per the guidelines (cf. 1.6.2.4.7).

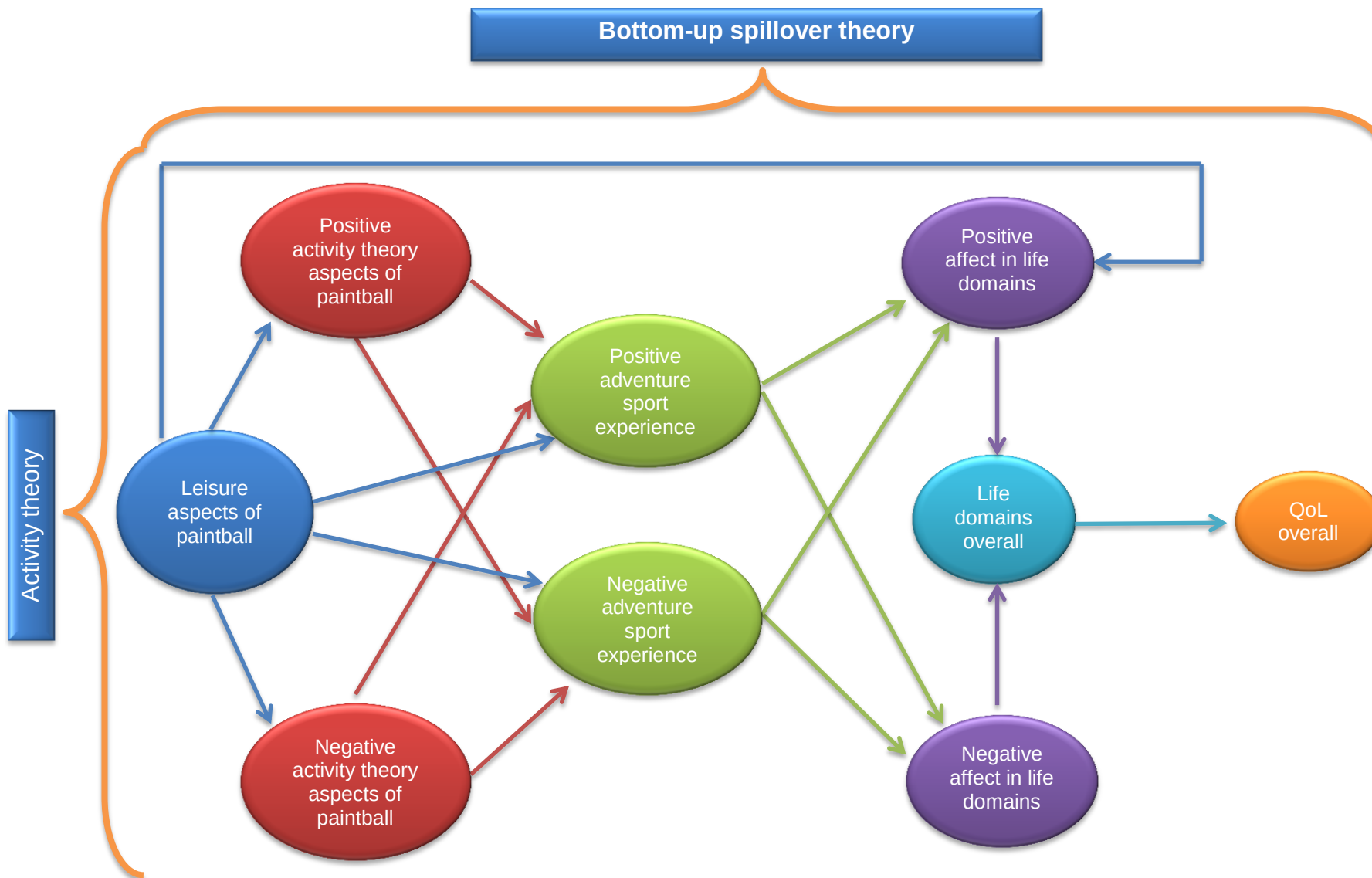


Figure 6.1: A proposed QoL framework for adventure-based (combat) sport

6.5.3 Practical contribution

Several practical contributions have been made, based on the results found in Chapters 2 to 5.

