

# **Adventure based experiential learning and adolescents' self-reported levels of resilience and positive mental health**

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for the degree *Magister Artium* in Clinical Psychology at the  
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### Summary

The aim of this study was to determine to what extent resilience and positive mental health are promoted in adolescents within a South African context through participation in an adventure based experiential learning programme. A review of the literature revealed that adventure based experiential learning programmes bring about a number of positive outcomes in the lives of participants. However, the majority of research on the impact of these programmes has focused on youth-at-risk, and clinical and delinquent populations. Improvements were also recently reported for well-functioning and healthy adolescents, particularly with regard to mental health, resilience and well-being. However, the potential role adventure programmes have in well-functioning and healthy adolescents has not received explicit attention within a South African context.

The study involved the evaluation of an existing adventure intervention presented by Outward Bound South Africa (OBSA). A pre-experimental pre-test multiple post-test design was used to determine the changes in the self-reported levels of resilience and positive mental health of two groups of adolescents during and after participation in the adventure programme. Data collection involved participants from two different schools. The participants were recruited from a private school for boys in the Gauteng Province and a semi-private school for girls in the Eastern Cape Province. A total of 104 participants participated in pre-testing, 100 in post-testing and 87 in post-post testing. Data were obtained by means of three questionnaires: The Resilience Scale (RS-25), Mental Health Continuum – Short Form (MHC-SF) and the General Health Questionnaire-28 (GHQ-28). These questionnaires were administered on three occasions, six weeks before the participants embarked on the programme, the second time immediately after they finished the programme and lastly, six weeks after they have completed the programme.

Results showed no significant differences in the adolescents' self-reported levels of resilience throughout the testing phases. Participants reported an initial increase in levels of anxiety and somatic symptoms, but thereafter results indicated decreases of varying significance in all forms of symptomatology as participants progressed through the points of measurement. These adolescents also reported increased levels of mental health, especially with regard to their social well-being. The research results also showed differences of small to medium effect to exist between the two gender groups. The female subgroup reported higher levels of resilience than the male subgroup. However, the male subgroup reported higher levels of positive mental health and lower levels of symptomatology as compared to their female counterparts. Furthermore, the results showed a positive correlation to exist between resilience and well-being, and demonstrated a negative correlation between resilience and symptomatology. In conclusion, the research study suggests that Adventure Based Experiential Learning programmes could be effective in the facilitation of the overall mental health and well-being of the adolescent population, and, therefore lays a foundation for further research on these intervention programmes.

**Keywords**

Adolescents, adventure, experiential learning, positive mental health, resilience.



### Opsomming

Die doelwit van die studie was om te bepaal tot watter mate veerkragtigheid en positiewe geestesgesondheid bevorder word binne 'n groep adolessente in die Suid-Afrikaanse konteks deur middel van deelname aan 'n avontuurgebaseerde ervaringsleerprogram. 'n Oorsig van die literatuur het getoon dat avontuurgebaseerde ervaringsleerprogramme 'n aantal positiewe uitkomst in die lewens van deelnemers voortbring. Die meerderheid navorsing het egter gefokus op die invloed van avontuurgebaseerde ervaringsleerprogramme op hoë-risiko jeug asook kliniese en misdadige populasies. Verbetering is ook onlangs gerapporteer vir goedfunksionerende en gesonde adolessente, veral ten opsigte van hul geestesgesondheid, veerkragtigheid en welstand. Die moontlike rol wat avontuurprogramme in goedfunksionerende en gesonde adolessente speel, het egter nog nie voldoende aandag binne die Suid-Afrikaanse konteks geniet nie.

Die studie behels die evaluering van 'n bestaande avontuur-intervensie wat aangebied is deur *Outward Bound South Africa* (OBSA). 'n Pre-eksperimentele voor-toets-meervoudige, na-toets-ontwerp is gebruik. Dit is spesifiek gebruik om die veranderinge in die self-gerapporteerde vlakke van veerkragtigheid en positiewe geestesgesondheid by die twee goepe adolessente te beskryf voor, en na afloop van hul deelname aan die avontuurprogram.

Data is ingesamel van deelnemers van twee verskillende skole. Die deelnemers is gewerf van 'n privaat seunskool in die Gauteng Provinsie en 'n semi-privaat skool vir dogters in die Oos-Kaap. 'n Totaal van 104 leerders het deelgeneem aan die voor-toetsing, 100 aan die na-toetsing en 87 aan die na-na-toetsing. Data is verkry deur middel van drie vraelyste: *The Resilience Scale* (RS-25), *Mental Health Continuum – Short Form* (MHC-SF) en die *General Health Questionnaire-28* (GHQ-28). Hierdie vraeslyste is op drie verskillende geleenthede afgeneem, ses weke voor die deelnemers op 'n avontuurgebaseerde

ervaringsleerprogram vertrek het, die tweede keer direk nadat hulle die OBSA-program voltooi het, en laastens ses weke nadat hulle die program voltooi het.

Resultate het geen beduidende verskille getoon wat betref adolessente se self-gerapporteerde veerkragtigheid tydens al drie die toetsfases nie. Hoewel deelnemers aanvanklik 'n styging self-gerapporteerde vlakke van angst en somatiese simptome getoon het, is dit gevolg deur afnames van variërende beduidendheid in al die vorms van simptomatologie wat gemeet is soos deelnemers gevorder het deur die verskillende fases van toetsing. Hulle het ook verhoogde vlakke van geestesgesondheid, en veral 'n toename in hul vlakke van sosiale welstand gerapporteer. Die resultate het verskille van klein tot medium effek tussen die geslagsgroepe getoon. Die vroulike subgroep het hoër vlakke van veerkragtigheid gerapporteer as die manlike subgroep; terwyl die manlike subgroep hoër vlakke van positiewe geestesgesondheid getoon het, asook laer vlakke van simptomatologie. Verder toon die navorsingstudie 'n positiewe korrelasie tussen veerkragtigheid en welstand, en demonstreer 'n sterk negatiewe korrelasie tussen veerkragtigheid en simptomatologie. Die studie toon dat avontuurgebaseerde ervaringsleerprogramme effektief kan wees in die fasilitering van die algemene geestesgesondheid en welstand van adolessente, en verleen so 'n goeie basis vir verdere navorsing oor hierdie intervensieprogramme.

### **Slutelwoorde**

Adolessente, avontuur, ervaringsleer, positiewe geestesgesondheid, veerkragtigheid.

## **Preface**

### **Article Format**

This mini-dissertation will follow the article format as described by General Regulation A.4.4.2.3 of the North-West University in partial fulfilment of the requirements for a professional Master's degree in Clinical Psychology.

### **Selected Journal**

The Journal of Psychology in Africa (JPA) is the intended journal for publication. The research manuscript and reference lists have been prepared in accordance with the specifications of the American Psychological Association (APA) 6th edition publication guidelines as required by the JPA. Amendments made for the purpose of examination will be changed to adhere to JPA publication guidelines before submission for publication.

### **Instructions to Authors**

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directions and Conclusions – in relation to the research questions and theory development. For all other contributions (except editorials, book reviews, special announcements) the abstract must be a concise statement of the content of the paper. Abstracts must not exceed 150 words. The statement of the abstract should summarise the information presented in the paper but should not include references. • Text: (1) Per APA guidelines, only one space should follow any punctuation; (2) Do not insert spaces at the beginning or end of paragraphs; (3) Do not use colour in text; and (4) Do not align references using spaces or tabs, use a hanging indent. Tables and figures: These should contain only information directly relevant to the content of the paper. Each table and figure must include a full, stand-alone caption, and each must be sequentially mentioned in the text. Collect tables and figures together at the end of the manuscript or supply as separate files. Indicate the correct placement in the text in this form <insert Table 1 here>. Figures must conform to the journal's style. Pay particular attention to line thickness, font and figure proportions, taking into account the journal's printed page size – plan around one column (82 mm) or two column width (170 mm). For digital photographs or scanned images the resolution should be at least 300 dpi for colour or gray scale artwork and a minimum of 600 dpi for black line drawings. These files can be saved (in order of preference) in PSD, PDF or JPEG format. Graphs, charts or maps can be saved in AI, PDF or EPS format. MS Office files (Word, Powerpoint, Excel) are also acceptable but DO NOT EMBED Excel graphs or Powerpoint slides in a MS Word document. Referencing: Referencing style should follow the latest edition of the APA manual of instructions for authors. References in text: References in running text should be quoted as follows: (Louw & Mkize, 2012), or (Louw, 2011), or Louw (2000, 2004a, 2004b). All surnames should be cited the first time the reference occurs, e.g., Louw, Mkize, and Naidoo (2009) or (Louw, Mkize, & Naidoo, 2010). Subsequent citations should use et al., e.g. Louw et al. (2004) or (Louw et al., 2004). 'Unpublished observations'

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*Journal article*

Peltzer, K. (2001). Factors at follow-up associated with adherence with adherence with directly observed therapy (DOT) for tuberculosis patients in South Africa. *Journal of Psychology in Africa*, 11, 165–185.

*Book*

Gore, A. (2006). *An inconvenient truth: The planetary emergency of global warming and what we can do about it*. Emmaus, PA: Rodale.

*Edited book*

Galley, K. E. (Ed.). (2004). *Global climate change and wildlife in North America*. Bethesda, MD: Wildlife Society.

*Chapter in a book*

Cook, D. A., & Wiley, C. Y. (2000). Psychotherapy with members of the African American churches and spiritual traditions. In P. S. Richards & A. E. Bergin (Ed.), *Handbook of psychotherapy and religiosity diversity* (pp 369–396). Washington, DC: American Psychological Association.

*Magazine article*

Begley, S., & Murr, A. (2007, July 2). Which of these is not causing global warming? A. Sport utility vehicles; B. Rice fields; C. Increased solar output. *Newsweek*, 150 (2), 48–50.

*Newspaper article (unsigned)*

College officials agree to cut greenhouse gases. (2007, June 13). *Albany Times Union*, p. A4.

*Newspaper article (signed)*

Landler, M. (2007, June 2). Bush's Greenhouse Gas Plan Throws Europe Off Guard. *New York Times*, p. A7.

*Unpublished thesis*

Appoh, L. (1995). The effects of parental attitudes, beliefs and values on the nutritional status of their children in two communities in Ghana (Unpublished master's thesis). University of Trondheim, Norway.

*Conference paper*

Sternberg, R. J. (2001, June). Cultural approaches to intellectual and social competencies. Paper presented at the Annual Convention of the American Psychological Society, Toronto, Canada.

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### Letter of Consent

We, the co-authors, hereby give consent that Megan Barbara Patricia Boyers may submit the manuscript titled “Adventure based experiential learning and adolescents’ self-reported levels of resilience and positive mental health” for examination in fulfilment of the requirements for the degree Magister Artium in Clinical Psychology. It may also be submitted to the *Journal of Psychology in Africa* for publication.



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**Prof. J. C. Potgieter**

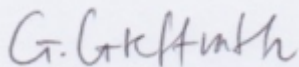
**Supervisor**



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**Miss C. Vosloo**

**Co-supervisor**



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**Dr G. Greffrath**

**Assistant supervisor**



**Declaration by Researcher**

I hereby declare that this research, *Adventure based experiential learning and adolescents' self-reported levels of resilience and positive mental health*, is entirely my own work and that all sources have been fully referenced and acknowledged.



