

The role of emotional intelligence in the health impairment process of professional athletes

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COMMENTS

The reader is reminded of the following:

- The references and the editorial style as prescribed by the *Publication Manual (6th Edition)* of the American Psychological Association (APA) were followed in this dissertation. This practice is in line with the policy of the programme in Industrial Psychology of the North-West University, to use APA style in all scientific documents as of January 1999.
- This mini-dissertation is submitted in the form of a research article. The editorial style specified by the South African Journal of Industrial Psychology (which agrees largely with the APA style) is used, but the APA guidelines were followed when constructing tables.

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DECLARATION OF AUTHENTICITY OF RESEARCH

I, Johan Daniël Wilhelm Kritzinger, hereby declare that the study of *The role of emotional intelligence in the health impairment process of professional athletes* is my own work. Also the views and opinions expressed in this study are those of the author and the relevant literature references as shown in the reference list. I also declare that the content of this research will not be submitted for any other qualification at any other tertiary institution.



JOHAN DANIËL WILHELM KRITZINGER

NOVEMBER 2015

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SUMMARY

Topic: The role of emotional intelligence in the health impairment process of professional athletes

Keywords: Professional athletes, emotional intelligence, emotional demands, distress, burnout, exhaustion, ill health, psychological distress.

Organisational psychology and the effects of organisational constructs in the sports environment have been explored and research only since the mid-1990s. It has become evident that the sporting environment has become a very demanding environment for athletes. The task of being an elite professional athlete requires the effective management of stress, tolerance of frustration, ability to regulate mood, and exercise of emotional restraint. The effects of such a demanding environment are that demands will exhaust resources of athletes and lead to distress, which, in turn, will lead to stress-related ill health. Thus, the role of emotional intelligence (EI) in sport has become an important research topic.

The study was a quantitative. A cross-sectional survey was used to collect the data and to achieve the research objectives. A combination of convenience and snowball sampling methods were used to involve a sample of South African athletes across different sport disciplines ($N = 145$). The participants were from different ethnic backgrounds and all were older than 18 years. The online questionnaire was distributed via email and it took on average 26 minutes to complete. The statistical analysis was carried out with Mplus 7.31 program. Confirmatory factor analysis was implemented to establish a measurement model. Furthermore, maximum likelihood estimation methods were used and the following fit indices were considered: Comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA) and the standardised root mean square residual (SRMR).

The general objective of the research was to explore the influences and effects EI might have on burnout and psychological distress of athletes in South Africa. The Sport Psychological Fitness Measurement Instrument was utilised to measure the health impairment processes of

athletes, in order to indicate their psychological fitness. The Brief Emotional Intelligence Scale (BEIS-10) was used to measure the EI levels of athletes.

The study indicated a good fit for the measurement model. Emotional demands were found to be negatively correlated with EI (medium effect). Emotional demands were positively correlated with burnout (large effect), as was emotional demands and psychological distress (large effect). Relationships were found to exist between emotional demands and burnout, between emotional demands and psychological distress, and between burnout and psychological distress.

EI was found to have a moderation effect on the relationship between emotional demands and burnout. Lastly, burnout was found to have a partial mediation effect on the relationship between emotional demands and psychological distress.

Recommendations were made for future research and for practice.

OPSOMMING

Onderwerp: Die rol van emosionele intelligensie in die gesondheidsverswakingsproses van professionele atlete

Kernwoorde: Professionele atlete, emosionele intelligensie, emosionele aanvraag, bedroewendheid, uitbranding, uitputting, ongesondheid.

Organisasiesielkunde en die uitwerking van organisasie-konstrukte in die sportmilieu word reeds sedert die 1990s verken en nagevors. Dit het duidelik geword dat sport 'n baie veeleisende milieu vir atlete geraak het. Om 'n professionele atleet te wees, vereis die doeltreffende hantering van stres, die vermoë om frustrasies te verdra, die vermoë om eie bui te reguleer, en om emosies in bedwang te hou. Die uitwerking van so 'n veeleisende milieu is dat atlete se hulpbronne uitgeput raak, wat kan lei tot bedroewendheid wat, op sy beurt, oor tyd, stresverwante nagevolge op die atlete se gesondheid kan hê. Die rol van emosionele intelligensie (EI) in sport het dus 'n belangrike navorsingsonderwerp geword.

Hierdie studie was kwantitatief van aard. 'n Dwarssnitmetode is gebruik om die data in te samel en die navorsingsdoelwitte te bereik. 'n Kombinasie van gerieflikheids- en aangroeiende-steekproefnemingsmetodes is gebruik om 'n steekproef van Suid Afrikaanse atlete in verskillende sportdissiplines te betrek (N = 145). Die deelnemers was van verskeie etniese groepe en almal was ouer as 18 jaar. Die aanlyn vraelys is deur middel van epos versprei, en dit het gemiddeld 26 minute geneem om die vraelys te voltooi. Die statistiese analise is deur middel van die Mplus 7.31 programmatuur uitgevoer. Bevestigende faktoranalise is geïmplementeer om 'n metingsmodel daar te stel. Maksimum aanneemlikheidsberaming is gebruik en die volgende passingsindekse is ondersoek: vergelykende pasindeks, Tucker-Lewis indeks, vierkantswortel verwerkingsfout van benaderings, en die gestandaardiseerde gemiddelde vierkantswortel van residue.

Die breë doelstelling van hierdie navorsing is om die invloed en uitwerking van EI op uitbranding en psigologiese nood onder Suid Afrikaanse atlete te ondersoek. 'n Meetinstrument vir psigologiese fiksheid in sport (Sport Psychological Fitness Measurement Instrument) is gebruik om die gesondheidsbelemmeringsproses onder atlete te meet, en so

hulle psigologiese fiksheid te bepaal. Die Brief Emotional Intelligence Scale (BEIS-10) is gebruik om die EI-vlakke van atlete te bepaal.

Die studie het gevind dat die metingsmodel goeie passing toon. Daar is 'n negatiewe korrelasie gevind tussen emosionele aanvraag en EI (medium effek). 'n Positiewe korrelasie is gevind tussen emosionele aanvraag en uitbranding (groot effek), asook tussen emosionele aanvraag en psigologiese bedroewendheid (groot effek). Verhoudings is gevind tussen emosionele aanvraag en uitbranding, asook tussen emosionele aanvraag en psigologiese bedroewendheid, en tussen uitbranding en psigologiese bedroewendheid.

Die studie het gevind dat EI 'n modererende uitwerking het op die verhouding tussen emosionele aanvraag en uitbranding. Laastens is gevind dat uitbranding die verhouding tussen emosionele aanvraag en psigologiese bedroewendheid bemiddel.

Aanbevelings word vir toekomstige navorsing en vir die praktyk gemaak.

LIST OF ABBREVIATIONS

BEIS-10	Brief Emotional Intelligence Scale-10
CFI	Comparative fit index
CI	Confidence intervals
CSA	Cricket South Africa
EI	Emotional intelligence
FIFA	International Federation of Association Football
JD-R Model	Job Demands-Resources model
SARU	South African Rugby Union
SPF	Sport Psychological Fitness Measurement Instrument
SRMR	Standardised root mean square residual
RMSEA	Root mean square error of approximation
TLI	Tucker-Lewis index
USD	United States Dollar

CHAPTER 1
INTRODUCTION

Introduction

This mini-dissertation focuses on the role of emotional intelligence in the health impairment process of professional athletes.

Chapter 1 includes the problem statement, literature review, research objectives and research methodology. The problem statement provides an overview of the sport environment, demands that athletes face, and the importance of emotional intelligence. The research objectives, which set out the general and specific objectives, are included. An outline of the research method is provided and the chapter is concluded by a brief overview of the divisions of the chapters.

1.1 Problem statement

Sport has become one of the biggest contributors to the global economic environment, as predicted by Hanin in 1993, and verified by various researchers, including Hone and Silvers (2006) and Humphreys and Ruseski (2010), who researched methods of calculating the exact contribution of sports to the economy. Sport can be viewed as an organisation that has grown to become a competitive industry that contributes to the global economy (Surujlal & Mafini, 2012). The growing interest in professional sport has undoubtedly transformed the sports industry into a big business with profit activities (Drakulevski, Nakov & Iliev, 2014; Hone & Silvers, 2006; Millar & Stevens, 2012; Shannon, 1999). The revenue that the International Federation of Association Football (FIFA) reported from 2007 to 2010 was USD 361 million (FIFA, 2011), and the South African Department of Sport and Recreation reported final appropriation of R820,880 million for the 2011/2012 term (Department of Sport and Recreation, 2012).

This indicates the extent of the impact of this industry, as Hone and Silvers (2006) and Shannon (1999) predicted. Humphreys and Ruseski (2010) hold the view that sport is a complex activity with a worldwide impact, whether it is an informal game, or whether it takes place on a pitch or a World Cup tournament. These activities can be included in the sports industry, making it a complex and dynamic sector, also within the South African economy, with profits and losses and employers and employees. Imray (2010) reported that a South

African billionaire bought 49% of the Lions rugby team. The conclusion can be drawn that sport has become part of the economy and is functioning as an organisation with stakeholders.

The difference between a “traditional” organisation and the organisation that involves sport is that the sports organisation’s main employees are the athletes that participate and compete. Imray (2010) quoted the billionaire’s reason for buying the Lions rugby team as being “to create a winning culture with business-like cutting edge management that will ultimately transform the Lions” (p. 1). As this quote illustrates, sport and organisation have been merged. Adcroft and Teckman (2009) reported that both sport and business are about how organisations and individuals deal with competition. Athletes are the employees that need to perform in order to retain their positions. The requirements placed on professional athletes are of such a nature that they have to dedicate more of themselves to achieve excellence (Aquilina, 2013).

In the early 1990’s Hanin (1993) suggested that organisational psychology has an impact in the sports setting. Since then, research has explored the effects of organisational constructs in the sports sector. Positive organisational psychology in sport (Fletcher, Hanton & Wagstaff, 2012), organisational psychology in elite sport (Fletcher & Wagstaff, 2009), athlete satisfaction (Burns, Jasinski, Dunn, & Fletcher, 2012), organisational stressors, coping, and coping effectiveness (Levy, Nicholls, Marchant, & Polman, 2009), effectiveness and productivity of sports teams (Arraya & Pellissier, 2013), and burnout amongst athletes (Appleton, Hall & Hill, 2009) are a few areas of research interest. The conclusion can therefore be drawn that the world of sports has become a very demanding environment.

The effects of a demanding environment is explained by the health impairment process of the job demand-resources model (JD-R model), which states that job demands will exhaust the physical and mental resources of athletes; this leads to distress and burnout, and health problems ultimately become evident (Bakker, 2014). A demanding environment will pressurise athletes in terms of workload (sport load), mental demands, and emotional demands.

Sport load, emotional demands, and mental demands, therefore, form the concept of job demands, which Bakker, Demerouti and Euwema (2005) identify as “those physical, social, or organisational aspects of the job which require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs” (p. 170). Bakker, Demerouti and Verbeke (2004) identify emotional demands as one of the primary factors leading to burnout. Thus, emotional demands will be the main focus in the health impairment process.

