HARDINESS AND GENDER AS DETERMINANTS OF RISK-TAKING BEHAVIOURS OF ADOLESCENT LEARNERS IN LIMPOPO PROVINCE, SOUTH AFRICA

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HARDINESS AND GENDER AS DETERMINANTS OF RISK-TAKING BEHAVIOURS OF ADOLESCENT LEARNERS IN LIMPOPO PROVINCE, SOUTH AFRICA

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Mini-dissertation (article format) submitted in partial fulfilment of the requirements for the degree Master of Social Science (Clinical Psychology) at the North-West University, Mafikeng Campus

Supervisor: Professor E.S. Idemudia

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DECLARATION

I, Motlabeng Fhulufhelo, declare that the mini-dissertation entitled "**hardiness and gender as determinants of risk-taking behaviours of adolescent learners in Limpopo province, South Africa** ", hereby submitted for the degree of Master of Social Science in Clinical Psychology, has not previously been submitted by me for a degree at this or any other university. I further declare that this is my work in design and execution and that all materials contained herein have been duly acknowledged.

_____ _____

Motlabeng Fhulufhelo Date

DEDICATION

This study is dedicated to my caring, supportive and loving husband, Thabelo Walter Motlabeng and daughter, Thabile Angel Motlabeng.

ACKNOWLEDGEMENTS

To the Almighty God, you are my strength and wisdom and no human being can match your strength. I appreciate you and thank you for the knowledge and for making me who I am today. Thank you for your blessings.

- Professor E. S Idemudia, I thank you for your persistence, thoughtfulness, support, guidance and most of all, for being a patient supervisor. Without your guidance, this study would have been very difficult to complete. May the good Lord bless you endlessly. I will keep on 'working hard'.
- I thank my husband, father and mother for supporting me throughout my studies. I would not have gone this far without their love, guidance and support. Thank you for believing in me. I made it.
- I wish to thank the following bursary schemes that made my academic years easier and financially stress free: the National Research Foundation (NRF); and the North West University Post Graduate Bursary.
- To my siblings, Lufuno, Livhuwani, Lutendo, Adivhaho, Thabelo and Aluwani Muthaphuli, I thank you for all the advice and support you gave me when things were tough. God bless you.
- I wish to thank my friends, Rose Mthembu, Mokwena Thendo, Siliga Portia, Keatlaretse Moamogwe, Taruvinga Percy, Puleng Masedi, Christabel Malebana and Thato Seseane for their understanding and guidance throughout the my studies, and for encouraging me to complete my studies. You are great guys. Much love.

- I am grateful to all the schools and institutions that assisted me with data collection: the Department of Education, Khwevha Secondary School and Thivhilaeli Secondary School.

SUMMARY

The aim of this study was to examine the influence of hardiness trait and gender on risk-taking behaviours of adolescents in high schools in Limpopo Province, South Africa. The study was guided by three hypotheses: (1) that hardiness will significantly determine risk-taking behaviours of adolescents (2) that gender will significantly influence risk-taking behaviours; and (3) that there will be an interaction effect of hardiness trait and gender on risk-taking behaviours among adolescents. A questionnaire was used to collect data and which was divided into two sections (A and B). Section A consisted of demographic items and RTSHIA scale with two sub-scales measuring risk-taking behaviour in adolescents. Section B comprised of a hardiness scale measuring hardiness personality. Psychometric properties of all the scales used indicate they are valid and reliable. Three hundred and fifty (350) participants were randomly selected using a table of random numbers of 'yes' or 'no' from two (2) secondary schools in Vhembe District in Limpopo Province, South Africa. Out of this number, 155 were males while 195 were females. The ages of participants ranged from 14-19 years, with mean age (M = 16.2 years; SD= 1.2). All the three hypotheses were tested using 2X2 Analysis of Variance.

Results for hypothesis 1 revealed that there was a significant main effect $F(1, 346) = 11.479$, $p < .001$ for hardiness on risk-taking behaviours; with adolescents high in hardiness traits (M= 54.406) significantly reporting higher risk-taking behaviours than those with low hardiness traits (M= 50.556). Results for hypothesis 2 showed that male adolescents (M= 58.505) significantly reported higher risk-taking behaviours than female adolescents (M= 46.456); $F(1, 346) = 112.424$, $p < .001$. However, for the third hypothesis, it was expected that there would be an interaction effect of hardiness and gender on risk-taking behaviours of adolescents. The results for hypothesis 3 showed no interaction effect of hardiness and gender on risk-taking behaviours

F (1, 346) = 0.809, p > .05. In other words, male adolescents who were low in hardiness trait (M= 60.941), were not significantly different in risk-taking behaviour compared to male adolescents who were high in hardiness trait (M= 56.069). Similarly, female adolescents who were low in hardiness trait (M= 47.870), were not significantly different in risk-taking behaviours compared to female adolescents who were high in hardiness trait (M= 45.042).