- A proposed QoL framework for adventure-based [combat] sport (Figure 6.1) can be used by the adventure sport industry (Table 4.2) to measure in a better way how their specific adventure sport disciplines affect their participants. Thereby increasing participant numbers and the associated travel and usage of tourism services.
- It cannot be stressed enough that the results of the study help to reaffirm the physical and psychological benefits of participation that most paintballers were conscious of, but could not prove.
- The study academically validates the positive and negative thoughts and feelings that paintballers have about the adventure sport.
- By implication, the paintball industry, which includes stakeholders, manufacturers, sponsors and paintball field owners, can now make use of the proposed QoL framework for adventure-based (combat) sport (Figure 6.1) to market paintball in a better way and thereby grow the sport. In addition, a better paintball experience can be created, based on the findings of the study.
- The empirical results help in breaking down the associated stigma that paintball and other adventure combat sports such as airsoft are mindless and violent, with participants attempting to hurt each other. Instead, the primary motivation for participation is the camaraderie, family, to social and the adrenaline rush.

6.6 RECOMMENDATIONS

6.6.1 Recommendations based on this study

With reference to the descriptive statistics (cf. 5.3.1), the following recommendations are made:

- The vast majority of paintballers are male (93%), which implies that the paintball industry can do more to attract potential female paintballers.
- Given that most paintballers are dabblers (49%) and enthusiasts (32%), and between the ages of 25 and 34 (38%) and 35 and 49 (36%) years old, more marketing and services by the industry as a whole should be allocated to those age groups.

- Most paintballers (53%) have a diploma/degree and are employed full-time (81%), which implies a steady income that is essential for playing paintball regularly.
- The vast majority of paintballers are married (44%) or living together (20%), which implies that paintballers are mostly in committed relationships. The paintball industry can do more to encourage paintballers to bring their partners/spouses and family with them on occasion.
- Based on the number of years playing paintball, it is evident that more than 67% of paintballers leave the adventure sport within the first five to ten years. The paintball industry as a whole should attempt to retain invested players for longer periods.
- Although only 24% of paintballers have an MLT background, the vast majority of those players only play MILSIM-S, which indicates a link between the former and latter. The paintball industry could focus its marketing more on people with an MLT background to increase MILSIM-S participation. Furthermore, the formal tactical training industry could partner with the paintball industry and provide MILSIM training for interested paintballers.
- The paintball industry should not underestimate the potential market size and growth of paintball in countries such as South Africa and should do more to supply equipment to the countries that are still growing paintball communities.

6.6.2 Recommendations for future research

- The study opens the door to a host of potential studies in the field of adventure (combat) sport. Given that the measuring instrument is in its infancy, the potential growth thereof and refinement are necessary.
- Each style of paintball (MILSIM/Scenario and speedball) should be investigated separately to see if any differences exist regarding the aspects that have been explored in this study. The investigation into speedball by the author is already scheduled to take place during 8 to 11 December 2016 during the Paintball Super Cup 2016 to be hosted in Vanderbijlpark, South Africa by the South African National Paintball Association (SANPA).

- Similarly, the type of paintballer (samplers, learners, dabblers and enthusiasts) should be investigated separately to see what differences exist regarding the aspects that have been explored in this study.
- An in-depth study of each of the life domains (especially social life) that have been used in this study (cf. 1.2) could reveal a deeper understanding of paintball's effect on them.
- The effect of paintball on individuals who have an MLT background and suffer from PTSD could be investigated, given the psychological and physiological benefits that are attributed to adventure sport (cf. 4.4.2).
- Given the social nature of the adventure sport, research into its effect on individuals with low self-esteem or social disorders could be investigated.
- Paintball's effect on individuals with physical disabilities can also be investigated.
- Paintball's sister adventure combat sport, airsoft, shares similar characteristics with paintball. It would be of interest to verify if any major difference exists between paintball and airsoft according to the aspects of this study.

6.7 LIMITATIONS

As stated in 5.4, some of the limitations of the study include the following:

- There was a lower than expected response from Singapore, which represents the largest contingent of Asian paintballers and is well known for its active speedball community.
- Fewer than envisaged non-English speaking paintball players took part in the study.
- Some of the statements that were used in the questionnaire cannot be generalised in other adventure sport study samples that do not contain elements of simulated combat.
- Although the study made use of a convenience sampling technique, it was found to be most appropriate, based on the geographical span of participation by respondents. A suggestion would be to conduct a complete sampling technique (database) with the various types of paintball players in future studies.

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ANNEXURE A

Interview consent form

Study Title: A quality of life framework for adventure based sport.