Workload refers to the amount of work and the time pressures pertaining to the workload (Houkes, Janssen, de Jonge & Bakker, 2003). Competitive sport depends on the teams’ and individuals’ ability to effectively execute physical tasks while under pressure (Crombie, Lombard & Noakes, 2009). *Mental demands* of athletes are described differently by different researchers. The main contributors to mental demands are anticipation, expertise, judgement and decision making, focusing attention and maintaining concentration, memory, mental imagery, perception, positive self-talk and goal setting, and controlling anxiety (Krane & Williams, 2006; Moran, 2009).

Emotional demands are those factors that require the regulation of feelings and expressions in the work environment (Grandey, 2000), and it is one of the strongest predictors of burnout (Bakker et al., 2004). Athletes will experience intense emotions before, during, or after competing (Gaudreau, Blondin & Lapierre, 2002; Lane, Beedie, Devonport, & Stanley 2011; Raglin, 2007); emotions also seem to differ significantly pre- and post-competition (Allen, Jones & Sheffield, 2011). Fletcher et al. (2012) found that organisational stressors influence athletes’ behaviour and emotions, which links to Gross and Thompson’s (2007) explanation of changes becoming apparent in thoughts, feelings and behaviour, and throughout the entire physical body, when a person experiences emotions.

The health impairment process therefore predicts that an increase of job demands will exhaust the individual’s mental and physical resources and lead to distress symptoms, such as burnout and exhaustion (Bakker & Demerouti, 2007; Bakker, Demerouti & Euwema, 2005). The core dimensions of distress (burnout, exhaustion, mental distance, and disengagement) are not only applicable in the corporate world, but can be observed in any occupation (Bakker et al., 2004). The health impairment process predicts that, when sport demands (in this case

emotional demands) are high, it will exhaust athletes mentally and physically, leading to distress and burnout. Eventually, the process predicts that stress-related ill-health symptoms will be evident (Bakker, 2014) that needs to be managed.

The task of being an elite professional athlete requires the effective management of stress, tolerance of frustration, regulation of mood, and exercise of emotional restraint (Perlini & Halverson, 2006). Emotional intelligence (EI) might have an important role to play with regard to the requirements inherent in the task of being an elite athlete. The concept of EI can be explained as the belief in one's capability to be aware of emotions, awareness of the effects emotions have on thoughts and behaviour, and knowing how to regulate emotions (Lane & Wilson, 2011). The role of EI in sports has become an important research topic (Meyer & Fletcher, 2007).

Fletcher et al. (2012) researched athletes' responses to organisational stressors. They found that the organisational environment makes numerous demands on athletes, and many of these demands are seen as significant and meaningful by athletes. Athletes, as employees, react to the stressors with a wide range of emotions, attitudes, and behaviours. Xanthopoulou, Bakker, Demerouti and Schaufeli (2007) found that employees with higher levels of personal resources are able to deal with demanding conditions more effectively and in a way that will prevent negative outcomes, such as exhaustion.

Athletes' personal resources, among which EI is one, may have a buffering impact on the process that stretches from emotional demands to burnout symptoms, as indicated by Xanthopoulou et al. (2007). Thus, an investigation into EI might assist coaches and athletes to develop new strategies for improving not only athletes' mental and physical performance (Lane & Wilson, 2011), but their stress-related health as well. Figure 1.1 below illustrates the research model that will be focused on, with EI as moderator between emotional demands and burnout.

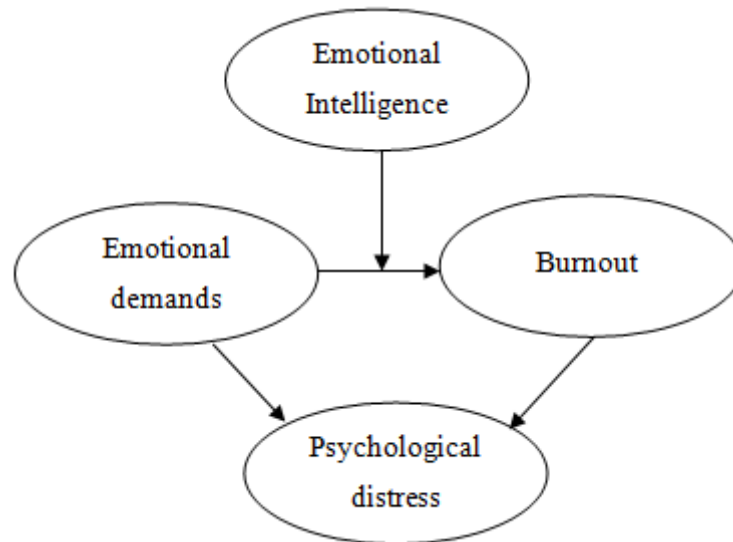


Figure 1.1: Research model deduced from the Health Impairment Process with EI (personal resource) as moderator.

The aim of this study is to research EI as a personal resource and to determine whether it moderates the relationship between emotional demands and distress, such as burnout.

When considering the literature as well as Figure 1.1, the following hypotheses can be drawn to investigate the various relationships between the constructs.

H₁: Emotional demands lead to burnout.

H₂: Emotional demands will lead to psychological distress.

H₃: Burnout will lead to psychological distress.

H₄: Emotional intelligence moderates the relationship between emotional demands and burnout.

H₅: Burnout mediates the relationship between emotional demands and psychological distress.

The constructs will be discussed in terms of their importance and the role that each will have in the health impairment process.

Literature review

Health impairment process of the job demands-resources model

The JD-R model consists of two underlying processes called the health impairment process and the motivational process (Bakker & Demerouti, 2007). The focus of this study is on the health impairment process, with emotional demands as main focus. The health impairment process starts with sport demands that an athlete experiences during training and competition. Sports activities are characterised by extreme conditions of physical and mental stress, a variety of risks, and, often, a lack of time (Shuklina & Barabanshchikova, 2014). Taylor (1995) mentions that every sport has its own set of physical, technical, and logistical demands. Perlini and Halverson (2006) confirm Taylor's claim (1995) by listing close personal interaction with team members, stress and frustration, emotional restraint and emotional reactivity as some of the emotional demands faced by hockey athletes. Fletcher et al. (2012) found that anger-related emotions, such as frustration, outrage, annoyance, and fury, were commonly experienced by athletes. These emotional demands require sustained psychological effort, and are associated with certain psychological costs (Bakker et al., 2005). Psychological effort, such as regulating emotions in order to reduce negative emotions, such as anger and anxiety, are constantly experienced by athletes (Lane, Beedie, Devonport & Stanley, 2011).

Competing in sports places not only physical, but also psychological stress on athletes, who utilise various psychological strategies to deal with this discomfort (Raglin, 2007). The psychological well-being of athletes depends, to a certain extent, on their capacity to cope effectively with such demands (Gaudreau & Blondin, 2004). Gaudreau and Blondin (2004) explain that coping strategies applied by athletes will influence their psychological well-being, because ineffective strategies lead to increased anger, dejection, and lower positive affect. Shuklina and Barabanshchikova (2014) conclude that, in order for athletes to reduce the risk of psychological breakdown, they should be prepared to cope with high demands.

Thus, the health impairment process predicts that the effect of psychological costs on athletes is that athletes experience the core dimensions of distress and exhaustion (Bakker et al., 2004; Bakker & Demerouti, 2007; Bakker, 2014). De Beer, Rothmann and Pienaar (2012) concur

with the statement and explain that burnout is a result of high demands on the athlete, and the process will continue until it results in stress-related ill-health symptoms. Distress and stress-related ill health will be discussed next.

Burnout

Burnout is the most common distress construct. Cresswell and Eklund (2006) researched burnout amongst athletes and found that many sports psychology researchers believe burnout in a sports setting is similar to the conceptualised burnout of the corporate setting. Cresswell and Eklund (2006) identify three characteristics of burnout: emotional and physical exhaustion, reduced accomplishment, and sport devaluation. Appleton et al. (2009) raise the concern of burnout amongst elite athletes because of their prediction that a significant number of athletes will experience it at some point during their careers. Appleton et al. (2009) conclude that burnout has a corrosive effect on athletes' physical and psychological states. This conclusion concurs with the health impairment process. It was found that athletes with burnout experienced highly negative emotions and fewer positive emotions, which caused feelings of anxiety and depression (Shuklina & Barabanshchikova, 2014). Anxiety and depression provide a direct link to the stress-related ill-health symptoms of the health impairment process. Burnout is the response mechanism to chronic occupational stress and failures to deal with various burdens (Rutkowska & Gierczuk, 2012).

Stress-related ill-health symptoms

In professional sports activities there are various negative factors that influence athletes, resulting in a possible decrease of performance and, more importantly, a loss of health (Shuklina & Barabanshchikova, 2014). Stress-related ill-health symptoms are divided into two main constructs, namely, physical ill health and psychological distress. Physical ill health is described by physical symptoms of stress, including sleeping disorders, changes in appetite, muscle tension and soreness, frequent headaches, gastrointestinal problems, and injuries (Smith, Segal & Segal, 2014). Psychological distress is a symptom of stress and includes constant irritability, lack of energy and constant tiredness, lower ability to concentrate, loss of sense of humour, loneliness, panic or anxiousness, mood swings, and depression (Smith et al., 2014). Confirming the existence of these psychological distress

symptoms Shuklina and Barabanshchikova (2014) found that moderate levels of acute and chronic stress were due to anxiety and emotional stress.

Emotional intelligence

EI can be considered an important personal resource, as the JD-R model recognises emotional demands as a contributor to job demands (Bakker & Demerouti, 2007). EI as personal resource can aid athletes in managing and regulating emotional demands (Lane & Wilson, 2011). There are a number of EI definitions, as the construct has been modified over the years. Mayer, Caruso and Salovey (2000) define EI as “an ability to recognise the meanings of emotions and their relationships, and to reason and solve problems on the basis of them” (p. 267). In a publication by Mayer, Roberts and Barsade (2008) the definition was changed somewhat, to “the ability to carry out accurate reasoning about emotions and the ability to use emotions and emotional knowledge to enhance thought” (p. 511).

Lane and Wilson (2011) explain EI as one’s capability to be aware of emotions; the effects emotions have on thoughts and behaviour, and knowing how to regulate emotions. Athletes with high EI supposedly experience higher levels of positive emotions and lower levels of negative emotions than athletes with lower EI (Petrides, Pita & Kokkinaki, 2007). In agreement with Petrides et al. (2007), EI was found to be associated with pleasant emotions, including higher calmness and happiness, together with lower levels of anger, confusion, depression, fatigue and tension, among athletes finishing an ultra-marathon over six days (Lane & Wilson, 2011). Lane and Wilson (2011) also found that athletes with lower EI experienced significantly more anger and confusion towards the end of the six-day marathon. Shuklina and Barabanshchikova (2014) explain that aggressive actions are a mere response to stressful influences on and negative emotions of athletes.

Competitive sports demand EI due to the required level of control over emotions when athletes are under pressure (Crombie et al., 2009). A negative disturbance in the balance of demands and resources will evoke negative emotions and physiological reactions (Alix-Sy, Le Scanff & Filaire, 2008). This interaction between cognition, emotions and physiological responses is a dynamic process (Alix-Sy et al., 2008) and needs to be controlled.