In conclusion, the study introduced a new perspective and contribution to the body of knowledge by showing that in some way, there is a strong influence of hardiness trait on risk-taking behaviours among adolescents. It was also revealed that gender can influence risk-taking behaviours in adolescents. Risk-behaviour reduction interventions should, therefore, be targeted towards adolescents, especially males and ensuring behaviour change in them with the goal of reducing the prevalence of risk-taking behaviours. More importantly, hardiness trait should be considered by professionals as a significant construct in risk reduction intervention programmes for adolescents.

PREFACE

Article format

For the purpose of this study and as part of the requirements for a Professional Master's Degree, the article format as described by General Regulation A.7.5.1.b of the North West University was chosen and followed.

Selected Journal

The target journal for submission of the current manuscript is the South African Journal of Psychology (SAJP). For the purpose of examination, tables are included in the text.

Letter of consent

The letter of consent from the authors, grant permission that the manuscript entitled "HARDINESS AND GENDER AS DETERMINANTS OF RISK-TAKING BEHAVIOURS OF ADOLESCENT LEARNERS IN LIMPOPO PROVINCE, SOUTH AFRICA" be submitted for purposes of this study, is attached.

Page numbering

In this study, page numbering starts from the first page and run to the last. For submission to the above-mentioned journal, the manuscript will be numbered according to the requirements of SAJP. Hence, all pages will be numbered consecutively. *The references section will also follow the requirements of SAJP*.

LETTER OF CONSENT

I, the undersigned, hereby give consent that Fhulufhelo Motlabeng may submit the manuscript entitled **"**HARDINESS AND GENDER AS DETERMINANTS OF RISK-TAKING BEHAVIOURS OF ADOLESCENT LEARNERS IN LIMPOPO PROVINCE, SOUTH AFRICA" for the purpose of a mini-dissertation in fulfilment of the requirements for the degree Master of Social Science in Clinical Psychology.

…….

Professor E.S. Idemudia

Supervisor

INSTRUCTIONS TO AUTHORS

South African Journal of Psychology

Information for Contributors

Submission of a manuscript

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MANUSCRIPT

HARDINESS AND GENDER AS DETERMINANTS OF RISK-TAKING BEHAVIOURS OF ADOLESCENT LEARNERS IN LIMPOPO PROVINCE, SOUTH AFRICA

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Abstract

Objectives: The specific objectives of this study were to determine whether: (1) hardiness as a personality trait will influence risk-taking behaviours of adolescents; (2) gender will influence risk-taking behaviours and (3) there would be an interaction effect of gender and hardiness variables on risk-taking behaviours of adolescents in Limpopo Province.

Method: Using an Ex-post facto research design, data were collected from three hundred and fifty (350) school learners , randomly selected, using a table of random numbers of 'yes' or 'no' from two (2) high schools (Khwevha and Thivhilaeli) in Vhembe District. Two hundred and forty five (245) learners from Khwevha and 105 learners from Thivhilaeli participated in the study. The mean age was 16.2 (SD = 1.2) years. Their ages ranged from 14 to 19 years. Hypotheses were tested with a 2X2 Analysis of variance (ANOVA).

Results: For hypothesis 1, the results showed that hardiness influence risk-taking behaviours in adolescents. For hypothesis 2, the results revealed that gender also influences risk-taking behaviours in adolescents. For hypothesis 3, the results showed that male and female adolescents who were low in hardiness traits were not significantly different in risk-taking behaviours compared to male and female adolescents who were high in hardiness traits.

Recommendations: Hardiness trait should be considered by professionals as a significant construct in risk reduction programmes or interventions for adolescents. Interventions that have a broader focus and impact on the community such as schools, family, and other institutions should be encouraged and implemented in order to reduce risk-taking behaviours practised by adolescents.