Purpose of the study: To determine how paintball affect participants QoL overall.

Method

Sequential exploratory mixed method design. Interviews are done first in order to reveal matters that might not have been identified in literature. This will assist in the final questionnaire design.

Anonymity

The researcher undertakes to keep the interviewees identity a secret. Transcription of interview will refer to the interviewee as **Paintballer 1** etc. At no stage will the researcher share the interviewee`s identity with anyone not associated directly with the research study.

Recording of interview for transcription

- A digital video camera will be used to record the interview audio and video. Audio will be used for transcription purposes after the interview and video to assist in identifying the interviewee for transcription if there is more than one.
- A copy of the recording will be stored digitally for a mandatory period of 5 years, should any queries be received regarding the legitimacy of the interview. The researcher undertakes to comply with the North West University guidelines and ethical practices concerning such queries.
- The researcher also undertakes to make use of **encryption** software to protect the content of the video recording which can then only be accessed through a password known only to the researcher.

Interviewee rights

- You may refuse to answer any question that may be asked by researcher. You need not provide a reason.
- You may retract consent to make use of the interview for the intended research purpose or any other purpose within a reasonable time before publication of the study.

Outcome

The interview will be transcribed by the researcher for use in his PhD Thesis. The result of which will include publication of the PhD Thesis. Furthermore academic articles could be published from the transcription by the researcher which might lead to remuneration in the form of academic funds.

Informed consent via video interview

The researcher will ask each interviewee to verbally consent to the terms of the interview and that they partake out of their own free will.

I the interviewee _____ consent to the interview of my own free will.

Date: _____.

Location:_____.

Signature:_____.

ANNEXURE B

Interview guideline

DEVELOPING A QUALITY OF LIFE FRAMEWORK FOR AN ADVENTURE-BASED SPORT

This interview involves an effort to develop a quality of life framework for adventure based sport. The measure is based on the theoretical notion that the perception of the overall quality-of-life impact of adventure sport (paintball) on participants is determined by their perceptions of the positive and negative impact of adventure sport (paintball) in various life domains such as **social life, emotional life, health and safety life, financial life and leisure and recreational life**. Furthermore paintball as leisure based-adventure sport activity will be explored as well as the positive and negative emotional experiences thereof. In turn, these perception of positive and negative impact of participating in an adventure-based sport in a given life domain (e.g., social life, leisure life) play an important role is the accumulation of positive and negative affect within each life domain (e.g., satisfaction in social life, satisfaction in leisure life). Satisfaction in the various life domains, in turn, plays a significant role in determining Quality of Life.

Date:_____ Group number:_____ Time:_____ Interviewee:_____

Continental region of origin:_____ Any military\law enforcement\tactical training:_____

INTERVIEWEE PROFILE

Age		
Gender		
Did you participate in paintball in the last six months?	Yes \ No	
How many years have you been playing paintball?		
Do you consider yourself	Amateur\sampler	
	Learner	
	Semi-professional\dabbler	
	Professional\Enthusiast	

SECTION A: LEISURE BASED ACTIVITY

Let us explore the leisure aspect of paintball based on the following definition.

(Leisure can be defined as a period in which an individual can engage in an activity or non-activity out of free will which they deem as being leisurely and where the end result of such leisure is characterised by personal fulfilment and self-improvement either physically, emotionally or spiritually)

Prominent themes:

- Leisure time paintball preference?
- Personal fulfilment
 - Physically
 - Emotionally
 - Spiritually
- Self-improvement
 - Physically
 - Emotionally
 - Spiritually

Response:

Let us explore the activity aspect of paintball. Prominent themes: Outcome – What do you want to achieve. Subject - Describe type of paintballer you are? Object(ive) – Purpose for playing? Tools – “markers\uniforms” feelings? Rules – Adherence and enforcement Community – Perception on fellow paintballers Division of Labour – Organisers ability and players receptiveness	Response:

SECTION B: ADVENTURE SPORT EXPERIENCE (taken directly from Chapter 4)

Let us explore paintball as an adventure-based sport experience. What comes to mind when I say “Peak experience”? (challenge\skill matches challenge)	Response:

Let us explore paintball as an adventure-based sport experience. What comes to mind when I say "Life style"?	Response:

Let us explore paintball as an adventure-based sport experience. What comes to mind when I say "camaraderie, friendship and community"?	Response:

Let us explore paintball as an adventure-based sport experience. What comes to mind when I say "adrenaline rush and escape"?	Response:

Let us explore paintball as an adventure-based sport experience. What comes to mind when I say "social and emotional"?	Response:

experience”?	
Let us explore paintball as an adventure-based sport experience. What comes to mind when I say “ memories ”?	Response:

Let us explore paintball as an adventure-based sport experience. What comes to mind when I say “ fearanxietystress ”?	Response:

SECTION C: LIFE DOMAINS

Let us start exploring how paintball affected your social life ? What was great about this? Prominent Themes: • Meeting new people • Social on and off the field Over all I am satisfied with my social life?	Response: Positive: • • • Negative • •

	•
Let us start exploring how paintball affected your emotional life? What was great about this? Prominent Themes: • Rest, relaxed, de-stressed • Emotionally recharged Over all I am satisfied with my emotional life?	Response: Positive: • • • Negative • • •
Let us start exploring how paintball affected your health and safety life? What was great about this? Prominent Themes health: • Fitness • Feel about being physically active. Prominent Themes safety: • Injuries major\minor • Safety on field Over all I am satisfied with my health and safety life?	Response: Positive: • • • Negative • • •

Let us start exploring how paintball affected your leisure and recreation life? What was great about this? Over all I am satisfied with my leisure and recreation life?	Response: Positive: • • • Negative • • •
Let us start exploring how paintball affected your financial life? What was great about this? Prominent Themes: • Money well spent? • Worth spending? Over all I am satisfied with my financial life?	Response: Positive: • • • Negative • • •
Any other areas in your life that paintball has affected (domains)	Response:

you would like to add.	Positive • • • Negative • • •

SECTION D: QOL OVERALL

Let us now paintball has affected your QoL overall in the last six months. Prominent Themes: - Life is close to ideal - Conditions of life are excellent - Satisfied with my life - I have gotten the important things I want in life -If I could live my life over, I would almost change nothing What was great about this?	Response:

Thank You for your participation.



Dr. S. Kruger/ Mr. D Venter

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Tourism Research in Economic Environments and Society (TREES)

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ANNEXURE C

Questionnaire

(Representation of online version)

A QUALITY-OF-LIFE FRAMEWORK FOR AN ADVENTURE-BASED SPORT

The purpose of this study is to create a QoL framework for an adventure-based sport. Please complete all the following sections in full:

SECTION A: LEISURE-BASED ACTIVITY

A.1 Leisure aspects of paintball

The following section focuses on the leisure aspects of paintball. Please provide the reasons that motivate your participation in paintball as a leisure activity:

Leisure aspects of paintball	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It helps to improve my fitness.					
It serves as good exercise.					
It has a great fun factor.					
It helps me to relax.					
It helps to relieve stress.					
It provides an adrenaline rush.					
It provides mental stimulation.					
It provides a platform to socialise.					
It provides a challenge.					
It helps me to escape from reality.					
It gives me a chance to go outdoors.					
I love the simulation (MILSIM).					
It is fast paced.					

A.2 Activity aspects of paintball

The following section focuses on prominent themes associated with the activity theory that helps to explain the activity aspect of paintball. Please rate each statement by following the scale that has been provided:

Themes	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Outcome					
It feels good to be able to break away from daily stresses.					
Playing paintball is fun.					
Socialising at paintball events makes me feel good.					
If I don't win, I feel negative.					
The action I experience while playing paintball isn't enough.					
Not being recognised for my achievements makes me feel negative.					
Subject					
I enjoy the challenge of playing MILSIM paintball.					

Playing MILSIM paintball tactically enhances the experience.					
My military background comes in handy when I play MILSIM paintball.					
A lack of realism while playing MILSIM paintball detracts from the overall experience.					
If speedball isn't fast paced, I don't enjoy it.					
Speedball is an intense game and deserves more recognition.					
Objective					
Being part of a paintball team enhances the experience.					
I enjoy travelling to new places to play paintball.					
Inspiring other paintballers makes me feel good.					
Paintballers who are not disciplined detract from the overall experience.					
I don't make enough friends playing paintball and that makes me despondent.					
If I don't play paintball often enough to blow off steam, I become frustrated.					
Tools					
My paintball gear gives me a sense of pride.					
I view my paintball gear as an extension of me and that makes me proud.					
My gear represents my identity.					
If paintball gear isn't functional, it frustrates me.					
When others play MILSIM paintball with speedball markers, it takes some pleasure away from the overall experience.					
I feel no connection to my paintball gear.					
Rules					
It's comforting to know that paintball is one of the safest adventure sports.					
By adhering to the rules, I feel better.					
Trusting other players to be honest makes the sport worthwhile.					
Players who cheat detract from the positive experiences.					
It's frustrating if paintball fields don't enforce the rules.					
Untrained marshals make paintball less fun.					
Community					
Paintball players are fantastic people.					