It seems as though emotional demands affect athletes' burnout states as well as their psychological distress states. Considering the background provided and the hypotheses formulated, the following research questions can be presented.

- How are sport demands, distress, ill health, and emotional intelligence conceptualised according to literature in the sports environment?
- Do emotional demands lead to burnout?
- Do emotional demands lead to psychological distress?
- Does burnout lead to psychological distress?
- Does emotional intelligence moderate the relationship between emotional demands and burnout?
- Does burnout mediate the relationship between emotional demands and psychological distress?
- What recommendations can be made for future research and practice?

1.2 Expected contribution of the study

1.2.1 Contribution for the Individual

This study makes athletes aware of the importance of emotional intelligence sport and the impact it will have on the experience of ill-health. Athletes will have a better understanding of the concepts and the impact it might have on their sport.

1.2.2 Contribution for the Organisation

This study provides the sport organisation with new knowledge about personal resources (emotional intelligence) that can be developed and improved in athletes and the importance thereof. This leads to a better understanding to why stress related ill health symptoms might appear in athletes and how to address it. Ultimately the research aims to investigate whether emotional intelligence has an influence on the relationship between burnout and stress-related ill health symptoms (physical and psychological ill health symptoms) of athletes. The research might provide coaches and athletes with a better understanding of emotional intelligence and how it is utilised as a personal resource to prevent stress-related ill health symptoms.

1.2.3 Contribution for the Industrial/Organisational Literature

Emotional intelligence is a known concept that has much research available, but the concepts have been ill researched in the sport environment. This study contributes to research about athletes and their psychological health in the South-African context. More knowledge is gained about the dynamics of emotional intelligence in the sport environment and what influences it might have on stress related ill health of athletes.

1.3 Research objectives

The research objectives are divided into a general objective and specific objectives.

1.3.1 General objectives

The general objective of this research is to explore the influences and effects EI might have on psychological distress of athletes in South Africa.

1.3.2 Specific objectives

The specific objectives of this research are:

- To determine how sports demands, distress, ill health, and emotional intelligence are conceptualised in literature in the sports environment;
- To determine whether emotional demands lead to burnout;
- To determine whether emotional demands will lead to psychological distress;
- To determine whether burnout will lead to psychological distress;
- To determine whether emotional intelligence moderates the relationship between emotional demands and burnout;
- To determine whether burnout mediates the relationship between emotional demands and psychological distress; and
- To provide recommendations for future research and practice.

1.4 Research design

1.4.1 Research approach

This study is quantitative in nature. According to Struwig and Stead (2010), quantitative research is a form of conclusive research involving large representative samples and structured data-collection procedures. A randomised cross-sectional survey design is used to collect data in order to attain the research objectives. The randomised cross-sectional design examines several groups of people at one point in time and is exploratory and descriptive in nature (De Vos, Strydom, Fouché, & Delpont, 2011). The reasons for using a cross-sectional survey design are that it is easier, less expensive, and requires less time to complete than the replicated randomised cross-sectional survey design (De Vos et al., 2011).

1.4.2 Research method

1.4.2.1 Literature review

The literature review focus on gathering information on the following constructs/keywords: emotional intelligence, athletes, distress, and stress-related ill-health symptoms. A complete literature review is conducted by means of extensive scientific research. The following sources are utilised: library resources such as databases, scientific and accredited articles on the internet, and relevant textbooks. Databases include JSTOR, SAePublications, EbscoHost, Scopus, Juta, ScienceDirect, Google Scholar and Sabinet References.

1.4.2.2 Research participants and procedure

For the purpose of this study a sample of professional and university-level athletes from different sports disciplines are selected ($N = 145$). A combination of an accidental (convenient) and snowball sampling methods are used in this study. The characteristic of convenient sampling is that respondents are usually nearest and most easily available to the researcher. Any person who comes across the path of the researcher and who can be identified in the research phenomenon is included into the research (De Vos et al., 2011). Snowball sampling is when the researcher approach a person who identifies with the research

in order to gain information. The researcher is then referred to other people who also fits the criteria of the research (De Vos et al., 2011). The athletes represent sports disciplines such as athletics, cycling, cricket, duathlon, hockey, karate, rugby, swimming, soccer, squash, tennis, triathlon, and water polo. The inclusion criteria for this study are that athletes are competing at national or provincial level, or are paid or sponsored to compete in a specific sport (this includes athletes with provincial and national colours). The age range of the participants varies between 18 and 65 years. The procedure that is followed to approach the athletes, involved contacting sports teams (coaches) and individual athletes via telephone or in person to explain the purpose of the study. After obtaining the approval of management or coaches, an email is sent to the participants (athletes); this email contained a letter as well as the hyperlink to the online questionnaire. The letter explains the objectives and importance of the study and that a report would be given in the form of an article at the end of the research. Participation in the study is voluntary, and the confidentiality and anonymity of participants are emphasised. Ethical aspects, informed consent, and motivation regarding the research are included in the survey. An online questionnaire is used, and the questionnaire is distributed to all athletes via email. The questionnaire takes 30 minutes to complete, and participants have four weeks to complete the questionnaire. A reminder to complete the questionnaire is sent to the coaches and athletes via email a week before the closing date. After the specified time, the data-collection process came to an end and data analysis commenced.

1.4.2.3 Measuring instruments

The *Sport Psychological Fitness Measurement Instrument* (SPF) is used as it is based on and developed according to the JD-R model. The SPF measures 11 subscales and comprises a total of 87 items. The internal consistency of all the subscales of the SPF is highly acceptable, with Cronbach alpha coefficients that range between 0.70 and 0.91 (Afriforte, 2010). The following items are examples of items in the SPF, and the items vary between a four-point and a seven-point scale: Exhaustion item: *I feel tired before engaging in a training session*; Cynicism item: *I have become less interested in my sport and training since I started*; Psychological distress: *Rate your irritability on a four point scale*; Emotional demands: *Does your sport put you in emotionally upsetting situation?*

The *Brief Emotional Intelligence Scale* (BEIS-10) (Davies, Lane, Devonport & Scott, 2010) measures five basic factors: 1) appraisal of own emotions; 2) appraisal of others' emotions; 3) regulation of own emotions; 4) regulation of others' emotions; and 5) utilisation of emotions. Examples of the five skills in the measurement are: (1) *I know why my emotions change*; (2) *I can tell how people are feeling by listening to the tone of their voice*; (3) *I have control over my emotions*; (4) *I help other people feel better when they are down*; and (5) *I use good moods to help myself keep trying in the face of obstacles* (Davies et al., 2010).

The BEIS-10 is a ten-item instrument that demonstrates acceptable psychometric properties and evidence of content validity, factorial validity, and test-retest reliability, which justifies its use as a reliable and valid measure of emotional intelligence (Davies et al., 2010). The results of the confirmatory factor analysis are provided by Davies et al. (2010): CFI = 0.91, NNFI = 0.89 and RMSEA = 0.06. Davies et al. (2010) confirm that, although both fit indices were below the 0.95 suggested criteria for a well-fitting model, a CFI greater than 0.90 may be acceptable. The RMSEA is also an acceptable fit (Davies et al., 2010). The correlations for factor test-retest scores indicate significant moderate positive correlations between all factor scores over a two-week period, with reliability correlation coefficients ranging between 0.89 and 0.96.

1.4.2.4 Statistical analysis

Structural equation modeling methods are applied with Mplus 7.31 (Muthén & Muthén, 2015). Specifically, confirmatory factor analysis is implemented initially to establish a measurement model. However, item parcels are also considered to constitute the latent variables to lessen the number of parameters, due to the number of parameters versus sample size. The maximum likelihood estimation methods are used and the following fit indices are considered: Comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA) and the standardised root mean square residual (SRMR). For the CFI and TLI values of 0.90 and above indicated acceptable fit to the data, values close to 0.95 are considered as superior fit (Bryne, 2010). Values below 0.08 are normally acceptable for RMSEA and SRMR (Van de Schoot, Lugtig, & Hox, 2012), RMSEA values lower than 0.05 indicate a good fit and values greater than 0.10 are regarded as a poor fit (Bryne, 2010).

Correlation coefficients are generated for the latent variables and effect sizes are also considered for the correlations, i.e. medium ($r \geq 0.30$) and large ($r \geq 0.50$). For the regression relationships the size and direction of the beta (β) coefficients are considered. Statistical significance of all of the parameters in the model is set at the 95% level, i.e. $p < 0.05$. For moderation analysis, an interaction term is created with the XWITH function in Mplus to investigate the potential moderating effect of EI in the relationship between emotional load and burnout.

Lastly, mediation analysis is conducted by means of bootstrapping with 10 000 draws for the data. The confidence intervals (CI) are determined for the indirect effect from emotional load to psychological distress via burnout (the proposed mediator).

1.4.2.5 Ethical considerations

The ethical considerations that are taken into account to ensure that the research is fair and ethical are as follows:

- A fundamental ethical rule of social research is it must bring no harm to participants (Babbie, 2007).
- Participation is voluntary at all times and participants may end participation if they wish to do so (De Vos et al., 2011).
- Written informed consent is a necessary condition. Informed consent implies all adequate information about the research was provided to participants, including goal, duration, procedures, respect towards the participants, credibility of researcher, integrity and responsibility of the researcher, and the confidentiality of data (De Vos et al., 2011; Sarkar, Hill & Parker, 2014).
- The research proposal is submitted to the North-West University's ethical committee for review.

1.5 Chapter division

The chapters in this mini-dissertation are presented as follows:

Chapter 1: Introduction.

Chapter 2: Research article.

Chapter 3: Conclusions, limitations and recommendations.

1.6 Chapter summary

In Chapter 1 the importance of sport to the economic sector was explained. The health impairment process was discussed, together with the importance and impact of emotional demands on athletes. EI was described in this chapter as a personal resource that might play an important role in the health impairment process. The motivation for the research was discussed, and it was supported by a discussion of the problem statement. This resulted in the formulation of general and specific research objectives. The research method was explained, followed by a brief overview of the chapters.

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CHAPTER 2

RESEARCH ARTICLE

The role of emotional intelligence in the health impairment process of professional athletes

Abstract

Orientation: In modern times it became important for athletes, if they were to attain success, to function in an optimum physiological and psychological state. However, athletes experience a wide range of stressors and demands within the sports organisation.

Research purpose: The general objective of this research is to explore the influences and effects EI might have on burnout and psychological distress of athletes in South Africa.

Motivation for this study: The job demands-resources model (JD-R model) predicts that, when demands become too many and too intense, athletes are likely to suffer from burnout. The JD-R model found that emotional demands were one of the biggest predictors of burnout. Furthermore, the JD-R model predicts that burnout will lead to stress-related ill health, such as physical ill health and psychological distress. The process is known as the health impairment process. Although it seems obvious that emotions have a role to play in sports, research regarding the value and effect of emotional intelligence (EI) is scant.