Keywords: Hardiness/risk-taking behaviours/adolescents/Limpopo Province/South Africa

Introduction and problem statement

Several studies have focused on adolescents and their vulnerability to various risk-taking behaviours and practices (Nightingale & Fishhoff, 2001), but there is very little evidence that hardiness, as a personality construct, is associated with risk-taking behaviours. Hardiness could be psychological or cognitive and is associated with commitment, control and challenge (Kobasa, 1979) and according to Van Servellen, Topf and Leake (1994) "personality hardiness is a set of beliefs that one holds in life about self and the world". Hardiness can also be associated with bravery, confidence and boldness. Adolescence is a critical stage of life where several changes are taking place in one's life; it is a period when an individual is moving from childhood to adulthood. At this stage of life, a lot of opportunities are being presented for individuals to decide on their own activities (actions) with the absence of parents and other guardians. During this transition, adolescents tend to experiment with a variety of dangerous and unsafe behaviours (Mcaloney, McCrystal & Percy, 2010).

However, some behaviours deviate from what is considered to be socially acceptable and could be seen as being risky to the adolescents or society. According to Sletten (2011) "fun, adventure or other positive rewards form part of such risk-taking behaviours". Worldwide, adolescents of different ages, genders and cultures are taking risks everyday (Kessler, 2010).

Researchers started paying much attention to the risk-taking behaviours of adolescents in the past years (Lauren, Flisher, Bhana & Lombard, 2004). This was because the main cause of adolescents' morbidity and mortality was not diseases but avoidable behaviours related to their interaction with social and environmental factors. Besides physical well-being, risk-taking behaviours can also have psychological and social effects, and this can jeopardize the completion

of normal development tasks and the fulfilment of anticipated social roles (Lauren et al., 2004). There is substantial evidence to prove that the risk-taking behaviours of adolescents are interrelated. In a study conducted in Australia, it was revealed that males are more dominant in risk-taking (Lauren et al., 2004).

Early school leavers, adolescents with less or without parental supervision as well as peers who actively engage in risk-taking behaviours, have negative attitudes towards authority and high alcohol use. However, the study also discovered that among adolescents aged 12 to 15 years, females engaged in more risk-taking behaviours and drank alcohol more than males (10% and 6%) (Centre for Accidents Research & Road Safety- Queensland (CARRS-Q), 2010).

During the 2000s, the leading causes for the death of adolescents were vehicle-related accidents and self-harm and this was supported by several studies. Hospitalization among male adolescents was prevalent and the main cause of such hospitalization was injuries resulting from self-harm. Females were reported to have a lower percentage in hospitalization than males (males 40% and females 20%) (CARRS-Q, 2010). With these statistics in mind, it is clear that male adolescents are more into risk-taking behaviours than females. However, due to the constant changes taking place in society, it is vital that literature is reviewed or new studies are conducted in order to assess if males and females are still different in terms of engaging in risk-taking behaviours. Although risk-taking in adolescents is considered as a development process, it certainly has consequences in adolescents and may lead to injuries. At this stage of development, the executive brain function is supposed to continue developing (CARRS-Q, 2010.

In the past years, South Africa has been through colonial changes (political, cultural and economic) with a strong effect on risk-related behaviours in adolescents, the use of illegal drugs,

violence and risky sexual behaviours taking place. In recent years, these risk-taking behaviours have rapidly increased (Carla & Dellis, 2010). In South Africa, these risk-taking behaviours have come to a point where policy issues, and several social and health problems are common challenges faced in the country (Carla & Dellis, 2010). The rates of HIV, substance use and alcohol abuse, rape charges of boys to girls among adolescents have increased significantly in the past years. In fact, they have become the highest in the world (Christofides, Jewkes, Dunke, Nduna, Shai & Sterk, 2014).

Although Kobasa (1979) introduced the concept of "psychological hardiness", she further proposed that this personality construct regulates the relationship between demanding life situations and illness. Demanding life situations are those events that are stressful. However, individuals who have hardiness traits are less likely to experience life events as being stressful. Many other researchers continued to investigate hardiness linking it to stress and health in different populations (Abdollahi & Talib, 2014; Subramanian &Vinothkumar, 2009) but few studies exists, that links risk-taking behaviours to hardiness. It is possible that the same personality construct which enable individuals to endure difficult conditions can act against adolescents and as a result, engage in risk-taking behaviours since they will perceive themselves to be hardy enough. People with hardy personality are known to overcome any situation whether it is risky or not.