Paintballers are incredibly friendly.					
Camaraderie between players transcends borders and language barriers.					
Problem players detract from the overall paintball experience.					
Amateurs playing against experienced players can affect the sport negatively.					
The politics in paintball have a negative effect on the sport.					
Division of labour					
Organisers who go above and beyond what is expected of them enhance the paintball experience.					
Charismatic paintballers enhance the overall paintball experience.					
Paintballers are open to new ideas in order to help the sport grow.					
Having more paintball leagues will impact the sport negatively.					
There is friction between MILSIM and speedball players that affects the sport negatively.					
Paintballers have difficulty understanding new game concepts.					

SECTION B: ADVENTURE SPORT EXPERIENCE

This section focuses on themes associated with the adventure sport experience

Themes	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Peak experience					
Teamwork and skill achieve victory and generate euphoria.					
Skilled opponents make for more memorable experiences.					
Childish behaviour by some paintballers detracts from the overall experience.					
Skilled players find playing against inexperienced opponents frustrating.					
Lifestyle					
Paintball has made my life better.					
Paintball has changed the way in which I view life.					
If you are not committed to paintball, you will not enjoy it.					
Camaraderie, friendship and community					
Camaraderie between paintballers embodies the core spirit of the sport.					
It feels good to be part of the paintball community.					
I have not made new friends while playing paintball.					

The paintball community is not supportive of new players.					
Adrenaline rush and escape					
The adrenaline rush is a key reason why I enjoy paintball so much.					
Paintball helps me to escape from daily life and reality.					
After playing paintball, my mind doesn't feel rested and clear.					
I feel more stressed after playing paintball.					
Social and emotional					
To meet people with similar interests is a positive experience.					
I feel emotionally broken when I lose a game.					
Negative comments by fellow paintballers detract from the social experience.					
Screaming, shouting and cursing while playing paintball detract from the overall experience.					
Memories					
Paintball has left me with wonderful memories.					
To share memories with other paintballers adds to the appeal of the sport.					
I have very bad memories of paintball.					
I feel left out during paintball conversations, because I have no memories to share.					
Fear, anxiety and stress					
Fear is common when one is new to paintball.					
Some stress before a match is normal.					
I become anxious when I am put under pressure in paintball.					
Unsportsmanlike behaviour causes unnecessary stress.					

SECTION C: LIFE DOMAINS

This section focuses on the life domains that have emerged through the interviews. Please rate each statement by following the scale that has been provided:

Social life	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Being able to tell stories of past paintball games enhances my social life.					
I enjoy meeting new people while playing paintball.					
I have become more confident in social situations since I started playing paintball.					

I cannot seem to make new friends while playing paintball.					
Without paintball, I have no social life.					
I feel despondent when fellow paintballers leave the sport permanently.					
Overall, I am satisfied with my social life.					
Emotional life					
I experience excitement when I don't know what to expect.					
Playing paintball has helped me in learning to be calm and in control under stress.					
Paintballers are emotionally supportive.					
I don't feel more confident since I have started playing paintball.					
Overall, I am satisfied with my emotional life.					
Health and safety life					
Paintball has helped me to improve my fitness.					
Playing paintball is good exercise.					
I am more vigilant in my day-to-day life because of paintball.					
The fear of injury detracts from the overall sport experience.					
I avoid certain types of paintball because of the risk they hold.					
Overall, I am satisfied with my health and safety life.					
Leisure and recreation life					
Paintball fills up most of my leisure time positively.					
I prefer paintball above other recreational activities.					
Paintball offers various types of activities that enhance leisure and recreation life.					
I don't have enough leisure time to play paintball as often as I would like to.					
Paintball overwhelms my sense of responsibilities sometimes.					
Sometimes, I feel excessively exhausted from a day's paintball.					
Overall, I am satisfied with my leisure and recreation life.					
Travel life					
I enjoy new places to visit while travelling to play paintball.					
Paintball allows me to travel to places that I wouldn't have visited otherwise.					
Paintball motivates me to travel in order to play.					
Packing all my paintball gear can					