Research design, approach and method:

A quantitative research design was used in this study. The study was randomised cross-sectional by nature. A sample ($N = 145$) of professional athletes from different sports disciplines in South Africa were selected. The Sport Psychological Fitness Measurement Instrument and the Brief Emotional Intelligence Scale (BEIS-10) were applied as measuring instruments.

Main results: Emotional demands had a significant positive relationship with burnout, thus emotional demands lead to burnout. Emotional demands had a significant positive relationship with psychological distress, thus emotional demands lead to psychological distress. Burnout was found to have a significant positive relationship with psychological distress, thus burnout leads to psychological distress. EI was found to moderate the relationship between emotional demands and burnout. Lastly, it was found that burnout partially mediates the relationship between emotional demands and psychological distress.

Practical/Managerial implications: This study will provide the sports organisation with new knowledge about personal and psychological skills that can be developed and improved

in athletes, and the importance thereof. This knowledge will lead to a better understanding of why stress-related ill-health symptoms appear in athletes. The research provides coaches and athletes with a better understanding of EI and the way it can be utilised as a personal resource to prevent distress and stress-related ill-health symptoms.

Contribution/value-add: The study contributes to research about athletes and their psychological health in the South African context. Knowledge will be gained about the dynamics of EI in the sports environment and the influences it might have on distress and stress-related ill health of athletes.

Key words: Emotional intelligence, emotional demands, burnout, psychological distress, ill-health, athletes.

Introduction

Sport has become a complex activity that impacts the whole world in some way, whether it is a recreational game or a World Cup tournament (Humphreys & Ruseski, 2010). The economic sector is one of the impact areas of sport. Shannon (1999) reported as long ago as 1999 that sport was the eleventh-largest industry in the United States of America. Some years later the effect of sports could be seen in the South African economy. The South African Rugby Union (SARU) 2011 annual report indicated its total equity was R67 million, with cash reserves of R39 million; R12 million was owed by SARU to provincial unions in accounts payable (SARU, 2011). Cricket South Africa's (CSA) annual report of 2011/12 indicated a loss of almost R47 million. CSA calculated an increase in expenses for the 2011/12 period of over R517 million (CSA, 2011/12). The importance of sports become evident and tangible for people, societies (Bostani & Saiari, 2011), and all other sectors it impacts, including the economy.

When considering that SARU and CSA represent only two sporting disciplines in South Africa, it becomes evident that sports have become of great economic relevance (Smith & Krige, 2010). For a better understanding of the economic impact of sport, consider that the South African Department of Sport and Recreation reported a final appropriation of R 820 million for the 2011/2012 term (Department of Sport and Recreation, 2012). The sporting sector has become a gigantic business enterprise with a focus on profit (Kristiansen, Halvari & Roberts, 2012). Sport has become very competitive, and each team strives to have the best player or athletes competing for the team, as illustrated by the R1,020 million transfer of Raheem Sterling from Premier League club Liverpool to rivals Manchester City (Arnett, 2015).

In modern times it has become important for athletes, if they are to attain success, to function at an optimum physiological and psychological state (Arnold & Fletcher, 2012a; Kajbafnezhad, Ahadi, Heidarie, Askari & Enayati, 2011). The Department of Sport and Recreation devised a strategic plan that "should be implemented parallel to delivering quality athletes who are able to participate and compete at the highest level" (Department of Sport and Recreation, 2012, p.2). The strategic plan continues by stating that the Department will strive to increase international sport success by strengthening performances at all levels of

participation. However, Aquilina (2013) explains a conundrum, namely, for professional athletes to achieve excellence they are required to dedicate more of themselves to the sport. According to Arnold and Fletcher (2012a) this task is challenging, as numerous demands are imposed on athletes from the surrounding organisational and social environment. A vast amount of research (Arnold & Fletcher, 2012a; Arnold & Fletcher, 2012b; Fletcher & Hanton, 2003; Hanton, Fletcher & Coughlan, 2005; Kristiansen et al., 2012; Kristiansen & Roberts, 2010) has focused on organisational stressors in the sports environment. Hanton et al. (2005) distinguish between organisational stressors (matters that are not directly related to sports performance) and competitive stressors (matters that are directly related to sports performance). Studies have indicated that athletes experience more organisational stressors than competitive stressors (Hanton et al., 2005; Kristiansen & Roberts, 2010). However, this does not mean there are no competitive stressors, in fact, Hanton et al. (2005) indicate that both sets of stressors are significant for athletes and can be encountered simultaneously.

Athletes experience a wide range of stressors and demands originating from the sports organisation (Fletcher & Hanton, 2003). Due to the competitive nature of sports, emotions of athletes are influenced before, during, and after competitions (Juravich & Babiak, 2015). Negative emotions, such as anxiety and anger, are experienced by athletes when they believe they don't possess sufficient resources to deal with these demands (Hanton et al., 2005; Neil, Hanton, Mellalieu, & Fletcher, 2011). It is a fact that athletes, and even coaches, experience various emotions in the process of achieving high performance, and even more so when highly valued goals are at stake (Chan & Mallet, 2011; Laborde, Brüll, Webber, & Anders, 2011).

Professional sports around the world often witness individual athletes failing to demonstrate the ability to regulate their emotions during competitions (Juravich & Babiak, 2015). A well-known example was the incident when the star Liverpool football player, Luis Suarez, bit Chelsea opponent Branislav Ivanović during a match (Juravich & Babiak, 2015). Various studies suggest that those teams and individuals that can control, manage, and regulate their emotions effectively will sustain higher levels of performance (Crombie, Lombard & Noakes, 2011; Juravich & Babiak, 2015). Although it is obvious that emotions have a role to play in sports, research that examines the value of controlling, managing, and regulating emotions (emotional intelligence - EI) is scant (Wagstaff, Hanton & Fletcher, 2013).

Fletcher, Hanton and Wagstaff (2012) found that many organisational stressors are significantly meaningful to athletes, and that these stressors impose numerous demands on athletes. The results show that athletes react to stressors in the same way as corporate employees do; these reactions comprise a wide range of emotions, attitudes, and behaviours. Within organisational psychology these demands have been researched extensively and are conceptualised by Bakker, Demerouti and Euwema (2005) as job demands: “those physical, social, or organisational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs” (p. 170). Bakker (2014) and Gustafsson, Hassmén, Kenttä and Johansson (2008) explain that, when these demands become too numerous and too intense, athletes are likely to suffer from the maladaptive experience known as burnout. This is known as the health impairment process within the job demand-resources model (JD-R model), and involves job demands exhausting the physical and emotional resources of athletes, which, in turn, cause distress and burnout and ultimately leads to health problems (Bakker, 2014).

The core dimensions of distress (burnout, exhaustion, mental distance, and disengagement) can be experienced by any individual, regardless of occupation or organisation type (Bakker, Demerouti & Verbeke, 2004). Because they are required to maintain regular interaction with others in an occupational setting, employees find themselves not only managing their own attitudes, behaviours and emotions, but also those of others, which leads to employees feeling disengaged and emotionally exhausted (Arnold & Fletcher, 2012b). Emotional exhaustion is seen as a central symptom of burnout (Donders, Roskes & Van der Gulden, 2007). This claim could explain why emotional demands are considered to be one of the biggest predictors of distress that ultimately leads to ill-health systems (Schaufeli & Bakker, 2004; Hakanen, Bakker & Schaufeli, 2004).

Although the JD-R model consists of two processes, namely, the motivational process and the health impairment process, as described by Bakker (2014), this research will focus only on emotional demands within the health impairment process. The health impairment process predicts that high job demands (in this case emotional demands) will most likely exhaust athletes' resources and lead to distress symptoms, such as burnout and exhaustion (Bakker & Demerouti, 2007; Bakker et al., 2005). The model of the health impairment process predicts, further, that distress symptoms, such as burnout and exhaustion, will cause stress-related ill

health (Bakker, 2014). Thus, a need exists for a personal resource that can moderate the negative effects of burnout.

Researchers have found that employees with personal resources deal more effectively with demanding conditions, which, in turn, prevent them from experiencing negative outcomes, such as exhaustion (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2007). Due to the challenge faced by professional athletes, that of managing emotional demands, such as stress, tolerating frustration, regulating their moods, and exercising emotional restraint (Perlini and Halverson, 2006) EI could have an important role to play in sports, especially with regard to the effective control of emotional demands (Crombie et al., 2011).

EI is described as the ability to be aware of and identify emotions, to be cognitive of the effects emotions have on thoughts and behaviour, and to know how to regulate and manage emotions (Costarelli & Stamou, 2009; Lane & Wilson, 2011). Juravich and Babiak (2015) claim that individuals with high EI can manage their emotions more effectively during stressful situations, and therefore perform related tasks more effectively. According to Crombie et al. (2011) this ability will provide athletes a competitive advantage.

It is proposed that athletes actively engage in emotional labour in order to perform their respective sports roles, which means the need for EI will always be evident in sport (Juravich & Babiak, 2015). Burnout will be experienced when an athlete does not have the ability or resources to cope with the demands (Bakker, 2014; Moen, Federici & Abrahamsen, 2015). The health impairment process suggests that burnout will lead to stress-related ill-health (Bakker, 2014). This prediction is supported by research that found that work-related burnout is associated with physical stress-related ill health, such as cardiovascular disease, impaired immunity functions, and chronic inflammation (Melamed, Shirom, Toker, Berliner & Shapira, 2006). Burned-out athletes were also found to experience heightened symptoms of physical stress-related ill health (Cresswell & Eklind, 2006a).

However, research indicates that individuals with high EI demonstrate better health and well-being (Schutte, Malouff, Thorsteinsson, Bhullar & Rooke, 2007). Thus, EI could be seen as an important personal resource that could moderate the relationship between emotional

demands and distress symptoms, such as burnout; this view concurs with the findings of Xanthopoulou et al. (2007).

The aim of this study was to research EI as a personal resource and to determine whether it moderates the relationship between emotional demands and distress, such as burnout. Figure 2.1 below illustrates the research model that will be used, with EI acting as moderator between emotional demands and burnout.

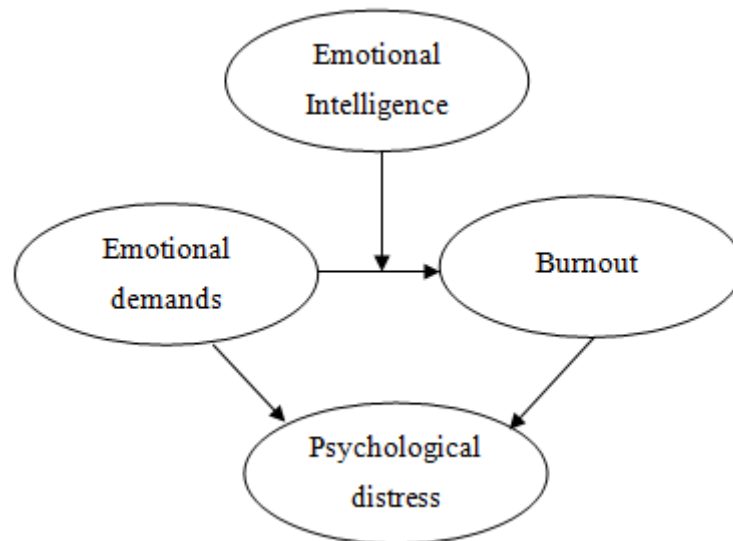


Figure 2.1: Research model deduced from the Health Impairment Process with EI (personal resource) as moderator.