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M. B. P Boyers

## Literature Review

*Life is either a great adventure or nothing. – Helen Keller*

### Introduction

Literature has demonstrated the efficacy of adventure based experiential learning (ABEL<sup>1</sup>) programmes to bring about a number of positive outcomes in the lives of participants. Wilson and Lipsey (2000) demonstrated ABEL programmes to have positive outcomes for troubled, at risk youth by reducing antisocial behaviour and improving psychological functioning in delinquent youth between the ages of 10 and 21 years. Improvements were also recently reported for well-functioning and healthy adolescents, particularly with regard to mental health, resilience and well-being (Gonzalez, 2014). Cason and Gillis (1994) have demonstrated in a meta-analysis that 62% of adolescents that participated in ABEL programmes were better off in terms of a variety of aspects including self-concept, locus of control, delinquent behaviour and academic performance, compared to those who did not participate in these programmes. Wynn, Frost and Pawson (2012) have found these programmes to have a positive influence on mental health, and on the development of certain life skills that promote the well-being and mental health of adolescents. Li, Chung and Ho (2012) demonstrated that psychological well-being in primary school children was also promoted through adventure programmes. A recent meta-analysis of adventure therapy outcomes and moderators conducted by Bowen and Neill (2013) concluded that “adventure therapy programs are moderately effective in facilitating positive short-term change in psychological, behavioural, emotional, and interpersonal domains and that these changes appear to be maintained in the longer-term” (p. 42). Positive outcomes of

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<sup>1</sup>ABEL: Adventure Based Experiential Learning

adventure programmes have therefore been shown to span a variety of facets of psychological functioning, as well as different developmental stages and age groups.

The aim of this particular study builds on the promise of the aforementioned studies, as it will explore the extent to which resilience and positive mental health are promoted in adolescents within a South African context through participation in an ABEL programme.

### **Adolescence: A Period of Multiple Transitions**

Adolescence represents the time period between late childhood and early adulthood (Hawkins, 1996). Within a South African context, policy guidelines define this developmental phase as the age period between 12 and 18 years (Venn, 2010). Adolescence has traditionally been viewed as a challenging developmental period of both discovery and disorientation (Venn, 2010). Zarrett and Eccles (2006) state that “there are major developmental changes and challenges associated with the period of adolescence, as youth acquire and consolidate the competencies, attitudes, values and social capital necessary to make a successful transition into adulthood” (p. 13).

Holder (2012) interestingly found a heightened interest among the adolescent population towards their own individual well-being and physical health. In spite of this, Anuradha and Yagnik (2012) maintain that “adolescent mental health is a concern for health professionals as the prevalence of mental health problems appears to peak in adolescence and early adulthood because of the biological and psychosocial transitions that are occurring in this age group” (p. 25). A further factor that creates concern is that this transition from childhood to adulthood is shaped by the sociocultural context and time period in which it occurs (Crockett & Silbereisen, 2000), and the South African context has been shown to pose specific challenges in this regard.

Growing up in a context filled with violence and crime, high rates of parental unemployment and rapid technological changes as well as demographic, economic and

political changes and uncertainty are all challenges posed in the South Africa context (Sharp & Dellis, 2010). Globalization and urbanization have also impacted our youth on many levels. The increase in population rates has had a definite impact on society by limiting the availability of jobs and income (World Youth Report, 2007). Our younger generation is faced with many challenges relating to inadequate shelter and the limited availability of public services (World Youth Report, 2007). The combination of these negative factors have been found to lead to feelings of anger and despair in adolescents, which then increases the chances of them engaging in crime, violence and other antisocial behaviours (World Youth Report, 2007). According to the World Youth Report (2007), “the emergence of various forms of delinquency, including the formation of youth gangs, is often a reaction to exclusion and marginalization in urban areas” (p. 26).

It is, however important to be mindful that it is not only the underprivileged adolescent population that is at increased risk. Adolescents living within the higher economic bracket are also exposed to different challenges in their upbringing. The process of modernization has created social and economic transitions (Reddy et al., 2008). Within rapidly developing countries, technology like the Internet have enabled many young people to access information that may otherwise have been unavailable (Reddy et al., 2008). The increased exposure to technology has also led to heightened sexual awareness (Reddy et al., 2008). Silva (2002) found that a proliferation of sexualized messages from the media have led to an increasing acceptance of premarital sexual intercourse among adolescents.

In reviewing evidence regarding the increase in adolescent drug use, Brook, Morojele, Pahl and Brook (2006) demonstrated how environmental stressors experienced by South Africans have had a confounding impact on family relations over the past decade. These family-related variables play a role in the prediction of various adolescent risk behaviours like drug use (Brook et al., 2006). Contextual issues to consider include the increase in single

parent families due to marital discord, which leads to an increase in the amount of children being raised in single-parent homes (Brook et al., 2006). Furthermore, the involvement of women in the workforce has transformed the level of parental involvement in young people's lives (Gluckman, 2011). This adds additional strain to parental figures as there is less time and energy available to monitor and care for children, which leaves children unsupervised for long periods. This can be a contributing factor towards the affiliation with substance-using peers (Brook et al., 2006). These risk factors collectively contribute towards the occurrence of risk behaviours, including for example, substance use, violence and unsafe, dangerous sexual behaviour within the adolescent population (Sharp & Dellis, 2010). The adolescent population in general, which includes the less fortunate and the privileged, are consequently at higher risk for engagement in high risk behaviours, which poses a significant threat to the maintenance of their well-being.

According to Price-Mitchell (2014), risk taking behaviour also serves an important developmental function during adolescence. According to this author, positive experiences and individual growth result when psychological boundaries are pushed, which creates a sense of accomplishment and contributes to the development of the individual identity. Dotterich (2006) is of the opinion that risk taking behaviour during adolescence is widely considered normal for this developmental phase, as it is important for the exploration of different and new behaviours, and facilitates identity formation and the development of decision making skills. This sense of accomplishment is achieved through learning how to solve problems and through acknowledging the importance of working with others (Price-Mitchell, 2014). It is, therefore, natural for adolescents to experiment and learn by pushing their own comfort zones, as this assists them to overcome challenges and develop certain psychological traits like courage, resilience, persistence and also self-esteem (Price-Mitchell, 2014). Of concern is, however, the manner in which adolescents often overestimate their

competencies – they often either rely on their immature ability to judge their surroundings or give in to peer pressure (Dotterich, 2006). While the risk taking behaviours typically associated with adolescence may thus pose significant threats to adolescents' levels of mental health and well-being, risk taking behaviour may also play an important developmental role.

Controlled risk taking is a fundamental trait of ABEL, and has been found to lead to the development of positive resources for adolescents (Hansen, 2002). Every component of the ABEL process presents participants with an opportunity to enhance their intrapersonal skills including self-esteem, self-confidence, self-awareness, self-management, spirituality as well as interpersonal skills such as communication, team work and conflict management (Hansen, 2002).

### **Mental Health and Well-Being during Adolescence**

The World Health Organization (2005) defines mental health as “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (p. 23). Keyes's conceptualization of mental health, which is referred to as the Complete Mental Health (CMH)-model, has gained increasing recognition in recent years because of its holistic conceptualization of mental health (Keyes, 2002). The CMH-model involves three facets of mental health including emotional well-being, psychological well-being and social well-being (Keyes, 2002). Emotional well-being is understood as the experience of life satisfaction and the ability to maintain a positive outlook on life (Keyes, 2002). The psychological well-being facet involves mastery over the environment, self-acceptance and acceptance from others as well as having an overall sense of purpose in life (Keyes, 2002). Social well-being includes societal integration and interaction and is characterized as a positive interaction with society and societal acceptance (Keyes, 2002). According to Keyes (2002), the presence of these three facets represents a state of positive

mental health, which is characterized by the ability to adapt to environmental changes, to cope with any presented adversity, to perform productively and to maintain fulfilling relationships with others (Keyes, 2002).

The promotion of mental health is central to the healthy development of adolescents. Mental health has been associated with different aspects of adolescents' functioning, like feeling happy, maintaining healthy relationships with family and friends as well as increasing participation in physical activity (Anuradha & Yagnik, 2012). Mental health also has physiological benefits as it helps individuals to relax and to get a good night's sleep (Anuradha & Yagnik, 2012) and has been shown to facilitate community participation and belonging (Anuradha & Yagnik, 2012). It is, therefore not surprising that mental health is one of the biggest challenges that affect young adolescents worldwide, with 4% of 12-17 year olds and 9% of 18 year olds suffering with different mental illnesses like depression (Mathieson & Koller, 2008). Conversely, positive mental health and well-being are aspects that assist individuals in their own growth and development (Mathieson & Koller, 2008). It is, therefore, important to safeguard the adolescent population by creating social environments that foster positive mental health (Mathieson & Koller, 2008).

A well-researched factor that has been found to play a prominent role in the protection of well-being and positive mental health during adolescence is that of resilience (Zolkoski & Bullock, 2012). Mathieson and Koller (2008) emphasize the reciprocal relationship that exists between resilience and well-being that has emanated from research, concluding that the promotion of well-being builds competent and resilient youth who are poised to successfully navigate the challenges of transitioning into adulthood.

### **Resilience: The Ability of Individuals to Adapt**

A variety of definitions and conceptualizations of resilience exist. Wagnild (2009) defines resilience as the "ability to successfully cope with change or misfortune" (p. 15).

Ahern, Kiehl, Sole and Byers (2006) state that resilience is considered a positive personality characteristic that controls the negative impact of stress and therefore, results in adaptation. These authors go further by describing resilience as the ability to successfully cope with change and to live a fuller and more rewarding life. For the purpose of this study resilience is understood as the ability to adapt under stressful conditions and different environments, whereby it is also recognised as a positive personality characteristic that enhances well-being and mental health.

According to Wagnild and Young (1993b), “resilience develops over time and early childhood experiences such as close confiding relationships, role models who advocated exuberance and self-reliance, and effective family functioning contribute to later development of resilience” (p. 167). According to Fletcher and Sarkar (2013), “individuals with high levels of ego resilience are characterized as having high levels of energy, a sense of optimism, curiosity, and the ability to detach from, and conceptualize problems” (p. 15). According to Wagnild and Young (1993a), who developed a tool to assess the underlying determinants of resilience, this construct enhances the adaptation of individuals within the environment and is, therefore, regarded as a positive personality characteristic. According to these authors, resilience is more than just bouncing back from adversity, as it also involves the capacity of individuals to live a full and rewarding life, a life that is vital, authentic and true (Wagnild & Young, 1993a). It is further suggested that people who possess resilience tend to manifest certain adaptive characteristics especially during times of stress, which include high levels of morale, somatic health and social functioning (Wagnild & Young, 1993a). These descriptions remind strongly of Keyes’ conceptualization of mental health discussed afore.

Elmore (2010) states that children within the Indestructible Youth (IY) generation are not equipped with the necessary resources that assist them in coping with certain obstacles or



stressors. According to Elmore (2010), the IY generation can be viewed as the Millennial Generation, which have grown up in a world influenced by the “i” – iPods, iTunes, iPhones, iChat and iPads. The aforementioned author further states that “this generation has been so sheltered by their parents, teachers, counsellors, and an overregulated government that many have trouble developing strong, independent coping skills” (p.23). This sheltering of children could lead them to not test their limits or take on challenging tasks or opportunities that plays an important part in the building of resilience.

Challenging situations can create courage and resilience (Brendtro & Strother, 2007). The adolescent population are understood to have an adventurous mind-set in that they actually seek out excitement to combat boredom (Brendtro & Strother, 2007). This excitement can be expressed in healthy or unhealthy ways, by seeking excitement through the use of drugs, for example, or through challenging situations like engaging in adventurous activities (Brendtro & Strother, 2007).

ABEL programmes and the activities forming part thereof have been shown to create one such healthy context for the facilitation and development of resilience and mental health among adolescents (Murphey, Barry & Vaughn, 2013).

## **The Facilitation of Resilience through Adventure Based Experiential Learning**

### **Interventions**

Hawkins (1996) defines adventure as “an exciting or dangerous experience” and a “willingness to take risks” (p. 7). According to Brendtro and Strother (2007), adventure is “engaging in stressful activities with manageable risk” (p. 3). Furthermore, it must be acknowledged that the uncertainty of an outcome when embarking on an activity is an adventure in itself. From both of these definitions it is clear that an element of risk is integral to every adventure experience. This perception of risk forms part of any ABEL programme, and serves to create a variety of reactions and emotions in participants including, for

example, uncertainty, dissonance and sometimes even anxiety (Lee & Ewert, 2013). Inherent to these experiences is, however, also the creation of opportunities and possibilities for the mobilization of resources within individuals.