According to Kobasa (1979) "hardy persons are hypothesised to show commitment or participation in everyday activities, perceived control over life events, and a tendency to view unexpected change or potential threat as a positive challenge rather than as an aversive event. Non-hardy persons on the other hand, are assumed to show alienation (i.e. a lack of commitment), an external locus of control and a tendency to view change as undesirable". In this

study, hardy persons (adolescents) are hypothesised to engage in more risk-taking behaviours than those with low hardiness.The following research questions were asked in this study:

- Why does an individual, directed by a strong survival nature and who is painfully conscious of its eventual death, purposefully compromise his or her own existence?
- Why do adolescents engage in risk-taking behaviours?
- Is there a difference between males and females or do they equally engage in risk-taking behaviours?
- Is there a relationship between hardiness and risk-taking behaviours? Risk-taking behaviour has been studied deeply and a great amount of risk-view studies are accessible but far less research exists regarding adolescent's hardiness towards risk taking.

Literature Review

Risk-taking behaviours and gender differences

Due to the prevalence of certain high risk-taking behaviours, professionals have gained interest in studying such behaviours among today's youth. A number of deaths and injuries in adolescents are caused by such behaviours and this also has a negative effect on the society (de Guzman & Bosch, 2007). Besides deaths and injuries, an overall development of adolescents and their well-being can be affected. Such risk-taking behaviours can prevent them from realising their dreams in future and development (Pfeifer, Masten, Moore, Oswald, Mazziotta, Iacoboni & Dapretto, 2011). For instance, if a teenager falls pregnant, this may prevent her from experiencing the usual or typical activities practised by adolescents such as school graduation or having to develop close relations with other peers (since the adolescent now will have to grow up and be a mother).

Risk-taking behaviours among adolescents include defiance to parents/guardians (e.g. coming home late) and school principles (e.g. missing classes), the use of substances (e.g. drinking and smoking), unprotected sex (which leads to unplanned pregnancy, STD's), suicide, self-harm (deliberately harming oneself) and delinquency (e.g. theft, violence, rape). When they reach adulthood, they already have physical and emotional problems carried over due to their engagement in risk-taking behaviours during adolescence. With some adolescents, these problems begin at the time of adolescence. According to Fantasia, Sutherland and Weeder (2012) males compared to their female counter parts, from an early age, are more likely to be involved in risk-taking behaviours and there is a less chance for them to believe that they can get hurt by taking risks. However, if it happens that one gets injured by a male, it is seen as bad luck rather than a consequence of manageable behaviours. With regard to statistics on injuries, it is observed that males get injured the most from as early as pre-school age (CARRS-Q, 2010).

However, according to a study conducted by Roberts, Rosario, Calzo, Corliss, Frazier and Austin (2014) the most "feminine girls compared to their peers are more likely to be engaged in behaviours that pose cancer risks and the same applies to masculine boys". They emphasised this by maintaining that feminine teenage girls are popularly known to use tanning beds most of the times and as a result, are more likely to be physically inactive. Masculine boys chew tobacco and smoke cigars while their peers who are gender nonconforming, are not involved in any of these behaviours.

MacArthur, Smith, Melotti, Heron, Macleod, Hickman and Lewis (2012) maintain that several risk-taking behaviours prevail in both genders during adolescence but the manner in which they are being carried out differs with an individual (between boys and girls). They argue that between 15 and 16 years, physical inactivity (about 74%), being rebellious and criminal conduct

(42%) and unsafe alcohol drinking (34%) were the most dominant risk-behaviours. Both males and females, according to MacArthur et al. (2012) were said to be involved in similar behaviours but vehicle related risk-taking behaviours, criminal behaviours and use of marijuana were common among males and self-mutilation (harm), use of tobacco and physical inactivity were dominant among girls.

Ronay and Kim (2006) conducted a study on gender differences in trying to answer if risk-decisions were socially enabled by the existence of same gender groups. They also examined what motivates risk-taking in the conscious and non-conscious and both explicit and implicit measures of risk attitude were applied. At an individual level, gender differences were found when they used a proposed dilemma. While using two explicit measures of risk attitude, males were reported to have expressed a stronger pro-risk position while placed in a group than females. On two parallel implicit measures, no gender difference was found (Ronay & Kim, 2006). Based on this statement, it is assumed that even in this study, males will likely be high risks takers than females although at an individual level.

At the same time, in a societal ruling, risk as a concept is both admired and criticized. At times, those who take risks are seen as heroes and sometimes, they are seen as fools but the difference is not determined by anything, it just happens by chance. Many factors, excluding age and gender, appear to be influencing the internalized mixed messages about being a hero or a fool and these messages are shaped into attitudes and behaviours depending on an individual. High participators of riskier sports, reckless driving, road accidents, and road fatalities are known to be males than females as reported by the Roads and Traffic Authority (RTA) (2009). Kruger (2004)

maintains that “being male puts one in the highest risk demographic for early mortality in developed countries”.