When considering the literature as well as Figure 2.1, the following hypotheses can be drawn to investigate the different relationships between the constructs:

H₁: Emotional demands lead to burnout.

H₂: Emotional demands will lead to psychological distress.

H₃: Burnout will lead to psychological distress.

H₄: Emotional intelligence moderates the relationship between emotional demands and burnout.

H₅: Burnout mediates the relationship between emotional demands and psychological distress.

A literature review discussing the health impairment process with special emphasis on emotional demands and the role that EI plays as a personal resource, follows.

Literature review

Health impairment process of the Job Demands-Resources model

The JD-R model is a predictive model based on two underlying processes, motivational and health impairment processes (Bakker & Demerouti, 2007). Although both processes are equally important, for the purpose of this study the focus will be on the health impairment process. The process is characterised by three phases, known as job demand (in this case, sport demands), distress, and stress-related ill health (Bakker, 2014). The process predicts that high sport demands will lead to distress (such as burnout), which will lead to stress-related ill health (Bakker, 2014; Bakker & Demerouti, 2007; Bakker et al., 2005). These three phases will be explained next.

The first phase, sport demands, involve those physical, psychological, social or organisational aspects of the job that require sustained physical and psychological (cognitive and emotional) effort or skills and that are therefore associated with certain physiological and psychological costs (Bakker & Demerouti, 2007). The model predicts that demands are primarily and positively related to exhaustion (Demerouti, Bakker, Nachreiner & Schaufeli, 2001).

Sport demands are divided into mental demands, sport load, and emotional demands. Mental demands are common before, during and after sport events, during which athletes utilise a variety of cognitive skills and strategies (Krane & Williams, 2006). Research done by Demerouti, Bakker, Nachreiner and Ebbinghaus (2002) found that mental fatigue is likely to cause exhaustion. Sport load or work load (in industrial psychology literature) refers to the amount of training and competitions completed in a certain time (Houkes, Janssen, de Jonge & Bakker, 2003). Sports which demand high physical or mental competencies also appear to demand emotional competencies (Perlini & Halverson, 2006).

Demands are usually stressful, which suggests a perceived imbalance between demands and the available resources that gives rise to competitive anxiety (Hanton et al., 2005; Sajadi, Khan mohamadi, Eskandari, Heidari & Darbani, 2011). Tension, anger, anxiety, depression, and fatigue are all adverse stress responses to unmet demands (Dubuc-Charbonneau & Durand-Bush, 2015). Organisational stressors or demands influence the behaviour and

emotions of athletes (Fletcher et al., 2012). When these emotions are experienced changes in thoughts, feelings, behaviour, and the physical body become apparent (Gross & Thompson, 2007).

Emotional demands on athletes in team sports can be caused by the need for close personal interactions between team members, and the tolerance of stress and frustration, emotional restraint and emotional reactivity at various times (Perlini & Halverson, 2006). Other team issues that contribute to athletes' feelings of stress and anxiety were found to be the team atmosphere, absence of support networks, unclear roles, and communication problems (Hanton et al., 2012). The experience of anxiety, tension, depression, anger, excitement, and happiness are just a few emotions that will be experienced by any athlete before, during and after competitions (Bertollo, Saltarelli & Robbazza, 2009; Jones, Lane, Bray, Uphill & Catlin, 2005; Neil et al., 2011; Tahmasediboroujeni, Mirheydari, Kavir & Shahhosseini, 2012). Pressure is an inherent characteristic of any sport and competitions, however, results indicate that pressure and stress intensifies with higher-standard competitions (e.g. finals) (Hanton et al., 2005). A source of this pressure and stress is undoubtedly athletes' perceptions about their preparations prior to competitions (Hanton et al., 2012).

Athletes experience emotional stress or anxiety about their own health, as the fear of experiencing pain or becoming injured is always apparent (Campo, Mellalieu, Ferrand, Martinent & Rosnet, 2012; Hanton et al., 2012). The fear of failure or making a mistake was found to be the most common stressor leading to athletes' anxiety experience (Campo et al., 2012). The most common organisational stressors that contribute to athletes' stress experiences were found to be team selections, finances, training and competition environments, travelling, and safety (Hanton et al., 2012). Increased media attention has also become a source of stress to athletes (Kristiansen et al., 2012). However, competitive sports require athletes to cope with such adverse factors and to control their emotions (Perlini & Halverson, 2006; Crombie et al., 2011).

The health impairment process predicts that the effect of demands, training load, reduced recovery time, and the accompanying psychological costs will exhaust athletes and cause them to experience the core dimension of distress (Bakker 2014; Bakker & Demerouti, 2007; Bakker et al., 2004; Gustafsson et al., 2008). Distress is the second phase of the predictive

process. Core dimensions of distress include burnout, exhaustion, mental distance, and disengagement, responses that can be experienced in any occupation regardless of the nature of the occupation (Bakker et al., 2004). A positive relationship between demands and burnout has been reported by various studies (Demerouti et al., 2001; Bakker et al., 2003).

Raedeke and Smith (2001, 2004) explain athlete burnout as a multidimensional syndrome that reflects emotional and physical exhaustion, a reduced sense of accomplishment, and devaluation (an uncaring and cynical attitude towards sports). Emotional exhaustion refers to feelings of being overextended and drained due to sport demands (Cresswell & Eklund, 2006b; Moen, Federici & Skaalvik, 2014). A reduced sense of accomplishment reflects an athlete's negative attitude towards desired goals (Ho, Appleton, Cumming & Duda, 2015).

Appleton, Hall and Hill (2009) conclude that burnout has a corrosive effect on athletes' physical and psychological states and that a significant proportion of athletes will experience burnout at some point. As athletes become older and maintain their involvement in sport the likelihood of burnout increases (Harris & Watson II, 2014). Perlini and Halverson (2006) also imply that athletes may lose the ability to tolerate stress due to the inherent and chronic demands of elite sport. Athletes' burnout is better conceived as a process in which the perceptions of emotional/physical exhaustion, reduced sense of accomplishment, and sport devaluation could develop gradually over time. (Isoard-Gautheur, Guillet-Descas, Gaudreau & Chanal, 2015; Madigan, Stoeber & Passfield, 2015).

Athlete burnout is of considerable concern in sports due to its potentially negative consequences, not only on an athletes' performance, but also on their well-being (Moen et al., 2014). Thus, the health impairment process further predicts that stress-related ill-health symptoms will become evident in athletes (Bakker 2014; Bakker & Demerouti, 2007; Bakker et al., 2004).

Phase three is characterised by stress-related ill-health symptoms and is divided into two main constructs, namely, physical ill health and psychological ill health. Physical ill health is characterised by physical symptoms of stress that include sleeping disorders, changes in appetite, muscle tension and soreness, frequent headaches, and gastrointestinal problems, and which can also contribute to injuries (Arnold & Fletcher, 2012b; Smith, Segal & Segal,

2014). Injuries have been found to have a substantial impact on the psychological state of an athlete (Johnston & Carroll, 2000). Higher levels of depression and anxiety were found in injured athletes (Johnston & Carroll, 2000).

Psychological ill health is psychological symptoms of stress that include constant irritability, lack of energy and constant tiredness, decreased ability to concentrate, loss of sense and humour, loneliness, panic or anxiety, mood swings, and depression (Smith et al., 2014). Even after physical injuries, athletes reported to greater mood swings, lower self-esteem and an increase in depression (Johnston & Carroll, 2000). Cresswell and Eklund (2006b) found that athletes with more injuries reported symptoms of burnout, such as reduced accomplishments, and physical and emotional exhaustion, more frequently. Thus, it can be argued that stress-related ill-health constructs are related and influences one another.

Emotional intelligence

EI refers to the ability of an individual to be aware and to identify own and others' emotions, regulate moods and emotions in an adequate manner, and understand the effect emotions have on thoughts and behaviour (Lane & Wilson, 2011; Mayer & Salovey, 1997). Individuals with higher EI tend to have better perception, understanding and emotional management, making it less likely that they will experience mental health problems (Schutte et al., 2007). Schutte et al.'s study found that better health was significantly associated with EI. Schutte et al. (2007) and Laborde et al. (2011) explain the association of EI with health variables through their findings that athletes with higher EI experienced a lesser increase in stress (during competitions) than athletes with a lower EI.

It is claimed that a high EI leads to positive attitudes, improved relationships, better orientation and greater adaptability (Akerjordet & Severinsson, 2007). Findings of Lane and Wilson (2011) also indicate that athletes with higher EI experience more pleasant emotions (calmness and happiness) and lower levels of anger, confusion, depression, fatigue and tension, whereas athletes with lower EI demonstrate a significant increase in anger and confusion. Armstrong, Galligan, and Critchley (2011) found EI to be negatively associated with distress. The finding does not only concur with the above, but also supports H_4 .

It is important to note that attempts to control and suppress emotions could have physical or cognitive consequences for athletes (Tice & Bratslavsky, 2000; Moon & Hur, 2011). Davis and Humphreys (2012) agree, and conclude that EI might not be universally advantageous when athletes are faced with chronic stressors. Their research showed that EI failed to modify the negative effects of stress on health. Moon and Hur (2011) speculate that the reason is that individuals who use their emotional knowledge to analyse situations may experience emotional exhaustion. This exhaustion could be explained by feelings of stress, frustration, or burnout that was generated due to a greater effort related to emotional facilitation (Moon & Hur, 2011).

According to Meyer and Fletcher (2007) EI in sport has become an important research topic. A significant amount of EI research in sports focuses on improving performance. The regulation and control of emotions and EI as a psychological skill also seems to be popular among researchers. Validation studies of EI scales and instruments are, to a lesser extent, available. However, research regarding EI and its relationship to athlete health and well-being seems to be limited or not easily accessible.

Research design

Research approach

The study was quantitative in nature. According to Struwig and Stead (2010), research that is quantitative in nature is a form of conclusive research involving large representative samples and data collection procedures that are structured. A randomised cross-sectional survey design was used to collect data in order to attain the research objectives. The randomised cross-sectional design examines several groups of people at one point in time and it is exploratory and descriptive in nature (De Vos, Strydom, Fouché, & Delpont, 2011). The reasons for a cross-sectional survey design are that it is easier, less expensive, and can be completed in a shorter time (De Vos et al., 2011).

Research method

Research participants

For the purpose of the study a sample of professional athletes from different sports disciplines were selected ($N = 145$). A combination of accidental (convenient) and snowball sampling methods was used. Athletes from a variety of different sports disciplines, such as athletics, cycling, cricket, duathlon, hockey, karate, rugby, swimming, soccer, squash, tennis, triathlon, and water polo, participated in the study. The inclusion criteria for athletes were that they had to compete at national or provincial level, or had to be receiving payment or be sponsored to compete in a specific sport (this includes athletes with provincial and national colours). The average age of participants was 25.34 years with a standard deviation of 8.16 years.