Existing ABEL interventions represent a wide variety of adventure activities that take place in different settings ranging from urban settings to natural environments like the wilderness (Scheinfeld, Rochlen & Buser, 2011). Also referred to as Outdoor Adventure Education (OAE), Sheard and Golby (2006) state that these interventions “involve direct and purposeful exposure to adventurous activities in an effort to facilitate both intra- and interpersonal growth” (p. 189). During programme implementation various adventurous activities are selected which assist in developing physical, mental and social competencies in participants (Lee & Ewert, 2013).

According to Murphey et al. (2013), ABEL programmes typically work within two domains. Firstly, these programmes assist in the prevention of illness through the facilitation of resilience, which have been described in the previous section as the ability to handle stress positively. Secondly, these programmes assist in the development, activation and facilitation of well-being (Murphey et al., 2013). According to Bloemhoff (2006), ABEL programmes are effective preventative interventions that create a buffer against, for instance, antisocial behaviour, psychological maladjustment, academic difficulties and physical complaints. The controlled experience of risk and the thought processes and self-understanding that results when exposed to risks are all tied in with the concept of resilience, as resilience involves the adaptation of individuals to a challenging environment or situation (Lee & Ewert, 2013).

A variety of programmes and ABEL interventions are presented by various organizations internationally, and most often makes use of experiential learning. According to Gentry (1990), the concept of experiential learning “exists when a personally responsible participant cognitively, affectively, and behaviourally processes knowledge, skills, and/or

attitudes in a learning situation characterized by a high level of active involvement” (p. 10). Furthermore, Priest and Gass (1997) explain experiential learning as learning by doing, by acting on a task or activity, and then observing the cause and effects of the action. This forms part of the rationale of adventure activities offered by different international organizations of which Outward Bound International is probably the most prominent and internationally most recognized (Hansen, 2002). According to Ritchie, Wabano, Russell, Enosse and Young (2014):

The Outward Bound process model illustrates how a participant achieves positive change and personal growth by processing through a series of challenges in a small group environment where successive problems are addressed, solved and then recognized into learning that may transfer to life beyond the outdoor experience (p. 3).

A number of organizations also offer such programmes in South Africa. These South African organizations include Itchyfeet South Africa, various girl and boy scouts clubs, the Veld and Vlei outdoor centre, the Wilderness Leadership School (WLS), the Outdoor Adventure and Recreational Centre (OARC) as well as Outward Bound’s local affiliate – Outward Bound South Africa (OBSA) (Hansen, 2002). Outward Bound is a non-profit international organization that focuses on experiential education in which they utilize various outdoor activities to enhance the lives of young people (Outward Bound, n.d.). The organization’s objective is to develop interpersonal skills, for example communication skills, leadership and team integration (Outward Bound, n.d.). One of their most prominent objectives is, however, personal development including, for example confidence building, strength building and self-awareness (Outward Bound, n.d.). Outward Bound (n.d., Mission Statement, para.3) maintains as their mission statement “to empower young South Africans

with the character, will, values and self-belief to live their lives to the full and to consistently make the right choices”.

The OBSA adventure programme is generally a seven day programme that involves different activities that are tailored to the needs of the group. The following activities often form a part of programmes directed towards the adolescent population: low and high ropes, rafting, kayaking or canoeing, sailing, solo wilderness experience, expedition hiking, camping, rock climbing or abseiling, navigation and orienteering, mental and physical challenges as well as group dynamics and team challenges (Outward Bound, n.d.). When participants challenge themselves physically and mentally during these OBSA adventure programmes, they need to draw upon certain protective factors within themselves in order to buffer negative environmental stressors, which facilitates the development of mental health and resilience (Bloemhoff, 2006).

### **Preamble to Problem Statement**

The information presented above suggests the existence of an association between ABEL and the development of resilience as well as the enhancement of positive mental health within the adolescent population. This association has, however, not been explored in a South African context. The current study will, therefore, focus on evaluating the outcomes of an established ABEL programme in terms of the self-reported levels of resilience and mental health of a group of South African adolescents.

## References

- Ahern, N. R., Kiehl, E. M., Sole, M. L., & Byers, J. (2006). A review of instruments measuring resilience. *Issues in Comprehensive Pediatric Nursing, 29*, 103-125.
- Anuradha, L. R., & Yagnik, V. S. (2012). Improving positive mental wellbeing among adolescents: Current need. *Delhi Psychiatry Journal, 15*(1), 22-27.
- Bloemhoff, H. J. (2006). The effect of an adventure-based recreation programme (ropes course) on the development of resiliency in at-risk adolescent boys confined to a rehabilitation centre. *South African Journal for Research in Sport, Physical Education and Recreation, 28*(1), 1-11.
- Bowen, D. J., & Neill, J. T. (2013). A meta-analysis of adventure therapy outcomes and moderators. *The Open Psychology Journal, 6*(1), 28-53.
- Brendtro, L. M., & Strother, M. (2007). Back to basics through challenge and adventure: Reclaiming children and youth. *The Journal of Strength-Based Interventions, 16*(1), 2-6.
- Brook, J. S., Morojele, N. K., Pahl, K., & Brook, D. W. (2006). Predictors of drug use among South African adolescents. *Journal of Adolescent Health, 38*(1), 26-34.
- Cason, D., & Gillis, H. L. (1994). A meta-analysis of outdoor adventure programming with adolescents. *Journal of Experimental Education, 17*, 40-47.
- Crockett, L. J., & Silbereisen, R. K. (2000). Social change and adolescent development: Issues and challenges. Retrieved from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1242&context=psychfacpub>
- Dotterich, J. (2006). *Positive youth development resource manual: Understanding collaboration*. Ithaca, NY: Cornell University, ACT for Youth.

Elmore, T. (2010). *Generation iY: Our last chance to save their future*. Atlanta, Georgia: Poet Gardener Publishing.

Fletcher, D., & Sarkar, M. (2013). Psychological resilience: A review and critique of definitions, concepts, and theory. *European Psychologist, 18*(1), 12-23.

Gentry, J. W. (1990). *Guide to business gaming and experiential learning*. East Brunswick, NJ/London: Nichols/GP.

Gluckman, P. (2011) *Improving the transition: Reducing social and psychological morbidity during adolescence*. A Report from the Prime Minister's Chief Science Advisor. Auckland: Office of the Prime Minister's Science Advisory Committee.

Gonzalez, A. (2014). *The effects of an adventure based program: Mechanisms promoting resilient outcomes among youth in transition from childhood to adulthood* (Honors thesis). University of Colorado, Boulder.

Hansen, J. (2002). *Guidelines for intervention through adventure-based programmes for youth-at-risk* (Master's thesis). University of Pretoria, Pretoria.

Hawkins, J. M. (1996). *The South African Oxford school dictionary*. Cape Town: Oxford University Press.

Holder, M. D. (2012). Why study children's and adult's well-being, including their happiness? In *Happiness in Children* (pp. 5-18). Springer Netherlands.

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43*(2), 207-222.

Lee, K., & Ewert, A. (2013). Adventure programs and diverse family styles. *Journal of Experiential Education, 36*(2), 123-138.

Li, W. H. C., Chung, J. O. K., & Ho, E. K. Y. (2012). Effectiveness of an adventure-based training programme in promoting the psychological well-being of primary schoolchildren. *Journal of Health Psychology, 18*(11), 1478-1492.

Mathieson, A., & Koller, T. (Eds.). (2008). *Social cohesion for mental well-being among adolescents: WHO/HBSC forum 2007*. World Health Organization, Europe.

Murphey, D., Barry, M., & Vaughn, B. (2013). Positive mental health: Resilience. Retrieved from [http://www.childtrends.org/wp-content/uploads/2013/03/Child\\_Trends-2013\\_11\\_01\\_AHH\\_Resilience.pdf](http://www.childtrends.org/wp-content/uploads/2013/03/Child_Trends-2013_11_01_AHH_Resilience.pdf)

Outward Bound. (n.d.). Outward Bound. Retrieved from <http://www.outwardbound.co.za/>

Price-Mitchell, M. (2014). Why risk-taking may increase teen happiness. Retrieved from <http://www.rootsofaction.com/why-risk-taking-may-increase-teens-happiness/>

Priest, S., & Gass, M. A. (1997). *Effective leadership in adventure programming*. Illinois, USA: Human Kinetics.

Reddy, S. P., James, S., Sewpaul, R., Koopman, F., Funani, N. I., Sifunda, S., . . . Omardien, R. G. (2008). *Umthente Uhlaba Usamila: The South African youth risk behaviour survey*. Cape Town: South African Medical Research Council.

Ritchie, S. D., Wabano, M. J., Russell, K., Enosse, L., & Young, N. L. (2014). Promoting resilience and wellbeing through an outdoor intervention designed for Aboriginal adolescents. *Rural and Remote Health, 14*, 1-19.

Scheinfeld, D. E., Rochlen, A. B., & Buser, S. J. (2011). Adventure therapy: A supplementary group therapy approach for men. *Psychology of Men & Masculinity, 12*(21), 188-194.

Sharp, C., & Dellis A, (2010). Risky teens: Intervention science and its application to the South African context. Report commissioned by the South African Gambling foundation.

Sheard, M., & Golby, J. (2006). The efficacy of an outdoor adventure education curriculum on selected aspects of positive psychological development. *Journal of Experiential Education, 29*(2), 187-209.

- Silva, M. (2002). The effectiveness of school-based sex education programs in the promotion of abstinent behavior: A meta-analysis. *Health Education Research, 17*(4), 471-481.
- Venn, D. J. W. (2010). *Rainbow knowledges: Adolescence and mental health in post-apartheid South Africa* (Master's thesis). Erasmus University, Netherlands.
- Wagnild, G. M., & Young, H. M. (1993a). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement, 1*(2), 165-178.
- Wagnild, G. M., & Young, H. M. (1993b). The Resilience Scale. Retrieved from <http://www.resiliencescale.com/index.html>
- Wagnild, G. M. (2009). *The Resilience Scale user's guide for the US English version of the Resilience Scale and the 14-Item Resilience Scale*. Worden, MT: The Resilience Center.
- Wilson, J. S., & Lipsey, M. W. (2000). Wilderness challenge programs for delinquent youth: A meta-analysis of outcome evaluations. *Evaluation and Program Planning, 23*, 1-12.
- World Health Organization. (2005). *Promoting mental health: Concepts, emerging evidence, practice*. Summary report. Geneva: WHO.
- World Youth Report (2007). *Young people's transition to adulthood: Progress and challenges*. United Nations: United Nations Publication.
- Wynn, B., Frost, A., & Pawson, P. (2012). Adventure therapy proves successful for adolescent survivors of childhood cancers. *Kai Tiaki Nursing New Zealand, 18*(1), 28-30.
- Zarrett, N., & Eccles, J. (2006). The passage to adulthood: Challenges of late adolescence. *New Directions for Youth Development, 111*, 13-28.
- Zolkoski, S. M., & Bullock, L. M. (2012). Resilience in children and youth: A review. *Children and Youth Services Review, 34*, 2295-2303.



**Manuscript for Examination**

**Manuscript Title, Authors and Addresses**

Adventure based experiential learning and adolescents' self-reported levels of resilience and positive mental health

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### **Abstract**

The present study aims to explore to what extent resilience and positive mental health are promoted in adolescents within a South African context through participation in an adventure based experiential learning programme. A pre-experimental pre-test-multiple post-test design was used to determine the changes in the self-reported levels of resilience and positive mental health reported by two groups of adolescents. The Resilience Scale (RS-25), Mental Health Continuum – Short Form (MHC-SF) and the General Health Questionnaire-28 (GHQ-28) were administered to all of the participants. The results showed no significant changes in self-reported levels of resilience. The two groups of participants reported increased levels of anxiety and somatic symptoms immediately after participation in the ABEL programme. However, significant decreases in all measured forms of symptomatology was observed as they progressed through the different points of measurement. Participants also reported improved mental health. Small gender differences were observed in resilience, well-being and mental health, and there was a strong correlation between resilience and positive mental health. The research study indicated that Adventure Based Experiential Learning (ABEL) programmes holds significant promise for the facilitation of the overall mental health and well-being of the South African adolescent population, and should be further explored.

### **Keywords**

Adolescents, adventure, experiential learning, positive mental health, resilience.