In support of the above statement, Byrnes, Miller and Schafer (1999) maintain that there is experimental data which supports the idea that males are high risk takers than females. They further argue that comparing the data with real life statistics, the difference is significantly small (Byrnes et al., 1999).

- Suicide

Suicide is considered the third cause of death among young people between 15 and 24 years after accidents and homicide (Centres for Disease Control and Prevention (CDC), 2015). It is also believed that at least 25 attempts are made for every completed teen suicide. Among adolescents, 8.4 per cent attempt suicide every year, with 86% of these deaths from males, and 14% from females (Morojele, Myers, Townsend, Lombard, Pluddemann, Carney & Nkosi, 2013).

- Substance abuse

In a survey conducted in the United States (CDC, 2015) marijuana, alcohol and the use of tobacco are the most abused substances by adolescents. Johnston, O’Malley, Miech, Bachman and Schulenberg (2015) maintain that 39% of high school learners admitted to be drinking alcohol, 23% admitted using marijuana and 16% admitted smoking cigarettes. CARRS-Q (2010) reported that 10% of adolescents reported to drive after drinking alcohol while 36% admitted to have had ride in a car where the driver was intoxicated. Most motor vehicle accidents, violence or fights, relationship problems and social interactions as well as various diseases are linked to substance use. The use of illicit drugs poses health and public risks and has negative effects on

the physical and emotional health of users. These effects are not only limited to physical health (major organs), but also brain damage which is very dangerous. Damage to the brain affects the overall development of adolescents.

While in South Africa the use of drugs and HIV/AIDS are major problems among adolescents, these problems are mutual worldwide. Adolescents have high HIV infection rates (Morojele et al., 2013) and their involvement in drugs has been increasing in recent years. In the past years, the use of methamphetamine was found to be very high in the Western Cape in South Africa compared with other areas worldwide. This drug is also known locally as "tik" and is considered as one of the most dangerous drugs. Psychosis, depression and weight loss are some of the side effects of "tik (Morojele et al., 2013).

- Violence

South Africans live in fear of violence (domestic, community and sexual) and destructions. Otwombe, Janan, Coetzee, Hopkins, Laher and Gray (2015) posit that violent behaviours have become part of the daily lives of South African citizens and whenever there is a problem, people tend to use violent means to resolve their challenges. For instance, nowadays, almost every challenge that arises from the community is resolved through strikes, burning of properties and hitting one another. Adolescents are the ones who are the most vulnerable to such forms of violent behaviours. Some adolescents may direct such behaviours towards themselves due to what they are exposed to in society.

At their age, fighting and aggressive behaviour are seen as being "cool" and as a result, most adolescents involve in physical fights. Such behaviours are considered under self-injurious behaviours. Nationally, many adolescents have been reported to be engaged in physical fights

over the years. Usually, most of such fights end up in one of the adolescent losing his or her life, and males were reported to outnumber females dramatically (Otwombe et al., 2015). With regard to the carrying of weapons, both males and females were reported to be similar, however, males outnumbered females significantly.

- Risky sexual behaviour

Schantz (2012) stated that during adolescence stage, sexual exploration and risk-taking is normal, expected and typically healthy, but the problem is while in the process of exploring adolescents are exposed to STDs and unplanned pregnancies. A study conducted by Steinmetz (2013) revealed that about 50% of adolescents who are sexually active do not use condoms. They are more likely to use condoms the first time they engage in sexual intercourse but as time goes on, the behaviour becomes inconsistent. In a study conducted in Kenya by Juma, Askew, Alali, Bartholomew and Born (2014) about 37% of adolescents were reported to have engaged in sexual behaviours and at the age of 19, 36% of the girls had already given birth. During most first pregnancies, the mothers reported not to be married and the pregnancies were reported not to be planned, compared to second pregnancies. In addition, Juma et al. (2014) maintain that "three per cent (3%) of female adolescents in this age group are infected with HIV compared to one per cent (1%) of their male counterparts".

In another study conducted in South Africa, it was reported that about 30% of adolescents in the country reported having been pregnant in their lives, and most of the time, the pregnancies were not planned. The study also revealed that the number has dropped over the years, even though it is still very high. The number includes all adolescents aged between 13 and 19 years (Wilan, 2013). These studies, which were conducted in different countries, confirm the fact that indeed,

adolescents engage in risky sexual behaviours. It is not only about them falling pregnant, there are also STDs to be concerned about. In both countries, the age group is the same which shows that risky sexual behaviours in adolescents are a worldwide concern.