Table 1

Characteristics of the Participants (N = 145)

Item	Category	Frequency	Percentage (%)
Gender	Male	99	68.28
	Female	46	31.72
Home language	Afrikaans	90	62.07
	English	39	26.90
	Sepedi	1	0.69
	Sesotho	3	2.07
	Setswana	1	0.69
	Siswati	2	1.38
	Tshivenda	2	1.38
	isiXhosa	1	0.69
	Xitsonga	3	2.07
	IsiZulu	3	2.07
Team vs. Individual sport	Individual	71	48.97
	Team	74	51.03
Sports disciplines	Athletics	48	33.10
	Cricket	2	1.38
	Cycling	5	17.24

	Duathlon	2	1.38
	Hockey	21	14.48
	Karate	1	0.69
	Rugby	20	13.79
	Squash	3	2.07
	Soccer	9	6.21
	Swimming	1	0.69
	Tennis	2	1.38
	Triathlon	12	8.97
	Water Polo	4	2.76
	Other	15	10.34
Off-season duration	Less than one month	44	30.34
	One to three months	65	44.83
	Three months or more	36	24.83
Off season vs. In season	Off season	37	25.52
	In season	108	74.48
Years of participation	1 month-5 years	80	55.17
	6 years-10 years	35	24.14
	10 years-15 years	15	10.34
	15 years-20 years	12	8.28
	> 20 years	3	2.07
Full time vs. Part-time	Full time	57	39.31
	Part time	88	60.69

When reviewing Table 1, it is apparent that the majority of the athletes are male (68.28%). Afrikaans-speaking athletes were the majority (62.07%), followed by English-speaking athletes (26.9%). Athletes speaking African languages also participated in the study, though in small percentages: 0.69% (Sepedi, Setswana, and isiXhosa); 1.38% (Siswati and Tshivenda); and 2.07% (Sesotho, Xitsonga, and isiZulu). IsiNdebele is the only language that had no representation among the athletes participating in this study.

Furthermore, the differentiation between team sports and individual sports was very small, with only a 2.06% difference in the favour of team sports (51.03%). The majority of athletes indicated that they take part in athletics (33.1%). The sporting disciplines with the fewest participants were karate and swimming (0.69%), and 10.34% of athletes indicated other

without providing a description. The majority of athletes indicated that the duration of their off-season is one to three months (44.83%). It is also evident that most of the athletes were still in their in-season (74.48%) when they took part in the study.

Considering the years of participation, it is clear that most athletes became involved in their sports discipline relatively recently, with 55.17% of athletes indicating that they had been involved between one month and five years. It was also evident that the majority of the athletes competed part time (60.69%).

Measuring instruments

A biographical questionnaire was used to determine demographic characteristics of research participants, in order to provide a detailed description of the population. These characteristics included age, gender, home language, team vs. individual sport, sport disciplines, off-season duration, current season (in or off season), years active in sport, and part-time vs. full-time athlete.

The *Sport Psychological Fitness Measurement Instrument* (SPF) was used because it is based and developed according to the JD-R model. The SPF measures 11 subscales with a total of 87 items. The internal consistency of all the subscales of the SPF is highly acceptable, with Cronbach alpha coefficients that range between 0.70 and 0.91 (Afriforte, 2010). The following items are some examples found in the SPF, and responses vary between a four-point and seven-point scales: Exhaustion item: *I feel tired before engaging in a training session*; Cynicism item: *I have become less interested in my sport and training since I started*; Psychological distress: *Rate your irritability on a four point scale*; Emotional demands: *Does your sport put you in emotionally upsetting situation?*

The *Brief Emotional Intelligence Scale* (BEIS-10; Davies, Lane, Devonport & Scott, 2010) measures five basic factors: 1) appraisal of own emotions; 2) appraisal of others' emotions; 3) regulation of own emotions; 4) regulation of others' emotions; and 5) utilisation of emotions. Examples of the five skills in the measurement are: (1) *I know why my emotions change*; (2) *I can tell how people are feeling by listening to the tone of their voice*; (3) *I have control over*

my emotions; (4) I help other people feel better when they are down; and (5) I use good moods to help myself keep trying in the face of obstacles (Davies et al., 2010).

The BEIS-10 is a 10-item instrument that demonstrates acceptable psychometric properties and evidence of content validity, factorial validity, and test-retest reliability, which justifies its use as a reliable and valid measure of emotional intelligence (Davies et al., 2010).

Davies et al. (2010) provide the confirmatory factor analysis (CFA) results of the BEIS-10 as follows: CFI = 0.91, NNFI = 0.89 and RMSEA = 0.06. Davies et al. (2010) confirm that, although both fit indices were below the 0.95 suggested criterion for a well-fitting model, a CFI greater than 0.90 may be acceptable. The RMSEA is also acceptable fit (Davies et al., 2010). The correlations for factor test-retest scores indicate significant moderate positive correlations between all factor scores over a two-week period, with reliability correlation coefficients ranging between 0.89 and 0.96.

Research procedure

Sports teams (coaches) and individual athletes were contacted per telephone or in person to explain the purpose of the study. After approval was gained an email was sent to the participants (athletes), containing a letter and the hyperlink to the online questionnaire. Participation in the study was voluntary, and the confidentiality and anonymity of participants were emphasised. Information on ethical aspects, informed consent and motivation regarding the research was also included. An online questionnaire was used and distributed via email. The questionnaire took approximately 25 minutes to complete.

Statistical analysis

Structural equation modeling methods were applied with Mplus 7.31 (Muthén & Muthén, 2015). Specifically, confirmatory factor analysis was initially implemented to establish a measurement model. However, due to the number of parameters versus sample size, it was decided to use item parcels to constitute the latent variables to lessen the number of parameters. For emotional load its three individual indicators were used with no parceling, EI consisted of five parcels (two items in each parcel based on the five theoretical components

of the BEIS-10), burnout had two parcels (exhaustion and cynicism) and psychological distress had three parcels. The maximum likelihood estimation method was used and the following fit indices were considered: Comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA) and the standardised root mean square residual (SRMR). CFI and TLI values of 0.90 and above indicated acceptable fit to the data, and for RMSEA and SRMR values below 0.08 are normally considered acceptable (Van de Schoot, Lugtig & Hox, 2012).

Correlation coefficients were generated for the latent variables and effect sizes were considered for the correlations, i.e. medium ($r \geq 0.30$) and large ($r \geq 0.50$). For the regression relationships the size and direction of the beta (β) coefficients were considered. Statistical significance of all of the parameters in the model was set at the 95% level, i.e. $p < 0.05$. For moderation analysis, an interaction term was created with the XWITH function in Mplus, to investigate the potentially moderating effect of EI in the relationship between emotional load and burnout. Furthermore, the interaction term would be plotted on a graph in order to represent the moderating effect visually.

Lastly, mediation analysis was conducted by means of bootstrapping with 10 000 draws from the data. This provided 95% confidence intervals (CI) for the indirect effect from emotional load to psychological distress via burnout (the proposed mediator).

Figure 2.2 below presents the research model.

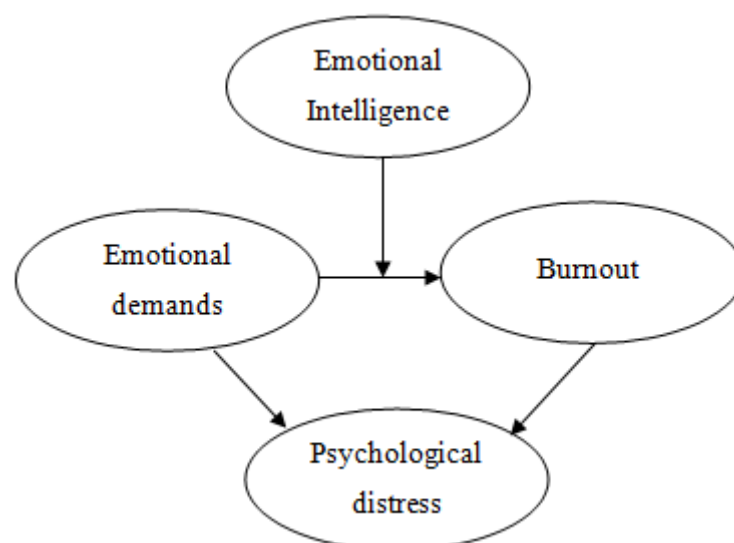


Figure 2.2. The research model for the current study.

Results

Confirmatory factor analysis, correlations and reliability

Confirmatory factor analysis showed that the model was a good fit to the data: CFI (0.93), TLI (0.91), RMSEA (0.06) and SRMR (0.07).

Table 2

Correlation Matrix for the Latent Variables

Variables	1	2	3	4
Emotional demands	1.00			
Emotional intelligence (EI)	-0.42 ⁺	1.00		
Burnout	0.50 ⁺⁺	-0.49 ⁺	1.00	
Psychological distress	0.71 ⁺⁺	-0.47 ⁺	0.65 ⁺⁺	1.00

Notes: α on the diagonal in brackets; all correlations statistically significant; ⁺ = medium practical effect; ⁺⁺ = large practical effect.

Emotional demands was negatively correlated with EI ($r = -0.42$; medium effect), and positively correlated with burnout ($r = 0.50$; large effect) and psychological distress ($r = 0.71$; large effect). Furthermore, burnout was positively correlated with psychological distress ($r = 0.65$; large effect). EI was negatively correlated with burnout ($r = -0.49$; medium effect) and with psychological distress ($r = -0.47$; medium effect). The results of the correlation were meaningful in that it could already be established that EI had a relationship with demands (emotional) and also a strong negative relationship with both burnout and psychological distress. This paved the way for investigating structural model and testing emotional intelligence as a possible moderator.

Structural regression results

Table 3 presents the results for the structural regressions as hypothesised.

Table 3

Structural Relationships of the Hypothesised Model

Specified regression path relationship	β	S.E.	p	Result
Emotional demands → Burnout	0.35	0.12	0.003	Significant
Emotional demands → Psychological distress	0.50	0.12	0.001	Significant
Burnout → Psychological distress	0.36	0.13	0.005	Significant

Notes: β = Beta coefficient; S.E. = Standard error; p = Statistical significance

Emotional demands had a significant relationship to burnout ($\beta = 0.35$; S.E. = 0.12; $p = 0.003$), and also to psychological distress ($\beta = 0.50$; S.E. = 0.12; $p = 0.001$). Furthermore, burnout had a significant relationship to psychological distress ($\beta = 0.36$; S.E. = 0.13; $p = 0.005$).

Moderation analysis

Figure 2.3 presents the visual representation of the moderating effect EI has on the relationship between emotional demands and burnout.