## **Introduction**

### **Orientation and Problem Statement**

Adolescence represents the time period between late childhood and early adulthood (Hawkins, 1996) and has, according to Venn (2010), traditionally been viewed as a challenging developmental period characterized by both discovery and disorientation. Zarrett and Eccles (2006) state that “there are major developmental changes and challenges associated with the period of adolescence, as youth acquire and consolidate the competencies, attitudes, values and social capital necessary to make a successful transition into adulthood” (p. 13). The transition from childhood to adulthood is also shaped by the sociocultural context and time period in which this transition occurs (Crockett & Silbereisen, 2000). Lifestyle changes within the adolescent population that have been identified include a heightened interest towards their own individual well-being and physical health (Holder, 2012). There are a number of risk factors and behaviours that have been shown to pose challenges to the maintenance of mental health during adolescence.

Among South African youth high risk behaviours such as substance use, violence and risky sexual behaviour have been identified as examples of factors threatening adolescent well-being (Reddy et al., 2008). In addition, according to Price-Mitchell (2014), risk taking also serves an important developmental function during this developmental period. Dotterich (2006) states that risk taking behaviour during adolescence is widely considered normal for this developmental phase, as it is important for the exploration of different and new behaviours, and facilitates identity formation and the development of decision making skills. Positive experiences can result when psychological boundaries are pushed, which creates a sense of accomplishment and contributes to the development of the individual identity. This sense of accomplishment is achieved by adolescents through learning how to solve their own problems and through acknowledging the importance of working with others (Price-Mitchell,

2014). It is, therefore natural for adolescents to experiment and learn by pushing their own comfort zones, as this can assist them to overcome challenges and develop certain psychological traits like courage, resilience and persistence (Price-Mitchell, 2014). Of concern is, however, that adolescents often overestimate their competencies, and then either rely on their immature abilities to judge their surroundings, or give in to peer pressure (Dotterich, 2006). Risk taking behaviour typically associated with adolescence can, therefore, play an important developmental role, but may also pose significant threats to adolescents' levels of well-being and mental health.

The World Health Organization (2005) defines mental health as “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (p. 23). Keyes's (2002) conceptualization of mental health, which is referred to as the Complete Mental Health (CMH)-model, has gained increasing recognition in recent years because of its holistic conceptualization of mental health. The CMH-model involves three facets of mental health: emotional well-being, psychological well-being and social well-being (Keyes, 2002): (I) Emotional well-being is understood as the experience of life satisfaction and the ability to maintain a positive outlook on life; (II) Psychological well-being involves mastery over the environment, self-acceptance and acceptance from others as well as having an overall sense of purpose in life; and (III) Social well-being includes societal integration and is characterized as a positive interaction with society and societal acceptance (Keyes, 2002). According to the aforementioned author, the presence of these three facets represent a state of positive mental health, which is characterized by the ability to adapt to environmental changes, to cope with any presented adversity, to perform productively and to maintain fulfilling relationships with others (Keyes, 2002).

A factor that has been found to play a prominent role in the protection of well-being during adolescence is resilience (Zolkoski & Bullock, 2012). A variety of definitions and conceptualizations of resilience exist, for example, Wagnild (2009) defines resilience as the “ability to successfully cope with change or misfortune” (p. 2526). Dotterich (2006) states that “resilience is the process of adapting well in the face of adversity” in other words, “bouncing back from difficult experiences” (p. 118). Resilience is also considered as a positive personality characteristic that controls the negative impact of stress and results in adaptation to the external environment and, therefore, constitutes the ability to successfully cope with change and to live a fuller more rewarding life (Ahern, Kiehl, Sole & Byers, 2006). According to Fletcher and Sarkar (2013), “individuals with high levels of ego resilience are characterized as having high levels of energy, a sense of optimism, curiosity, and the ability to detach from, and conceptualize problems” (p. 15). Wagnild and Young (1993b) developed an assessment tool to assess the underlying determinates of resilience, and they are of the opinion that this construct is more than just bouncing back from adversity. According to these authors, resilience also involves the capacity of individuals to live a full and rewarding life, a life that is vital, authentic and true. This description reminds strongly of Keyes’s conceptualization of mental health discussed afore. For the purpose of this study resilience is understood as the ability to adapt under stressful conditions and different environments, whereby it is also recognised as a positive personality characteristic that enhances well-being and mental health.

According to Zolkoski and Bullock (2012), the enhancement of resilience can be explained through the Challenge model. These authors provide a description of the Challenge model as the following: “a stressor (i.e. risk) can be treated as a possible enhancer of competence in the face of adversity, given that the amount of stress is not extreme” (p. 2299). This explanation ties in with the concept of eustress, which is understood as a positive

psychological response to a particular stressor (O'Sullivan, 2011). O'Sullivan (2011) comments that "people who experience a certain level of stress can actually be more productive and effective than if the stress was eliminated" (p. 156). Therefore, according to the Challenge model, situations that lead to moderate levels of stress provide or create challenges for individuals, and when these challenges have been overcome the process strengthens the feeling of competency in individuals (Zolkoski & Bullock, 2012). This is seen as an on-going developmental process as children continuously learn to activate resources around them when they are exposed to hardships (Yates, Egeland, & Sroufe, 2003). This conceptualization of resilience positions the burgeoning field of adventure interventions ideally for the enhancement of resilience and the consequential protection of positive mental health during adolescence.

Hawkins (1996) defines adventure as "an exciting or dangerous experience" and a "willingness to take risks" (p. 7). This definition incorporates certain risk factors which, as previously mentioned, fit in with Zolkoski and Bullock's (2012) definitions of resilience: As individuals adapt to challenge or overcome certain demanding activities or situations they activate and develop this resilience factor within themselves. The perception of risk within any adventure programme serves to create a variety of reactions and emotions in participants such as uncertainty, anxiety or dissonance (Lee & Ewert, 2013). Inherent to these experiences is, however, also the creation of opportunities and possibilities for the mobilization of resources within individuals. The controlled experience of risk behaviour that enables thought processes and self-understanding is connected with the concept of resilience as previously mentioned, as it involves the adaptation of individuals to a challenging environment or situation (Lee & Ewert, 2013).

A variety of ABEL interventions are presented by various organizations internationally. According to Gentry (1990), the concept of experiential learning "exists when

a personally responsible participant cognitively, affectively, and behaviourally processes knowledge, skills, and/or attitudes in a learning situation characterized by a high level of active involvement” (p. 10). Furthermore, Priest and Gass (1997) explain experiential learning as learning by doing, by acting on a task or activity, and then observing the cause and effects of the action. This forms an important part of the rationale of adventure activities offered by different international organizations of which Outward Bound International is probably the most prominent and internationally most recognized (Hansen, 2002). According to Ritchie, Wabano, Russell, Enosse and Young (2014):

The Outward Bound process model illustrates how a participant achieves positive change and personal growth by processing through a series of challenges in a small group environment where successive problems are addressed, solved and then recognized into learning that may transfer to life beyond the outdoor experience (p. 3).

A number of organizations offer such programmes in South Africa. The majority of these organizations use adventure programmes to challenge individuals and to assist in activating the resilience factor within individuals – leading to personal growth. These South African organizations include Itchyfeet South Africa, various girl and boy scouts clubs, the Veld and Vlei outdoor centre, the Wilderness Leadership School (WLS), the Outdoor Adventure and Recreational Centre” (OARC) as well as Outward Bound’s local affiliate – Outward Bound - South Africa (OBSA) (Hansen, 2002). Outward Bound is a non-profit international organization that focuses on experiential education in which they utilize various outdoor activities to enhance the lives of young people (Outward Bound, n.d.). The organization’s objective is to develop interpersonal skills, such as communication skills; leadership and team integration; and one of their most prominent objectives is personal development including confidence building, strength building and self-awareness (Outward

Bound, n.d.). Outward Bound (n.d., Mission Statement, para.3) maintains as their mission statement “to empower young South Africans with the character, will, values and self-belief to live their lives to the full and to consistently make the right choices”.

A typical OBSA adventure programme stretches over seven days and involves different activities that are tailored to the needs of the group. Activities that often form part of such a programme include low and high ropes, rafting, kayaking or canoeing, sailing, solo wilderness experience, expedition hiking, camping, rock climbing or abseiling, navigation and orienteering, mental and physical challenges as well as group dynamics and team challenges (Outward Bound, n.d.). By challenging themselves physically and mentally during these adventure programmes, participants need to draw upon certain protective factors within themselves in order to buffer negative environmental stressors, which facilitates mental health and resilience (Bloemhoff, 2006).

Empirical evidence has demonstrated the efficiency of adventure programmes to bring about a number of positive outcomes. Firstly, Cason and Gillis (1994) have demonstrated through a meta-analysis that 62% of adolescents who participated in adventure programmes were better off in terms of self-concept, locus of control, delinquent behaviour and academic performance, compared to those who did not participate in these programmes. Adventure programmes have also demonstrated their effectiveness in reducing antisocial behaviour and improving psychological functioning in delinquent youth between the ages of 10 and 21 years (Wilson & Lipsey, 2000). Wynn, Frost and Pawson (2012) have found these programmes to have a positive influence on mental health and on the development of certain life skills that promote the well-being and mental health of adolescents.

The above-mentioned discussion demonstrates the effectiveness of adventure programmes in facilitating overall mental health and well-being, especially when focusing on the adolescent population. The majority of research on the impact of adventure programmes



has, however, focused on youth-at-risk and clinical and delinquent populations (Zolkoski & Bullock, 2012). According to Li, Chung and Ho (2012), the role of and improvement in resilience in well-functioning and healthy adolescents has not received explicit attention. Especially within a South African context, evidence pertaining to the impact of such programmes remains scant and, therefore, further studies are needed to determine whether adventure programmes are in fact effective within culturally diverse communities (Ritchie et al., 2014) as seen in South Africa. Furthermore, studies have mainly looked at the overall effects of adventure interventions and have not explicitly looked at gender differences in the enhancement of resilience and positive mental health after the completion of an ABEL programme. The overarching purpose of this particular study is, therefore, to provide early indications of the benefits of ABEL as a legitimate intervention modality in the field of psychology within a South Africa context. According to Ritchie et al. (2014) most research studies in this field have looked at only the short term effects of such programmes. The current study will, therefore, also endeavour to determine the longer term effects of such interventions.

ABEL has been found to provide benefits at both group and individual levels in international research (Newes, 2001). This has been ascribed to the fact that the activities are real and meaningful because the participants are actively involved in their treatment. The potential of such programmes to facilitate intrinsic changes without being solely dependent on therapists or course guides holds vast benefits within a context like South Africa that has such scarce resources.

The research question that the current study will, therefore, attempt to answer is:  
*What changes occur in the self-reported levels of resilience and positive mental health of a group of South African adolescents participating in an ABEL programme?*

### **Aim of the Research Study**

The present study aims to explore to what extent resilience and positive mental health are promoted in adolescents within a South African context through participation in an adventure based experiential learning programme. The specific objectives of this research project were, therefore, to:

1. Describe self-reported levels of resilience and positive mental health of a group of adolescents before and after participation in an Outward Bound South Africa (OBSA) adventure based experiential learning programme.
2. Explore possible gender differences in terms of self-reported levels of resilience and positive mental health in a group of adolescents before and after participation in an Outward Bound South Africa (OBSA) adventure based experiential learning programme.
3. Determine the relationship between resilience and positive mental health in a group of adolescents participating in an Outward Bound South Africa (OBSA) adventure based experiential learning programme.

### **Method of Investigation**

#### **Context of Current Study**

The overarching TREA (Training Resilience through Eco-Adventure) -project that this study forms part of has been conceptualized as consisting of two different phases. This specific research study forms part of phase one of the TREA-project, which aims to determine the impact of existing adventure interventions on various aspects of participants' psychosocial functioning.

#### **Design**

The study involved the evaluation of an existing adventure intervention programme presented by OBSA. A pre-experimental pre-test-multiple post-test design was used to

determine the changes in the subjective levels of resilience and positive mental health reported by two groups of adolescents during participation in the adventure programme.