be exhausting.					
When I travel far, I sometimes feel uneasy getting out of my comfort zone.					
Travelling from one place to another makes me feel tired and exhausted.					
Overall, I am satisfied with my travel life.					
Financial life					
The money I spend on paintball is worth the experiences I get to enjoy.					
I try to save money by playing other forms of paintball.					
Playing paintball has taught me how to manage my finances.					
The initial expenses to start playing paintball are high.					
Paintball has a negative effect on my finances.					
I spend more on paintball than I can actually afford to.					
Overall, I am satisfied with my financial life.					
Family life					
Paintball has had a positive effect on my family life, as they join me when I play.					
The pressures of playing paintball has strengthened the bond that I feel towards my family.					
My paintball family is my real family.					
Playing paintball reduces the time that I spend with family.					
I am in conflict with my family because I play so much paintball.					
Sometimes I feel guilty for playing paintball and neglecting my family.					
Overall, I am satisfied with my family life.					

SECTION D: Quality of Life

These statements refer to how satisfied you are with your life, based on playing paintball. Please rate each statement by following the scale that has been provided:

Quality of Life	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
In most ways, my life is close to ideal.					
The conditions of my life are excellent.					
I am satisfied with my life.					
So far, I have obtained the important things that I want in life.					
If I could live my life over, I would change almost nothing.					

SECTION E: DEMOGRAPHIC PROFILE OF RESPONDENT

E.1 Gender

Male	1
Female	2

E.2 Year of birth

E.3 Home language

E.4 Highest level of education

No school	1
Grade 12	2
Diploma/Degree	3
Post-graduate	4
Doctorate/PhD	5

E.5 What is your current working station?

Full-timer	1
Part-timer	2
Unemployed	3
Student	4
Pensioner	5

E.6 Marital status

Single	1
Married	2
Living together	3
Divorced	4
Widow/er	5

E.7 Type of paintballer

Sampler (amateur)	1
Learner (amateur)	2
Dabbler (semi-professional)	3
Enthusiast (professional)	4

E.8 Which type of paintball fits your style of play most?

MILSIM/Scenario	1
Speedball	2
Both	3

E.9 How many years have you been playing paintball?

E.10 How many times do you play paintball over a six-month period?

E.11 Do you have any military/law enforcement/formal tactical training?

Yes	1
No	1

Thank you for your participation.



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ANNEXURE D
Terms and conditions of participation
(Representation of online version)

A QUALITY OF LIFE FRAMEWORK FOR AN ADVENTURE-BASED SPORT

The purpose of this study is to create a QoL framework for an adventure-based sport.

ETHICS NUMBER: NWU-00115-12-A4

ETHICAL DECLARATION AND PARTICIPATION IN THE STUDY:

By continuing with this online questionnaire you acknowledge that you do so out of your own free will and that you consent that the information you provide will be used for the purpose of the study. Furthermore you agree to be bound by the terms stated below regarding incentives. Your participation in the study will be kept anonymous, unless you choose otherwise.

TERMS REGARDING INCENTIVES:

- In order to qualify for one of the incentives, you need to provide your email contact details at the end of the study.
- Family members of the researcher and/or his academic support do not qualify for any of the incentives.
- All participants who chose to provide their email address will be entered into a draw which will randomly choose a winner for each incentive. One incentive will be allocated per 500 participants who complete the online questionnaire up to a maximum of 2500 participants.
- The online questionnaire will become available 1 July 2016 (08:00 GMT+2) and close on 31 July 2016 (16:00 GMT+2).
- No participant may win more than one incentive.
- One entry per participant. Multiple entries will result in forfeiting any chance of winning an incentive.
- Winners will be contacted via email on 27 September 2016 and informed of the incentive they won.
- Incentives that have not been claimed by the respective winner via email by 27 October 2016 at 12:00 (GMT+2) will forfeit the incentive won, which will then be allocated to another random participant.

- No correspondence will be entered into by the researcher or his support regarding the winners of each incentive.
- Winners may at their own discretion reveal their identity on the Global Paintball Research Group, Facebook page.

I the participant agree that I have read the ethical declaration and participation stated above regarding the study. Furthermore, I accept the terms regarding the incentives.

Yes \ No