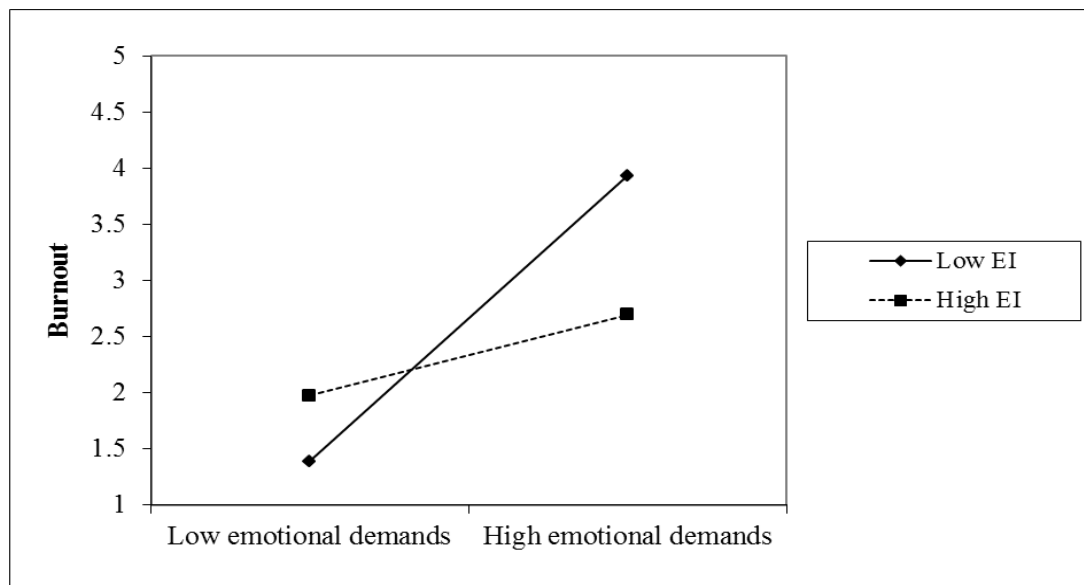


Figure 2.3: The moderating role of EI in the relationship between emotional load and burnout.

The main effect (regression) from EI to burnout was significant ($\beta = -0.34$; S.E. = 0.12 $p = 0.003$). As can be seen from the interaction plot, participants who had a high emotional demands and lower EI had a steeper slope – indicating that their burnout levels were higher.

Conversely, participants with higher EI had a slope that was less steep – indicating lower burnout levels. This provides evidence for the buffering effect of EI in the relationship between emotional demands and burnout – supporting H_4 .

Mediation analysis: Indirect effect results

As the regressions showed significant paths from emotional demands to burnout and from burnout to psychological distress, mediation analysis was conducted. Results from the bootstrapping re-sampling showed that there was a significant indirect effect from emotional demands to psychological distress through burnout (0.13; S.E. = 0.05; $p = 0.03$). Furthermore, the direct relationship from emotional demands to psychological distress was also significant. Indicating a complementary mediation model (classically referred to as partial mediation) (Zhao, Lynch & Chen, 2010). Therefore, H_5 was supported.

Discussion

Outline of results

Athlete burnout is a considerable concern in sports due to the potentially negative consequences it has on an athlete's performance and well-being (Moen et al., 2014). Fletcher and Scott (2010) state that national sports organisations and the governing bodies of sports have a duty to protect and support the well-being of all employees within the sports environment. Thus, the main purpose of the study was to research EI as a personal resource and to determine whether it moderates the relationship between emotional demands and burnout. The study will provide coaches and athletes with a better understanding of EI and how it can be utilised as a personal resource to prevent distress and stress-related ill-health symptoms.

According to the confirmatory factor analysis results the hypothesised model was a good fit to the sample data because the CFI and TLI values were both above 0.90 and the values of RMSEA and SRMR were also both below the required 0.08 (Van de Schoot et al., 2012). Therefore, it was considered appropriate to continue with the interpretation of the results.

A negative correlation between emotional demands and EI suggests that athletes with higher EI experience less emotional demands. This correlates well with the finding that personal resources empower individuals to deal more effectively with demanding conditions and to prevent the experience of distress (Xanthopoulou et al., 2007). The results also highlight the important role that EI can play in sports with regard to controlling emotional demands (Crombie et al., 2011).

A positive correlation between emotional demands and burnout suggests that athletes with high emotional demands experience the effects of burnout. Bakker (2014) and Gustafsson et al. (2008) explain this outcome by indicating that, when emotional demands become too much and too intense, the experience of burnout will become evident. Therefore, the first hypothesis (emotional demands will lead to burnout) was confirmed by the study's finding of a significant positive relationship between emotional demands and burnout. It is also supported by literature that found positive relationships between demands and burnout (Demerouti et al., 2001; Bakker et al., 2003). This relationship can be explained due to athletes' inability or lack of resources to cope with emotional demands, and thus they experience burnout (Bakker, 2014; Moen et al., 2015).

Because athletes constantly experience emotions such as tension, anger, anxiety, depression, fatigue, and frustration (Bertollo et al., 2009; Dubuc-Charbonneau & Durand-Bush, 2015; Hanton et al. 2012; Perlini & Halverson, 2006) it is no surprise that they also experience psychological distress symptoms. The study found a positive correlation between emotional demands and psychological distress. The finding indicates that athletes with high emotional demands experience psychological distress symptoms such as sleeplessness, depression irritability and anxiety (Arnold & Fletcher, 2012b; Smith et al., 2014). In this regard, the study confirmed H_2 (emotional demands lead to psychological distress) by the positive relationship between emotional demands and psychological distress.

Cresswell and Eklund (2006a) found that burned-out athletes experience heightened levels of stress-related ill-health symptoms. Their finding correlates with the results of this study, which found a positive correlation between burnout and psychological distress. The indication is that athletes with high levels of burnout experience psychological distress. It also confirms the prediction of the health impairment process, namely, that burnout will lead

stress-related ill health (Bakker, 2014; Bakker & Demerouti, 2007; Bakker et al., 2005). This prediction and H_3 (burnout leads to psychological distress) were proved by the study when a significant positive relationship was found between burnout and psychological distress. Other literature also found that work-related burnout is associated with physical stress-related ill health, such as cardiovascular disease, impaired immunity functions, and chronic inflammation (Melamed et al., 2006).

In the study EI was described as the ability to be aware of and identify emotions, to be cognitive of the effects emotions have on thoughts and behaviour, and to know how to regulate and manage emotions (Costrarelli & Stamou, 2009; Lane & Wilson, 2011). Thus, H_4 (EI moderates the relationship between emotional demands and burnout) was formulated. Results in the correlation matrix indicated that EI was negatively correlated with burnout. Furthermore, evidence was provided in the results that EI has a buffering effect on the relationship between emotional demands and burnout. Thus, H_4 was confirmed and is in accordance with Xanthopoulou et al.'s (2007) finding of the positive role of personal resources within the health impairment process.

It is then implied that athletes with higher EI will experience lower levels of burnout and vice versa, namely, athletes with lower EI will experience higher levels of burnout. Research by Schutte et al. (2007) also found that individuals with high EI demonstrated better health and well-being. This result concurs with Schutte et al. (2007) by producing a negative correlation between EI and psychological distress. A possible explanation is provided by Juravich and Babiak (2015), namely, that individuals with high EI can manage their emotions more effectively during stressful situations.

The fifth hypothesis of the study was that burnout mediates the relationship between emotional demands and psychological distress. The results indicated that the hypothesis is supported due to a significant indirect effect from emotional demands to psychological distress through burnout. The finding supports the prediction of the health impairment process in the JD-R model. The process predicts that high emotional demands will exhaust athletes' resources and lead to burnout, which will ultimately lead to psychological distress (Bakker, 2014; Bakker & Demerouti, 2007; Bakker et al., 2005).

Managerial implication

As athletes are experiencing an increase in organisational demands placed on them (Arnold & Fletcher, 2012b) the concern for burnout has also increased due to its impact on performance and well-being (Moen et al., 2014). This study will provide the sports organisation with new knowledge about personal and psychological skills that can be developed and improved in athletes, and the importance thereof. This knowledge might lead to a better understanding of why stress-related ill-health symptoms appear in athletes. The research provides coaches and athletes with a better understanding of EI and how it can be utilised as a personal resource to prevent distress and stress-related ill-health symptoms. It might help sports organisations and sporting bodies to protect the well-being of their athletes more effectively, supporting the statement of Fletcher and Scott (2010).

Limitations and recommendation for future research

The study described in the present chapter had a variety of limitations. Firstly, the sample size was not optimal and relatively small ($N = 145$), which had an impact on the statistical power. Secondly, some of the professional teams approached by the researcher have internal processes that need to be followed before they can take part in research. Some of these processes make it impossible to involve these teams in the research. Lastly, due to the electronic survey and athlete autonomy, it was impossible to identify who had completed the survey and which teams or athletes needed to be reminded to participate.

Studies building on the original study should be carried out using a larger number of athlete participants. It is also recommended that a better system of tracking the response rate should be utilised in future studies, to ensure a larger sample group. The results obtained in such studies could then be compared with those obtained by the present study, thereby promoting an in-depth investigation into EI and health of athletes. Sport organisations and managing teams of athletes should be aware of the demands of athletes and the effect it might have on their well-being. It is necessary for these sport organisations to aid the athletes in meeting the demands and improve their well-being.

Conclusion

The current study focused on professional and semi-professional athletes in South Africa. A literature review indicated the research gap as well as a proposed solution where hypothesis were formulated. This research investigated the health impairment process of these athletes. The results were statistically analysed and discussed, after which some limitations and recommendations were explained.

The results found that emotional demands lead to burnout, due to a positive relationship between the two constructs. Emotional demands had a significant positive relationship with psychological distress, thus emotional demands lead to psychological distress. The relationship between burnout and psychological distress was found to be significant positive, indicating that burnout leads to psychological distress. EI was found to moderate the relationship between emotional demands and burnout. Lastly, it was found that burnout partially mediates the relationship between emotional demands and psychological distress.

Chapter 3 contains the conclusion drawn from the results and discussion; further limitations will be provided, and recommendations will also be discussed.

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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

Conclusions, limitations and recommendations

The purpose of Chapter 3 is to draw conclusions from the research article. Conclusions will be drawn in accordance with the research findings reported in the preceding chapter. Limitations encountered during this specific study will be discussed, followed by recommendations for future research.

3.1 Conclusions

This study had seven specific objectives (as stated in chapter 1). Firstly, the study aimed to determine whether sports demands, distress, stress-related ill health, and EI can be conceptualised according to literature in the sports environment. Secondly, the research aimed to determine whether emotional demands lead to burnout. Thirdly, it aimed to determine whether emotional demands will lead to psychological distress. Fourthly, the study aimed to determine whether burnout will lead to psychological distress. The fifth objective was to determine whether EI moderates the relationship between emotional demands and burnout. The sixth objective was to determine whether burnout mediates the relationship between emotional demands and psychological distress. Finally, the study aimed to provide recommendations for future research and practice. These objectives will be discussed below.

Specific objective 1: To determine whether sport demands, burnout, stress-related ill health, and EI can be conceptualised according to literature in the sports environment.