Although no control group was used, two different schools participated in the programme and were tested using the pre-test-multiple post-test design, which created a basis for comparison.

A significant drawback of using the pre-experimental pre-test-multiple post-test design is that the research data are subjected to numerous threats because of the absence of a control group. Extreme caution was, therefore, exercised during interpretation of the results not to infer any direct cause-and-effect relationships within the intervention programme, but to use it for descriptive and explorative purposes. The pre-experimental pre-test-multiple post-test design is considered an appropriate and cost-effective way to distinguish if a potential research study or explanation is worthy for further investigation (Cam, 2014). As this study falls within the first phase of the larger TREA-project, it was deemed an appropriate design to explore the self-reported changes in levels of resilience and well-being of adolescents participating in existing adventure based interventions.

### **Participants**

The schools used within the research study both have a long-standing affiliation with OBSA. The participants were all school going grade 10 learners between 15 and 17 years old. A total number of 104 adolescents participated in the pre-testing stage, 100 in the post-testing stage and 87 within the post-post testing stage. The participants were recruited from a private school for boys in the Gauteng Province and a semi-private school for girls in the Eastern Cape Province. Within the pre-testing stage 38 boys and 66 girls participated and in the post-testing stage 38 boys and 62 girls participated while 30 boys and 57 girls participated in the post-post testing stage. Within the group of boys who participated, 73% were Caucasian, 11% were African, 5% were Indian and 11% were Coloured. Within the group of girls who

participated, 65% were Caucasian, 17% were African, 4% were Indian and 14% were Coloured.

As the participating group was predetermined by OBSA, the researcher was not able to create groups of participants through random assignment, and all of the adolescents registered for the specific adventure programme were utilized within the research study. Convenience or availability sampling was, therefore, used as it was the most appropriate sampling method. According to Gravetter and Forzano (2009), “convenience sampling is a nonprobability sampling method involving the selection of individuals on the basis of their availability and willingness to respond” (p. 584).

### **Procedure**

A formalized Memorandum of Agreement, detailing the active collaboration between the principle investigators of this study and OBSA, was negotiated and signed by appropriate representatives of the North-West University Potchefstroom Campus and OBSA. Suitable participant groups, which have an established relationship with OBSA, was thereafter identified with the assistance of the OBSA regional representatives.

The schools were contacted prior to the adolescents’ attendance of the programme and written permission was attained from the principals to conduct the study. The Independent Schools Association and the Eastern Cape Department of Education, who serves as the gatekeepers to the schools involved, were also contacted to obtain their permission. Parental permission was sought from all the adolescents’ parents or legal guardians for participation in the study as the participants were under the age of 18 years. Prior to their participation in the project, individual consent was sought from all of the participants after an information document was distributed and discussed during an information session held at the schools’ premises. The information session was held with the participants, their parents or legal guardians and the principals of the two schools. During the session the researcher explained

the aims, purpose and rationale of the research study. Furthermore, the voluntary nature of participation in the study and the participants' right to withdraw from the study at any time also received explicit attention. Informed written consent was sought for baseline measurements six weeks prior to the commencement of the OBSA programme (pre-test), the repeat of measurements immediately following the completion of the OBSA programme (post-test) and six weeks after (post-post testing) completion of the OBSA programme. Data regarding the participants' level of resilience and mental well-being before and after the OBSA intervention were obtained via three psychometric measures presented in booklet format. The questionnaires involved the General Health Questionnaire-28, Mental Health Continuum-SF and the Resilience Scale-25. All tests were administered in English, as all participants were competent in English and the researcher was available to assist the participants with any questions that they did not comprehend. Two groups of participants were assessed three times. The participants completed the questionnaires in a quiet, structured environment six weeks before they embarked on their adventure programme at the schools' premises to determine baseline scores and in order to prevent the transference effect. Immediately after the completion of the OBSA programme (during the so-called "wrap-up session"), the participants were asked to complete the same questionnaires. The post-test measure was done before the debriefing took place so that all the participants could answer the self-report questionnaire honestly and accurately without the pressure to conform or follow any subjective opinions that may be shared by other group members during the debriefing session. Approximately six weeks after the post-test data collection, post-post testing took place where the researcher repeated the same measures at the schools that the participant group attended.

All the questionnaires were collected and data were captured electronically after which data analysis commenced. After the finalization of the data analysis, a group feedback

session was set up with the participants that facilitated closure of the research process.

Information regarding the results and the future goals of the research study were given in a non-directive, non-threatening and easily understandable manner.

All the participants within the study followed the same process and principles applied by the ABEL programme presented by OBSA.

### **Analysis of the Literature**

In the literature study the key terms *adolescents*, *adventure*, *experiential learning*, *positive mental health*, and *resilience* were used to search databases such as Google Scholar, EBSCO Host, PsycINFO and Academic Search Premier for recent literature that is relevant to this topic. Books, theses and dissertations were also used to collect data regarding the topic at hand.

### **Measuring Instruments**

In line with quantitative methodology, data were collected by means of self-report questionnaires that were utilized to measure levels of resilience and mental health of the participants. The questionnaires were selected based on three important characteristics: firstly, their applicability within a South African context; secondly, the reliability and validity of the questionnaires; and thirdly, the applicability of the questionnaires within the adolescent population. Consistency is an important factor to consider in determining the evaluation of questionnaires. The Cronbach's Alpha (CA) is a mandatory statistical analysis that determines the internal consistency of questionnaires with acceptable CA values ranging from 0.70 to 0.95 (Tavakol & Dennick, 2011). The following three self-report questionnaires were selected to address the research aims of this particular study:

**The Resilience Scale (RS-25) (Wagnild & Young, 1993b).** The 25-item Resilience Scale (RS-25) has been determined to be one of the better instruments to study resilience in the adolescent population (Ahern et al., 2006). The scale measures individuals' levels of

resilience, which is conceptualized as a positive personality characteristic that leads to individual adaptation (Ahern et al., 2006) and increases the ability or capacity of individuals to live a fuller and more rewarding life (Wagnild & Young, 1993b). This 25-item scale uses a 7-point Likert-type response format and measures five core characteristics of resilience: perseverance, equanimity, meaningfulness, self-reliance and existential aloneness (Wagnild, 2009).

The RS-25 was cited by its authors, Wagnild and Young (1993a), to have acceptable reliability. The internal constancy of this scale was attested by Ahern et al. (2006) who found a Cronbach's coefficient Alpha of 0.91 for the general population and 0.72 when used in an adolescent group. Previous studies also attested to the scale's validity as it showed high concurrent validity when used with other, well established and validated measures of resilience (Ahern et al., 2006). Although no evidence could be found to indicate the validity of this scale within a South African context, its psychometric properties was determined within the current sample before further analysis. The RS-25 obtained a CA of .785 which indicated the reliability of the scale within this particular study.

**Mental Health Continuum – Short Form (MHC-SF) (Keyes, 2002).** The Mental Health Continuum – Short Form (MHC-SF) is used to measure each facet of individual well-being, according to Keyes's Mental Health Continuum (Keyes, 2009). The 14-item MHC-SF measures mental health as represented by emotional (3 items), psychological (6 items) and social (5 items) well-being facets and uses a 5-point Likert-type response format (Keyes, 2009).

The internal consistency reliability of this scale was attested to by Keyes (2009) who found a Cronbach's coefficient Alpha of 0.80 for the adolescent population in South Africa. Keyes (2009) further reported favourably on the MHC-SF's test-retest reliability, as represented by a Cronbach's coefficient Alpha of 0.68 over a three month period and 0.65

over a nine month period. Previous studies also attested to the scale's validity, as it showed a good discriminant validity score among adolescents in South Africa (Keyes, 2009). The scale was; therefore, found to be a valid and reliable measure of mental health within a South African context (Keyes, Wissing, Potgieter, Temane, Kruger & Van Rooy, 2008). The MHC-SF obtained a CA of .807 which indicated the reliability of the total scale within this particular study. The MHC-SF has three subscales: (1) emotional well-being (MHC-SF-E); (2) social well-being (MHC-S-SF); and (3) psychological well-being (MHC-SF-P). CA's of 0.839 (emotional well-being), 0.749 (social well-being) and 0.709 (psychological well-being) attested to the internal consistency of the respective subscales.

**General Health Questionnaire-28 (GHQ-28) (Goldberg & Hillier, 1979).** The 28-item General Health Questionnaire (GHQ-28) was recently determined by Chan (2013) to be one of the best instruments to measure signs and symptoms of possible psychological disorder. The GHQ-28 is often utilized to detect early signs of psychiatric distress (Chan, 2013). The 28-item scale uses a 5-point Likert-type response format and measures four different areas of distress: anxiety, depression, hypochondriasis and social impairment (Chan, 2013).

The GHQ-28 was cited by its authors, Goldberg and Hillier (1979), to have acceptable reliability. Acceptable indices of internal consistency for its use within a South African context was reported by Wissing and Van Eeden (2002), who found a Cronbach's coefficient Alpha that varies between 0.78 and 0.86 within the general population. Previous studies also attested to the scale's validity as it showed acceptable construct validity when applied in a South African context (Wissing & Van Eeden, 2002). The GHQ-28 indicated a CA of 0.827 which indicated the reliability of the total scale within this particular study. The GHQ-28 has four subscales: (1) somatic symptoms (GHQ-28-A); (2) anxiety/insomnia (GHQ-28-B); (3) social dysfunction (GHQ-28-C); and (4) severe depression (GHQ-28-D). Data from the



respective subscales was found to be reliable with CA's of 0.847 (somatic symptoms), 0.859 (anxiety/insomnia), 0.782 (social dysfunction) and 0.910 (severe depression).

### **Data Analysis**

The SPSS statistical software package was used to conduct the analysis of data. The Statistical Consultation Services (SCS) of the North-West University, Potchefstroom Campus, assisted with the analysis and interpretation of all the quantitative data. Cronbach's coefficient Alpha values were calculated in order to determine the internal consistency of the subscales of the RS-25 as well as MHC-SF and the GHQ-28 before any further analyses were done. Descriptive statistics were used to quantitatively describe the participants' levels of resilience and mental health. These statistics provided the researcher with a simple summary (i.e. baseline) of the two participant groups' functioning prior and after the intervention. Measures of central tendency enabled the researcher to determine the typical scope of the two group scores, and the measure of variability enabled the researcher to indicate the spread of the two group scores. Subsequent comparison of scores obtained immediately after the completion of the intervention and those obtained at post-post testing with baseline data identified emerging patterns with regard to participants' resilience and well-being levels. An Analysis Of Variance (ANOVA) was used to determine the significance of differences between the mean scores obtained by the two groups at various points of measurement. Significance was determined by means of the Cohen's *d* due to the relatively small sample size which gave an indication of the practical significance of changes and differences in the participants' scores.

Spearman rank correlation was used to determine the association between changes observed in adolescents' self-reported levels of resilience and levels of positive mental health after participation in an OBSA ABEL programme. According to Weir (2015), "Spearman's correlation coefficient is a statistical measure of the strength of a monotonic relationship

between paired data” (p. 2). A monotonic relationship does one of the following: (1) when the value of one variable increases, so does the value of the other variable; or (2) when the value of one variable increases, the other variable value decreases (Weir, 2015). According to Weir (2015), a strong correlation ranges from .60 to .79 and a very strong correlation ranges from .80 to 1.0.

### **Ethical Considerations**

Ethical approval for this project was obtained from the North-West University Health Research Ethics Committee, Potchefstroom Campus (ethics number: NWU-00109-13-A1). Permission was obtained from the principals of the two schools as well as the parental permission from the parents or legal guardians, as the participants were minors. Individual consent was obtained from all prospective participants. Data were collected anonymously and treated confidentially.

The participants were likely to benefit in terms of the prevention of mental illness due to ABEL interventions being primarily aimed towards the promotion of resilience and positive mental health. The dignity, well-being and safety of all the participants were of primary concern throughout this research project with their interests outweighing that of science and society at all times. The “do no harm” principle was followed at all times and the best interest of the participants was adhered to. The participants were; therefore, able to withdraw from the study at any time without consequence if they were to experience any discomfort. Care was taken for the recruitment, selection, exclusion and inclusion of the participants in order to be just and fair. It should also be noted that OBSA took full responsibility for any physical harm that may have occurred as a result of the ABEL programme. OBSA also required all of the participants to complete a medical form and were required to have a medical screening prior to the start of the course as the participants needed to be medically fit and healthy in order to participate.

Administration of psychometric tests could have possibly provoked an emotional experience or response from some of the participants. A registered clinical psychologist was; therefore, present during data collection and a mandatory debriefing session was held after the ABEL programme where the participants had an opportunity to reflect on their experiences. The principle investigators disseminated the research results in a timely, accessible, responsible and competent manner at an information session held at the two schools. OBSA received a report and feedback about the results obtained. The report did not, however, contain information that could have been used to identify any particular individual/group.

## **Results**

### **Reliability**

The psychometric properties were considered for each of the RS-25, MHC-SF and GHQ-28. As indicated in the previous section, reliability indices of the different scales used indicated the data collected to be reliable and interpretable for this specific study.

### **Descriptive Statistics**

Descriptive statistics were used to quantify participants' levels of resilience and positive mental health. These statistics provided the researcher with a simple summary (i.e. baseline) of the two participant groups' functioning prior to, and then after the ABEL programme. Table 1 indicates the descriptive statistics of the two participant groups and includes the Mean Scores (M), Standard Deviation (SD) and Cronbach Alpha scores ( $\alpha$ ).

A number of incomplete test protocols and the withdrawal of participants from the study caused a discrepancy in the number of the participants involved within each testing phase. However, the final number of participants involved in the post-post testing phase took part in each of the preceding testing phases.

Table 1  
 Descriptive Results of the RS-25, MHC-SF and the GHQ-28 during Different Points of Measurement

Scale	Point of measurement									
	Pre-testing				Post-testing			Post Post-testing		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>α</i>
RS-25	104	5.61	.55	100	5.63	5.63	87	5.40	1.08	.79
MHC-SF total	104	3.29	.76	100	3.39	.74	87	3.61	.81	.81
<i>Emotional well-being</i>	104	3.74	.91	100	3.79	.87	87	4.01	.95	.84
<i>Social well-being</i>	104	2.43	.99	100	2.62	.89	87	2.92	1.11	.75
<i>Psychological well-being</i>	104	3.77	.79	100	3.82	.80	87	3.98	.76	.71
GHQ total	104	1.80	.48	100	1.80	.52	87	1.66	.46	.83
<i>Somatic Symptoms</i>	104	1.80	.61	100	1.93	.72	87	1.72	.60	.85
<i>Anxiety and Insomnia</i>	104	1.96	.69	100	2.06	.78	87	1.78	.72	.86
<i>Social Dysfunction</i>	104	2.05	.45	100	1.88	.49	87	1.88	.49	.78
<i>Severe Depression</i>	104	1.40	.60	100	1.32	.52	87	1.26	.50	.91

Note. N = number of participants; M = Mean; SD = Standard Deviation;  $\alpha$  = Cronbach's coefficient Alpha; RS-25 = Resilience Questionnaire; MHC-SF = Mental Health Continuum Short Form; GHQ = General Health Questionnaire.

### **Adolescents' Self-Reported Levels of Resilience and Positive Mental Health**

The results from the one-way ANOVA presented in Table 2 illustrate the statistical and practical significance of changes observed in the self-reported levels of resilience and positive mental health of two groups of adolescents' from baseline to immediately after, and then again six weeks after participation in an ABEL programme. Cohen's *d*-value was used as an indicator of the practical significance of these changes. As a result of the relatively small sample size and differences in numbers between each phase of testing, greater emphasis was placed on the practical significance of the differences observed. This was calculated using Cohen's *d*-value. A Cohen's *d*-value of 0.80 is considered an indication of large practical significance, while 0.50 indicates a medium effect and 0.20 is considered an indication of small practical significance (Rubin, 2013).

As shown in Table 2, there was no difference of statistical or practical significance between the three testing phases in the adolescents' self-reported levels of resilience. The MHC-SF (total) however showed a difference between the three testing phases at the .05 level of statistical significance. Although the pre- to post-testing on the MHC-SF did not demonstrate a significant difference ( $d = .13$ ); the pre- to post-post testing ( $d = .39$ ) and post- to post-post testing ( $d = .27$ ) did show a practically significant increase in participants' levels of mental health that were of small to medium effect. It appears that the effect sizes of the differences in MHC-SF scores increased as the participants progressed through the different points of measurement. With regard to the three different subscales of the MHC-SF, the emotional well-being and psychological well-being subscales did not demonstrate any statistically significant differences. Differences of small effect were; however, found on the pre- to post-post testing ( $d = .29$ ) and post- to post-post testing ( $d = .24$ ) on the emotional well-being subscale. Similar changes of small effect were also shown on the psychological well-being subscale from pre- to post-post testing ( $d = .27$ ) and post- to post-post testing ( $d =$

.20). The social well-being subscale did demonstrate a statistically significant ( $p < .00$ ) increase. These changes approached medium effect from pre- to post-post testing ( $d = .44$ ) and were of small practical significance from post- to post-post testing ( $d = .27$ ).

Table 2

*One-Way ANOVA for Effect Sizes between Different Points of Measurement for the RS-25, MHC-SF and the GHQ-28*

Scale	<i>p</i>	Point of measurement		
		Pre- to post- testing	Pre to post- post-testing	Post- to post-post testing
		<i>D</i>	<i>d</i>	<i>d</i>
RS-25	.10	.00	.19	.04
MHC-SF total	.02*	.13	.39*	.27*
<i>Emotional well-being</i>	.10	.05	.29*	.24*
<i>Social well-being</i>	.00**	.19	.44*	.27*
<i>Psychological well-being</i>	.16	.07	.27*	.20*
GHQ-28 total	.08	.01	.30*	.27*
<i>Somatic Symptoms</i>	.07	.18	.14	.30*
<i>Anxiety and Insomnia</i>	.03*	.13	.25*	.36*
<i>Social Dysfunction</i>	.01**	.35*	.36*	.00
<i>Severe Depression</i>	.18	.14	.24*	.11

*Note.*\* =  $p < 0.05$ , where *p*-values are statistical significant. Practical significance 0.2 = small correlation; 0.5 = medium correlation; 0.8 =

large correlation. RS-25 = Resilience; MHC-SF = Mental Health Continuum Short Form; GHQ-28 = General Health Questionnaire.

The GHQ-28 total scale score demonstrated no statistically significant change in self-reported levels of symptomatology between the different points of measurement. Two of the

four subscales of the GHQ-28 did however show statistically significant decreases. After an initial, insignificant increase on the subscales measuring anxiety and insomnia, as well as somatic symptoms, participant's self-reported experience of these symptoms decreased significantly ( $d=.36$  and  $.30$  respectively) from post to post-post testing. The social dysfunction subscale showed statistically significant ( $p<.01$ ) decreases of small to medium effect from pre- to post-testing ( $d = .35$ ) and from pre- to post-post testing ( $d = .36$ ). Although not of statistical significance, adolescents' self-reported levels of depression showed a slight decrease of small practical significance from pre- to post-post testing ( $d = .24$ ). Possible explanations for the reported results will be explored in detail in the discussion section.

### **Differences between Genders**

In order to explore the differences between male and female subgroups, a two-way ANOVA (Table 3) was tabulated. Cohen's  $d$ -value was also calculated to indicate the practical significance of differences between the gender groups.

When comparing self-reported levels of resilience between males and females, results indicated a difference of only small practical significance at post-post testing ( $d = .33$ ), with the female subgroup reporting slightly higher levels of resilience than the male subgroup. With regard to their self-reported levels of general and mental health, there was a general trend of the male subgroup reporting lower levels of symptomatology, and higher levels of mental health than the female subgroup. These differences were especially apparent during the post-post phase of testing, where differences of small to medium practical significance ( $d = .35$ ) was reported in terms of positive mental health. These differences were however even more prominent with regard to self-reported symptomology, where the male subgroup reported experiencing symptoms of possible disorder at significantly lower levels ( $d = .55$ ) than the female subgroup.

Table 3

*Gender Differences for the RS-25, MHC-SF and GHQ-28 during Pre-, Post-, and Post-Post Testing*

<i>Scale</i>	<i>Gender</i>	<i>N</i>	<i>M</i>	<i>d</i>
Difference between gender groups at pre-testing				
RS-25	M	38	5.55	.12
	F	66	5.64	
MHC-SF	M	38	3.34	.11
	F	66	3.26	
GHQ-28	M	38	1.69	.38*
	F	66	1.87	
Difference between gender groups at post-testing				
RS-25	M	38	5.63	.01
	F	62	5.62	
MHC-SF	M	38	3.40	.02
	F	62	3.38	
GHQ-28	M	38	1.81	.04
	F	62	1.79	
Difference between gender groups at post- post-testing				
RS-25	M	30	5.24	.33*
	F	57	5.49	
MHC-SF	M	30	3.78	.35*
	F	57	3.51	
GHQ-28	M	30	1.48	.55*
	F	57	1.75	

*Note.*\* =  $p < 0.05$ , where p-values are statistical significant. Practical significance 0.2 = small effect; 0.5 = medium effect; 0.8 = large effect.

RS-25 = Resilience; MHC-SF = Mental Health Continuum Short Form; GHQ-28 = General Health Questionnaire.

## Correlations

The Spearman rank correlation was used to determine the association between adolescents' self-reported levels of resilience and levels of positive mental health after participation in an ABEL programme (Table 4).



Table 4  
*Spearman Rho Correlation of the Association between RS-25 and MHC-SF and GHQ-28 within a Group of Adolescents Participating in an ABEL Programme*

Variables	N	RS-25	Psychometric Measures										
			MHC-SF	MHC-SF-E	MHC-SF-S	MHC-SF-P	GHQ-28	GHQ-28-A	GHQ-28-B	GHQ-28-C	GHQ-28-D		
RS-25													
Pre-Testing	104	1.00	0.50**	0.36**	0.39**	0.48**	-0.41**	-0.25*	-0.25**	-0.25**	-0.46**	-0.38**	
Post-Testing	100	1.00	0.58**	0.51**	0.44**	0.57**	-0.44**	-0.30**	-0.35**	-0.40**	-0.48**		
Post-Post Testing	87	1.00	0.47**	0.52**	0.35**	0.44**	-0.42**	-0.19	-0.38**	-0.40**	-0.46**		

Note. \*Correlation is significant at the 0.05 level (2-tailed) \*\*Correlation is significant at the 0.01 level (2-tailed). ). Practical significance 0.1 = small correlation; 0.3 = medium correlation; 0.5 = large correlation

The correlations were only calculated for the total participant group. This was due to the different group sizes with regard to gender, and the relative absence of differences demonstrated between the gender groups with regard to resilience.

As indicated in Table 4, a positive relationship was demonstrated to exist between the RS-25 and the MHC-SF, as well as its respective subscales, with all correlations reaching the .01 level of significance. Conversely, a negative relationship was indicated to exist between the RS-25 and the GHQ-28 and its subscales. With only three exceptions, these correlations were also statistically significant at the .01 level. Although no causality could be inferred from these results, resilience was shown to be strongly related to participants' self-reported general and mental health. These results will be discussed in greater detail within the discussion section, with reference to relevant literature that demonstrated similar findings.

### **Discussion**

The purpose of this study was to explore to what extent resilience and positive mental health are promoted in adolescents within a South African context through participation in an existing adventure based experiential learning programme. A pre-experimental pre-test-multiple post-test design was used to determine the changes in the subjective levels of resilience and positive mental health reported by two groups of adolescents during participation in the ABEL programme.

The participants completed the RS-25 on three different occasions and the results revealed no statistically or practically significant differences among the three testing phases in the adolescents' self-reported levels of resilience. The groups' resilience remained constant throughout the different points of measurement. This is in line with the conceptualization of resilience as being a developmental process, involving a pattern of learned adaptation that is developed over time, and that may therefore not show significant changes over a short time period (Block, 2002).