Sports organisations have experienced tremendous change in their functioning over the last few decades, and psychologists should consider the implications these developments have on athletes (Fletcher, Hanton, Mellalieu & Neil, 2012). Fletcher et al. (2012) researched organisational stressors within the sports environment. They categorised these stressors into five dimensions that all place demands on athletes. Arnold, Fletcher and Daniels (2013) explain that organisational stressors are a multi-factorial construct that is represented by a number of demands. They also found that there are significant correlations between organisational stressors and emotions experienced by athletes. Fletcher et al. (2012) agree and indicate that demands placed on athletes have the potential to affect their stress experience and well-being. Overload, one of the organisational stressors, is a key principle of physical

training that is required to achieve top performance (Purvis, Gonsalves & Deuster, 2010). However, such demands can result in not only performance decrements, but also profound fatigue and burnout. Athletes become more vulnerable to burnout due to a number of factors, such as feeling trapped in their sport, high social constraints and low benefits, high physical and psychological costs, and when they experience low control (Gustafsson, Skoog, Podlog, Lundqvist & Wagnsson, 2013). Chronic fatigue, staleness, and burnout are all products of demands that are placed on athletes, and indicate the overwhelming physiological and psychological loads (Purvis et al., 2010). Galambos, Terry, Moyle and Locke (2005) highlight the scale of injury problems (physical distress symptoms) in elite sports. They found that psychological distress symptoms, such as depression and extreme exhaustion, could be determined by mood scores of athletes. Furthermore, they found that mood dimensions were significantly related to orthopedic injuries.

Because emotions play a central and important role in sport athletes should be able to choose from a range of strategies to enhance emotional control (Jones, 2003). Rahtee and Salh (2012) conclude that athletes who demonstrate higher levels of emotional maturity (such as emotional intelligence - EI) have the ability to maintain focus, control emotions, and to perform well under pressure. Lane, Thelwell, Lowther and Devonport (2009) predict that enhancing EI will increase athletes' ability to cope with stressors and demands placed on them. Furthermore, they found that enhancing EI in athletes is associated with desirable behaviours and the athlete's psychological well-being.

Specific objective 2: To determine whether emotional demands lead to burnout.

According to Xanthopoulou, Bakker, Dollard et al. (2007), job demands (in this case sports demands) are the strongest predictors of burnout. Bakker, Demerouti, Taris, Schaufeli, and Schreurs (2003) agree with the statement, and found in their research that emotional demands are one of the biggest contributors to burnout. This research is in accordance with the findings of this particular study, which found a positive correlation between emotional demands and burnout. The implication of the finding is that, when athletes experience high emotional demands, they will experience some effects of burnout; this is confirmed by Bakker et al. (2003), who expect burnout levels to increase when demands are high. Thus, burnout develops when certain demands are high and when resources to deal with the

demands are limited (Bakker et al., 2003). This study concurs with Bakker et al. (2003) and Xanthopolou, Bakker, Demerouti, and Schaufeli (2007), and confirms the second objective due to the significant positive relationship between emotional demands and burnout.

Specific objective 3: To determine whether emotional demands will lead to psychological distress.

Emotions are psychological reactions to ongoing relationships with the environment (Lazarus, 2000). Thus, a demanding environment is likely to affect the stress being experienced by athletes and the well-being of athletes (Fletcher et al., 2012). Distressing emotions, such as destructive anger and aggression, could have negative effects on the health and well-being of athletes (Lazarus, 2000). The results of this study complement the Lazarus' statements, as a positive correlation between emotional demands and psychological distress was found. This confirms that athletes faced with high demands experience some levels of psychological distress, which will have a negative impact on their well-being. The third objective, emotional demands will lead to psychological distress, is also confirmed by the positive relationship that was found between emotional demands and psychological distress. Tabei, Fletcher, and Goodger (2012) provided, in this regard, an important recommendation to coaches, trainers, and athlete managers, to monitor the physical and psychological well-being of athletes on a regular basis.

Specific objective 4: To determine whether burnout will lead to psychological distress.

The job demands-resources (JD-R) model predicts that demands will lead to burnout, and eventually burnout will lead to stress-related ill health (known as the health impairment process of the JD-R model; Bakker, 2014). The fourth objective was constructed on the basis of the final phase of the health impairment process experienced by athletes, to determine whether burnout will lead to psychological distress. The objective was achieved, with the finding of a positive correlation between burnout and psychological distress, as well as a significantly positive relationship between burnout and psychological distress. Previous literature confirms these results, as a negative correlation was found between burnout and psychological well-being by Schaufeli, Bakker, van der Heijden and Prins (2009). Cresswell and Eklund (2006) explain that athletes with high levels of burnout will experience symptoms

of psychological distress. In conjunction with the results of this study, Lundqvust (2011) is of the opinion that well-being and health of athletes may be enhanced by increasing positive emotional states.

Specific objective 5: To determine whether EI moderates the relationship between emotional demands and burnout.

The fifth objective was constructed based on the important role of emotions in the health impairment process (Xanthopolou, Bakker, Dollard, et al., 2007), and due to the fact that EI was explained as the ability to be aware and identify emotions, to be cognitive of the effects emotions has on thoughts and behaviour, and to know how to regulate emotions by Costrarelli and Stamou (2009). A study done by Xanthopoulou, Bakker, Demerouti et al. (2007) highlight the importance of personal resources that can be utilised to deal more effectively with demanding conditions in order to prevent negative outcomes such as distress. EI has also been found to play an important role in demanding situations (Laborde, Lautenbach, Allen, Herbert & Achtzehn, 2014). Lane et al. (2009) concur that EI is an important construct in relation to athletes, as it provides them with the ability to cope better with stressful situations. The current study's correlation matrix also indicated the positive role of EI as a negative correlation between EI and burnout was found.

Furthermore, results confirmed the positive role of EI in the health impairment process, as the buffering effect of EI between emotional demand and burnout has been confirmed. It can therefore be concluded that EI moderates the relationship between emotional demands and burnout (fifth objective). The correlation matrix also indicated that EI is negatively correlated with psychological distress. Thus, EI is associated with desirable athlete well-being as Lane et al. (2009) also found. A potential explanation for these results might be the positive correlation of EI with positive emotions such as vigour, happiness, and calmness (Lane et al., 2010) and the role that EI plays in the management of burnout (Laborde et al., 2014; Xanthopoulou, Bakker, Demerouti et al., 2007)

Specific objective 6: To determine whether burnout mediates the relationship between emotional demands and psychological distress.

The sixth objective was also constructed on the basis of the JD-R model and the prediction that high emotional demands will exhaust athletes' resources, and burnout will become evident (Bakker, 2014) as this study has also concluded during the second objective. Bakker (2014) explains that the JD-R model further predicts that burnout will cause stress-related ill health, such as psychological distress, which was also proved by this study in the fourth objective. Appleton, Hall and Hill (2009) are of the supporting opinion that burnout has corrosive effects on the physical and psychological state of athletes. Results of the present study confirm that there is a significant indirect effect from emotional demands to psychological distress through burnout. Thus, the sixth objective is supported. However, the research model is classified as a complementary mediation model (Zhao, Lynch & Chen, 2010), due to the significant direct relationship found between emotional demands and psychological distress.

Considering the above objectives, it becomes evident that burnout has become of considerable concern in competitive sports due to its negative consequences on well-being and health (Moen, Federici & Skaalvik, 2014). Thus, it is understandable that there has been an increase in studies on well-being in the context of competitive sports (Lundqvist, 2011).

The seventh objective will be discussed in the recommendation section in 3.3.

3.2 Limitations

Despite the satisfactory results, the study was not without limitations. Firstly, the number of athletes that participated was not optimal and relatively small ($N = 145$). The small sample size had an impact on the statistical power of the study. Due to internal processes of most professional teams, it was impossible to reach all teams and athletes in the required time. The availability of athletes also provided limitations, in terms of the seasons and international participation. Managers of sports that were in the off season indicated that they couldn't get hold of athletes. Other in-season sports were travelling internationally, thus team management indicated that athletes were not available.

Secondly, as the survey was electronic it required athletes to not only have access to a form of computer (laptop, desktop, tablet etc.) but also to have access to the internet. This was a limitation, as not all the athletes had internet access. Alternative methods were followed; however the response rate for these alternatives was close to zero. Thirdly, due to the electronic survey and athlete autonomy, it was impossible for team management and the researcher to keep record of which athletes had completed the survey and whom should be reminded to complete the survey.

The fourth limitation that was identified was the fact that the Sport Psychological Fitness Measurement Instrument (SPF) was primary developed for team sports. Thus, athletes participating in individual sports, such as athletics, cycling, duathlon, karate, swimming, squash, tennis, and triathlon, had to adapt their responses for certain team-related questions. The fifth limitation was the fact that the questionnaire had been developed in English, and not all the respondents were English-speaking, which may have lead to misunderstandings or misinterpretations of the items.

The sixth limitation is that cross-sectional survey design was used, which made it difficult to establish the causality of the data gathered. A further limitation of this study is that it made use of self-report instruments, and therefore the information provided may have been inaccurate.

Lastly, it should be noted that the primary purpose of the BEIS-10 is to collect EI data quickly (Davies, Lane, Devonport & Scott, 2010). It is recommended by Davies et al. (2010) that researchers seeking a more in-depth representation of EI should consider alternative measures that use multiple indicators.

3.3 Recommendations

The seventh objective of this study was to make recommendations for future research and practice. Thus, recommendations and directions for future research will be discussed, which will be followed by recommendations for practice.

3.3.1. Recommendations for future research

The current study focused only on EI and its relationship with emotional demands within the health impairment process. Thus, it is recommended that future research also includes other demands, such as sports load and mental load and their relationships with regard to EI and burnout in the health impairment process. The JD-R model consists out of two underlying processes, namely, the health impairment process and the motivational process (Bakker, 2014). As this study focused only on the health impairment process, it is recommended that future research focuses on the motivational process too, and its role and relationships with regard to athlete burnout and EI. Furthermore, future studies could focus on longitudinal designs, which will address the question of whether an intervention design to enhance EI leads to lower levels of burnout and less stress-related ill-health symptoms. Longitudinal studies can also be conducted to validate the current findings. Other longitudinal designs can be conducted to validate the findings of this study, and provide more in-depth measurement of EI. It can also be recommended that more in depth research on EI and applicable EI models must be discussed and presented in future research. Xanthopoulou et al. (2007) researched the role of personal resources (excluding EI) in the JD-R model and found positive results with regard to burnout. Thus, it is recommended that future research should focus on other personal resources that athletes might could to prevent burnout and stress-related ill health. Finally, future studies should use a larger sample size than the one used in this study.

3.3.2. Recommendations for practice

Sports organisations and governing bodies of sport have a duty to protect and support the well-being of their employees within the sports environment (Fletcher & Scott, 2010). Thus, managing staff of teams and athletes should be aware of the potential demands and health risks facing athletes (Tabei et al., 2012). Relevant information regarding demands and emotions of athletes could help coaches to develop and manage teams and individuals more effectively (Arraya & Pellissier, 2013). Sports psychologists face the need to develop certain abilities, such as EI, in athletes, in order for athletes to manage demands (Lane et al., 2009; Tabei et al., 2012). Enhancing EI should increase athletes' ability to cope more effectively with sports-related, as well as everyday life demands (Lane et al., 2009). Furthermore, EI has been found to increase performance levels of athletes, which heightens the importance of

understanding and implementing EI in the sports environment (Crombie, Lombard & Noakes, 2011; Soflu, Esfahani & Assadi, 2011).

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