Through the administration of the MHC-SF the adolescents' self-reported levels of positive mental health were determined before they embarked on the ABEL programme, directly after their participation, and then a further six weeks after participation in the programme. The MHC-SF total scale score showed a significant increase through the three testing phases. This is in line with findings by Holder, Coleman and Sen (2009) who state that the combination of physical and mental challenges, which constitute important elements of adventure programmes, have a positive influence on children's levels of well-being. This particular ABEL programme produced different challenges for the participant groups that were physical, mental, social and emotional in nature. Even though the challenges faced were difficult, it was facilitated in such a way that participants were able to successfully overcome each challenge presented, which might have resulted in them having a more positive conception of themselves and their abilities. Overcoming of challenging activities have been found to result in the development of both intrapersonal and interpersonal skills, which have a positive relationship with mental health (Bowen & Neill, 2015).

With regard to the three different subscales of the MHC-SF, the emotional well-being (MHC-SF-E) and psychological well-being (MHC-SF-P) subscales did not demonstrate any changes that were of statistical significance. Increases of small practical significance were however observed on both the MHC-SF-E and the MHC-SF-P after the participants embarked on an ABEL programme. The slight increase in these facets of mental health that occurred over the course of time seems to confirm literature which states that exposure to the outside environment has been shown to have a positive correlation with emotional and psychological well-being (Braymer, Cudahy & Sharma-Braymer, 2010). According to Bowen and Neill (2013), "results indicate that adventure therapy programs are moderately effective in facilitating positive short-term change in psychological, behavioural, emotional, and interpersonal domains and that these changes appear to be maintained in the longer-term" (p.

42). These domains are all understood to have an impact on an individual's level of well-being (Bowen & Neill, 2015).

The social well-being (MHC-SF-S) subscale did demonstrate a statistically significant increase of small to medium effect over the testing period. According to documented literature, participation in an ABEL programme in a group setting can allow for the facilitation of social skills and a greater sense of social connectedness (Butselaar, 2013). Butselaar (2013) states that "within the group environment, there was not only the formation of friendships and increased social connectedness, but an opportunity to further develop social skills such as learning to cooperate and work with others, building trust, and communication skills" (p. 20). This finding is significant to the developmental phase of adolescence, as certain biological changes in adolescents lead them to demonstrate a need to belong to a group, and peer approval becomes more valuable than approval from their family system (American Psychological Association, 2002). This has a positive developmental function in that social connectedness with individuals outside of the family environment leads to the enhancement of self-esteem due to learning to get along with a diverse set of individuals and overall gaining acceptance by their peer group through participation and the development of friendships (American Psychological Association, 2002).

In considering the participants' general health, the GHQ-28 provided the researcher with the self-reported levels of symptomatology that they were experiencing during the different points of measurement. As with the MHC-SF, the GHQ-28 total scale score did not produce statistically significant results. Although not of practical or statistical significance, it was interesting to note small increases in participants' self-reported levels of anxiety and insomnia, as well as somatic symptoms immediately following the OBSA course. These initial increases were however followed by significant decreases six weeks after their participation on the ABEL programme. A possible reason for the increase in anxiety reported

directly after participation in the ABEL programme could be that participants were exposed to a new environment, leading them to a state of dissonance as they were removed from their comfort zones and had to partake in challenging activities that may have been anxiety provoking. As referred to by the challenge model (Brendtro & Strother, 2007), these results seem to suggest that participants were challenged, and that the programme created a state of imbalance that participants needed to overcome. A possible explanation for the increase in somatic symptoms could be that the ABEL programme challenged them on a physical level, more so than they would experience under normal circumstances. According to the Challenge model, challenge and resultant anxiety should not be seen as negative as it is because of risk and anxiety that people are able to mobilize resources within themselves and their environments to overcome difficult situations (Lee & Ewert, 2013). Research confirms that in ABEL programmes, participants are required to join in different activities that are psychologically and physically demanding, which can elicit levels of anxiety and frustration. Moderate levels of anxiety have been found to be beneficial in encouraging innovation in dealing with different challenges (Li et al., 2012), especially when the lessons learnt can be successfully transferred to everyday situations. Opportunities for growth are optimised when moderate levels of stress provide or create challenges for individuals, and when these challenges have been overcome the process strengthens the feeling of competency in individuals (Zolkoski & Bullock, 2012).

Participants' levels of anxiety did decrease after they had a period of time to reflect on the programme. This could indicate that they were able to overcome the initial anxiety of participating as they completed the programme successfully. Furthermore, the participants also showed decreases in their levels of social dysfunction as they progressed through the points of measurement. This decrease could be due to the fact that participants' learnt social and communication skills through having to communicate during challenging group

activities. The small decrease in participants' levels of depression and somatic symptoms could be explained by the fact that ABEL programmes have been found useful in this regard due to three important facets: (1) it is physical in nature; (2) it is outside of the urban society where participants are in connection with nature; and (3) social connections as well as support are created with the other participants (Pryor, Carpenter & Townsend, 2005).

In comparing the self-reported levels of resilience of males and females, results indicated a difference of only small practical significance at post-post testing, where the female subgroup indicated higher levels of resilience than their male counterparts. This confirms Sun and Stewart's (2007) contention that girls tend to have higher levels of resilience. They ascribe this finding to higher levels of social and emotional development, and that girls therefore seek out more social support from adults and their peer group when compared to boys. When comparing self-reported levels of mental health using the MHC-SF, results showed a difference of small practical significance at post-post testing with the male subgroup reporting higher levels of positive mental health than the female subgroup. This was also reflected in participants' self-reported symptomatology, where the male subgroup reported lower levels of symptomatology as compared to the female subgroup. This reflects previous findings (HBSC Positive Health Focus Group, n.d), and may be due to a combination of biological, interpersonal and intrapersonal factors. Girls have been found to face more hormonal change due to the onset of puberty; they are more expressive about their feelings and emotions and also have greater body dissatisfaction (HBSC Positive Health Focus Group, n.d). These factors have all been found to negatively affect girls' self-esteem, mental health and overall life satisfaction during adolescence (HBSC Positive Health Focus Group, n.d), and could have impacted the current results.

After exploring the possible differences in resilience and mental health, the study then explored if a relationship exists between these constructs within this group of adolescents.

Data collected demonstrated that the adolescents' self-reported levels of resilience correlated significantly with the MHC-SF and all of its subconstructs. Therefore, the higher the participants' self-reported level of resilience, the higher their self-reported level of well-being is likely to be, and vice versa. The results also showed a strong negative relationship between resilience and general mental health (GHQ-28) demonstrating that the higher the self-reported level of resilience, the lower the level of symptoms of possible dysfunction they experienced. Once again, these findings are in line with available literature. According to Murphey, Barry and Vaughn (2013), ABEL programmes typically work within two domains. Firstly, these programmes assist in the prevention of illness through the facilitation of resilience. Secondly, these programmes assist in the development, activation and facilitation of well-being (Murphey et al., 2013). Furthermore, Bloemhoff (2006) states that ABEL programmes are effective preventative interventions that create a buffer against, for instance, antisocial behaviour, psychological maladjustment, academic difficulties and physical complaints, which ties into the negative relationship between resilience and reported symptomatology like anxiety, insomnia, social dysfunction and severe depression. Results found within this group of South African adolescents therefore seem to reflect findings from international studies in this regard.

### **Conclusion**

The study aimed to explore to what extent resilience and positive mental health are promoted in adolescents within a South African context through participation in an adventure based experiential learning programme. Furthermore it provided a basis for future research aimed at creating a better understanding of the impact adventure programmes have in well-functioning and healthy adolescents within a South African context. In considering the first aim of the study no significant improvements were documented throughout the testing phases on adolescents' self-reported levels of resilience. The adolescents in this

sample did indeed experience increased levels of anxiety and somatic symptoms immediately after participation in the ABEL programme, which could be ascribed to the challenges presented by the new environment and the different activities these adolescents' were exposed to. However, a general and often significant decrease in symptomatology was observed as they progressed through the different points of measurement. Participants also reported increased levels of mental health, which could possibly represent some of the benefits of participation in an ABEL programme. Similar changes were observed for both the male and female subgroups. Further comparison between the gender groups revealed that the female subgroup reported higher levels of resilience than the male subgroup, but that the male subgroup interestingly reported higher levels of positive mental health and lower levels of symptomatology when compared to their female counterparts. Lastly, this study showed a positive correlation to exist between resilience and well-being, and a negative correlation between resilience and the signs and symptoms of possible disorder, thereby demonstrating a strong relationship between resilience and positive mental health in this group of adolescents.

In combination, these results suggest that ABEL programmes could be effective in the facilitation of the overall mental health and well-being of the adolescent population. The promise that these results show in terms of the potential impact of ABEL programmes over a period of time lays the groundwork for further study and development of these intervention programmes. The fact that, collectively, the results from this study reflected findings from international studies, also suggest that similar benefits could be derived from applying ABEL programmes as an intervention modality for adolescents within a South African context.



## References

- Ahern, N. R., Kiehl, E. M., Sole, M. L., & Byers, J. (2006). A review of instruments measuring resilience. *Issues in Comprehensive Pediatric Nursing, 29*, 103–125.
- American Psychological Association. (2002). *Developing adolescents: A reference for professionals*. Washington, DC: American Psychological Association.
- Block, J. (2002). *Personality as an affect-processing system: Toward an integrative theory*. Mahwah, NJ: Psychology Press.
- Bloemhoff, H. J. (2006). The effect of an adventure-based recreation programme (ropes course) on the development of resiliency in at-risk adolescent boys confined to a rehabilitation centre. *South African Journal for Research in Sport, Physical Education and Recreation, 28*(1), 1–11.
- Bowen, D. J., & Neill, J. T. (2013). A meta-analysis of adventure therapy outcomes and moderators. *The Open Psychology Journal, 6*(1), 28–53.
- Bowen, D. J., & Neill, J. T. (2015). Effects of the PCYC Catalyst outdoor adventure intervention program on youths' life skills, mental health, and delinquent behaviour. *International Journal of Adolescence and Youth*, (ahead-of-print), 1-22.
- Braymer, E., Cudahy, T. F., & Sharma-Braymer, V. (2010). The role of nature-based experiences in the development and maintenance of wellness. *Asia-Pacific Journal of Health, Sport and Physical Education, 1*(2), 21–27.
- Brendtro, L. M., & Strother, M. (2007). Back to basics through challenge and adventure: Reclaiming children and youth. *The Journal of Strength-Based Interventions, 16*(1), 2-6.
- Butselaar, M. F. (2013). *Outdoor adventure camps for young adults and adults with mental illness*. Centre of Youth Mental Health: The University of Melbourne and Orygen Youth Health Research Centre.

- Cam, N. N. (2014). Pre-experimental design. Retrieved from <http://www.slideshare.net/metalkid132/experimental-design-15799134>
- Cason, D., & Gillis, H. L. (1994). A meta-analysis of outdoor adventure programming with adolescents. *Journal of Experimental Education, 17*, 40–47.
- Chan, C. (2013). The scaled General Health Questionnaire-28 (GHQ-28). Retrieved from [http://scireproject.com/sites/default/files/clin\\_sum\\_the\\_scaled\\_health\\_questionnaire-28.pdf](http://scireproject.com/sites/default/files/clin_sum_the_scaled_health_questionnaire-28.pdf)
- Crockett, L. J., & Silbereisen, R. K. (2000). Social change and adolescent development: Issues and challenges. Retrieved from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1242&context=psychfacpub>
- Dotterich, J. (2006). *Positive youth development resource manual: Understanding collaboration*. Ithaca, NY: Cornell University, ACT for Youth.
- Fletcher, D., & Sarkar, M. (2013). Psychological resilience: A review and critique of definitions, concepts, and theory. *European Psychologist, 18*(1), 12–23.
- Gentry, J. W. (1990). *Guide to business gaming and experiential learning*. East Brunswick, NJ/London: Nichols/GP.
- Goldberg, D. P., & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine, 9*, 139–145.
- Gravetter, F. J., & Forzano, G. (2009). *Research methods for the behavioral sciences*. Belmont, CA: Wadsworth.
- Hansen, J. (2002). *Guidelines for intervention through adventure-based programmes for youth-at-risk* (Master's thesis). University of Pretoria, Pretoria.
- Hawkins, J. M. (1996). *The South African Oxford school dictionary*. Cape Town: Oxford University Press.

HBSC Positive Health Focus Group. (n.d). Mental health. Retrieved from

<http://www.hbsc.org/publications/factsheets/Mental-Health-english.pdf>

Holder, M. D., Coleman, B., & Sen, Z. L. (2009). The contribution of active and passive leisure to children's well-being. *Journal of Health Psychology, 14*, 378–386.

Holder, M. D. (2012). Why study children's and adult's well-being, including their happiness? In *Happiness in Children* (pp. 5-18). Springer Netherlands.

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43*(2), 207–222.

Keyes, C. L. M. (2009). Brief description of the mental health continuum short form (MHC-SF). Retrieved from <http://www.sociology.emory.edu/ckeyes/>

Keyes, C. L. M., Wissing, M., Potgieter, J. P., Temane, M., Kruger, A., & Van Rooy, S. (2008). Evaluation of the Mental Health Continuum – Short Form (MHC-SF) in Setswana-speaking South Africans. *Clinical Psychology and Psychotherapy, 15*, 181–192.

Lee, K., & Ewert, A. (2013). Adventure programs and diverse family styles. *Journal of Experiential Education, 36*(2), 123–138.

Li, W. H. C., Chung, J. O. K., & Ho, E. K. Y. (2012). Effectiveness of an adventure-based training programme in promoting the psychological well-being of primary schoolchildren. *Journal of Health Psychology, 18*(11), 1478–1492.

Murphey, D., Barry, M., & Vaughn, B. (2013). Positive mental health: Resilience. Retrieved from [http://www.childtrends.org/wp-content/uploads/2013/03/Child\\_Trends-2013\\_11\\_01\\_AHH\\_Resilience.pdf](http://www.childtrends.org/wp-content/uploads/2013/03/Child_Trends-2013_11_01_AHH_Resilience.pdf)

Newes, S. L. (2001). Adventure-based therapy: Theory, characteristics, ethics, and research (Unpublished dissertation). The Pennsylvania State University, Pennsylvania.

- O'Sullivan, G. (2011). The relationship between hope, eustress, self-efficacy, and life satisfaction among undergraduates. *Social Indicators Research, 101*(1), 155–172.
- Outward Bound. (n.d.). Outward Bound. Retrieved from <http://www.outwardbound.co.za/>
- Price-Mitchell, M. (2014). Why risk-taking may increase teen happiness. Retrieved from <http://www.rootsofaction.com/why-risk-taking-may-increase-teens-happiness/>
- Priest, S., & Gass, M. A. (1997). *Effective leadership in adventure programming*. Illinois, USA: Human Kinetics.
- Pryor, A., Carpenter, C., & Townsend, M. (2005). Outdoor education and bush adventure therapy: A social-ecological approach to health and wellbeing. *Australian Journal of Outdoor Education, 9*(1), 3–13.
- Reddy, S. P., James, S., Sewpaul, R., Koopman, F., Funani, N. I., Sifunda, S., . . . Omardien, R. G. (2008). *Umthente Uhlaba Usamila: The South African youth risk behaviour survey*. Cape Town: South African Medical Research Council.
- Ritchie, S. D., Wabano, M. J., Russell, K., Enosse, L., & Young, N. L. (2014). Promoting resilience and wellbeing through an outdoor intervention designed for Aboriginal adolescents. *Rural and Remote Health, 14*, 1-19.
- Rubin, A. (2013). *Statistics for evidence based practice and evaluation*. Belmont, CA: Brooks/Cole.
- Sun, J., & Stewart, D. (2007). Age and gender effects on resilience in children and adolescents. *International Journal of Mental Health Promotion, 9*(4), 16–25.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education, 2*, 53–55.
- Venn, D. J. W. (2010). *Rainbow knowledges: Adolescence and mental health in post-apartheid South Africa* (Master's thesis). Erasmus University, Netherlands.

- Wagnild, G. M., & Young, H. M. (1993a). Development and psychometric evaluation of the Resilience Scale. *Journal of nursing measurement, 1*(2), 165–178.
- Wagnild, G. M., & Young, H. M. (1993b). The resilience scale. Retrieved from <http://www.resiliencescale.com/index.html>
- Wagnild, G. M. (2009). *The Resilience Scale user's guide for the US English version of the Resilience Scale and the 14-Item Resilience Scale*. Worden, MT: The Resilience Center.
- Weir, D. I. (2015). Spearman's correlation. Retrieved from [www.statstutor.ac.uk/resources/uploaded/spearmans.pdf](http://www.statstutor.ac.uk/resources/uploaded/spearmans.pdf)
- Wilson, J. S., & Lipsey, M. W. (2000). Wilderness challenge programs for delinquent youth: A meta-analysis of outcome evaluations. *Evaluation and Program Planning, 23*, 1–12.
- Wissing, M. P., & Van Eeden, C. (2002). Empirical clarification of the nature of psychological well-being. *South African Journal of Psychology, 32*(1), 32–44.
- World Health Organization. (2005). *Promoting mental health: Concepts, emerging evidence, practice*. Summary report. Geneva: WHO.
- Wynn, B., Frost, A., & Pawson, P. (2012). Adventure therapy proves successful for adolescent survivors of childhood cancers. *Kai Tiaki Nursing New Zealand, 18*(1), 28–30.
- Yates, T. M., Egeland, B. L., & Sroufe, A. (2003). Rethinking resilience: A developmental process prospective. In S. S. Luthar (Ed.), *Resilience vulnerability: Adaptation in the context of childhood adversities* (pp. 243–266). New York, NY: Cambridge University Press.
- Zarrett, N., & Eccles, J. (2006). The passage to adulthood: Challenges of late adolescence. *New Directions for Youth Development, 111*, 13–28.

Zolkoski, S. M., & Bullock, L. M. (2012). Resilience in children and youth: A review.

*Children and Youth Services Review, 34, 2295–2303.*

### **Critical Reflection**

When reflecting on the research study, some strengths and limitations need to be recognized. The study made use of a pre-experimental pre-test-multiple post-test design. This is considered a relevant design for the current study as it falls within the first phase of a larger TREA-project. It was therefore deemed appropriate to explore the self-reported changes in levels of resilience and well-being of the adolescents participating in an existing ABEL programme. Furthermore, this design was considered an appropriate and cost-effective way to distinguish if the potential role of resilience in ABEL programs is worthy for further investigation (Cam, 2014).

It must however also be considered that there are significant drawbacks to using this pre-experimental pre-test-multiple post-test design, as data are subjected to numerous threats due to the absence of a control group. Considering the limitations of such a design, extreme caution was exercised during the interpretation of the results to not infer any direct cause and effect relationships between the constructs central to this study, but to use it only for descriptive and explorative purposes, as a variety of confounding variables could possibly have influenced the results (Cam, 2014). In spite of the promise shown by the current programme to facilitate the well-being of adolescents, it is strongly recommended that this study be followed up by an experimental design study in which a control group is used in order to eliminate certain confounding variables, and more effectively identify cause and effect relationships.

A possible drawback on using quantitative methodology, specifically the use of self-report questionnaires, is the level of response accuracy. Information obtained from questionnaires have often been found to be inaccurate or incomplete, and strongly influenced by the level of motivation of participants to fill in the questionnaires accurately and truthfully. In order to avoid the possible drawbacks of using self-report questionnaires the

researcher took time to ensure the participants had a good understanding of each questionnaire and were able to ask questions at any point during the assessment if they were unsure of anything, which assisted in limiting guessing or random responses. Furthermore the importance and benefit of the study for their specific population was reiterated before they filled in the questionnaires to increase their level of motivation to perform.

In considering the participation group two factors that could have affected the results need to be considered: (1) the size of the participant groups; and (2) the schools that the participants attended. These two factors both limit the generalizability of results to the larger South African adolescent population. Although the study included participants from a various language and ethnic groups, it is recommended that future research include a larger number of participants from different races, schools and cultural heritages within South Africa to make the research population more representative, and thereby increase the generalizability of results. Care should however be taken in this regard, as it has been found that larger groups (15 or more) may create difficulties in guiding and managing the adventure experience, whereby participants become spectators in their own group. This may dilute their overall experience and the effect of the adventure programme.

A further factor that needs to be considered in this regard is the fact that the participating group was predetermined by OBSA, so the researcher was not able to create groups of participants through random assignment – again resulting in the participant groups not being representative of the larger population. It is, therefore, recommended for further research to assign groups through randomized sampling.

Another potential contaminating variable that needs to be considered within this research was the context in which the two groups participated in the ABEL programme. In spite of the courses following similar structures, the groups attended the course at different sites. It is, therefore possible that the context, the activities and course guides were not



identical, which could have affected the results of the study. It would have been beneficial for the researcher to spend the whole programme with the participants, and be able to observe the participant groups. This would possibly have given the researcher a better understanding of the challenges and expectations that the participants faced. However, the researcher was cognizant that embarking on the programme with the participants may have led to biased interpretations of results and, therefore, could have limited the researcher from making interpretations based solely on the quantitative information provided. Furthermore, it was considered that limiting the time the researcher spent with participants on the course would place less strain on the participants, as the feeling that they were being observed during the process may have detracted from their experience and added a contaminating variable to the results.

As mentioned previously, Scheinfeld, Rochlen and Buser (2011) demonstrated that ABEL interventions represent a wide variety of adventure activities that take place in different settings, ranging from urban settings to natural environments, like the wilderness. The ABEL programme presented by OBSA was understood to be wilderness based in that all of the activities were presented outdoors. Therefore, the results produced within this particular study can only be considered relevant to projects and programmes presented outdoors, and cannot be applicable to all ABEL interventions. In this regard, one of the significant limitations of the current study was the inability to discriminate between activities that formed part of the course base on its impact on resilience and positive mental health. This would have added substantial value to the research, and would inform researchers and practitioners of the steps to be taken to establish an intervention programme that is optimally beneficial to the group involved. Taking field notes would have been beneficial in this regard, as it would assist in establishing which programme components were likely to facilitate the development of resilience and positive mental health. This would also enable the researcher

to understand not only *if* the programme is effective, but also *how* and *why* these programmes work, and how they benefit the adolescent population.

The use of quantitative methodology appeared useful in reaching the stated aims and objectives of the study. The research question of “*What changes occur in the self-reported levels of resilience and positive mental health of a group of South African adolescents participating in an ABEL programme?*” was answered successfully when considering the results obtained. Importantly, research results did infer a positive relationship to exist between resilience and positive mental health. In looking specifically at the changes in the adolescents’ self-reported levels of resilience from pre-testing to post-testing, and then post-post testing, the absence of significant increases should not create the impression that ABEL programmes do not activate resilience within participants. A number of factors could have contributed to this outcome, like for instance the effectiveness of the measuring instrument used. Although the resilience scale proved reliable, a recommendation for further research could be the proper validation of the RS-25. As the language structure of the assessment tools used should always be taken into consideration, the use of an assessment tool validated for the South African context should be considered in order to accommodate the diversity of culture and language groups found within a South African context.

Lastly, it may be recommended that a mixed method study be conducted to gain a greater understanding of resilience, and how it may develop during the programme by integrating participants’ subjective experiences of their participation in an ABEL programme.

This study showed to me the importance of structuring the experience in such a way that an appropriate amount of challenge is created, that would be conducive to adolescents’ growth and the development of their resources. It is important to not create high levels of risk and stress, but moderate levels of challenge that adolescents’ are able to overcome.

Overall, in spite of its inherent limitations, the approach and methodology utilized within this research study were effective in answering the research question, and in achieving the aims and objectives of this particular study.

### References

Cam, N. N. (2014). Pre-experimental design. Retrieved from

<http://www.slideshare.net/metalkid132/experimental-design-15799134>

Scheinfeld, D. E., Rochlen, A. B., & Buser, S. J. (2011). Adventure therapy: A

supplementary group therapy approach for men. *Psychology of Men & Masculinity*,

*12*(21), 188–194.