With the increasing number of HIV/AIDS infections and the threat to the future of South Africa's youth, one will imagine that adolescents will stop engaging in destructive sexual behaviours. Surprisingly, in a study conducted, only a small percentage of adolescents felt they were at risk of contracting HIV, besides the 31% admitting to have been engaged in unprotected sex (Wilan, 2013).

In 2005, the HIV/AIDS prevalence in South Africa was reported to be very high with new infections occurring in young adults and adolescents (Simbayi, Kalichman, Jooste, Cherry, Mfecane & Cain, 2005). HIV-related risk-behaviours and risky sexual behaviours were examined in a "black South African township". The township was chosen due to the high prevalence of HIV within the population. The findings revealed that 68% males and 56% females admitted to be engaged in HIV-related risky sexual behaviours. Knowledge on the transmission of HIV was high in general, however, misunderstanding regarding the pandemic was equally high. Males with lower levels of education, low knowledge about HIV, negative attitudes towards the use of condoms and the use of marijuana were found to be at risk of being infected with HIV. Females who were found to be at risk were those who believed that condoms get in the way of sex and tend to have unprotected sex. With all the knowledge of HIV/AIDS, adolescents still engage in unprotected sexual behaviours which put them at risk of being infected. Immediate interventions on these behaviours are needed, especially in areas where adolescents are economically disadvantaged (Christofides et al., 2014).

Christofides et al., (2014) also provided statistics which revealed that the prevalence of HIV and pregnancy in adolescents are still very high in South Africa. Between 15 and 19 years, HIV prevalence is reported to be 6.9%. Out of the 1000 women who give birth in the country, 65 are adolescents. Giving birth at a young age has been associated with some short and long-term social and health challenges, including anaemia, urinary tract infections, pregnancy-induced hypertension, depression, substance abuse, increased sexual risk-behaviours, as well as lower educational attainment and socio-economic status.

- Self-harm as risk-taking behaviour in adolescents

In a study conducted in England; Morey, Mellon, Dailami, Verne and Tapp (2016) reported that self-harm in adolescents was very prevalent among adolescents aged 13-18 years. With such behaviour, adolescents intentionally harm their own bodies. Self-harm is not a mental disorder or disease but refers to a variety of behaviours which are risky to one's life. It has been reported that overdosing on medications and cutting are the most common means that adolescents use to hurt themselves. Besides the methods mentioned above, there are other means that adolescents use to harm themselves such as through burning their own skins, interfering with wound healing, hitting or banging some parts of the body and scratching or pinching themselves.

Such behaviours are not meant to be fatal but it is important that they are taken seriously. Adolescents engage in these kinds of behaviours as a way of coping and they put their health at risk. In order to avoid dealing with emotional discomfort or overwhelming negative feelings, thoughts or memories, adolescents usually inflict physical pain on themselves. Adolescents with low hardy personalities are the ones who are likely to engage in self-harm behaviours since they struggle with issues of confidence or low self-esteem. However, this does not rule out the kind of

adolescents who self-harm themselves by engaging in drastic sports or competitions such as drinking; consuming a lot of alcohol or any substance without puking or getting drunk, can fall under self-harm and risk-taking (Bubrick, Goodman & Whitlock, 2010).

While self-harm behaviours and gender differences have been studied, inconsistent results have been found in different studies, with some results showing that there is a difference between males and females and some indicating that there is no difference between the two genders (Breskin & Schoenleber, 2015).

Hardiness

Personality characteristics such as hardiness have been explored to better understand how people endure or get involved in certain behaviours or certain life events. Hardiness is a personality concept and at times it is associated with a range of behaviours that require courage, bravery and confidence, it is also associated with some sort of belief that one can overcome difficult situations and untoward self-assurance. However, its major meaning or implication is not known to many people. Mckay and Mckay (2012) defined hardiness as "boldness and confidence in action while encountering difficulty or danger".

According to Boyles (2007) adolescents know quite enough about the consequences of risk-taking behaviours such as drinking, smoking and using drugs, but they are hardwired to overlook what they know or have learned. According Ajibola and Mabekoje (2007) hardiness encourages adolescents to continue seeking challenges and growth that can lead to engaging in risk-taking behaviours. Adolescents engage in risk-taking behaviours in order to boost their personal growth initiatives desired for social transformation. Constructs such as hardiness may also have an

influence over events that affect the lives of adolescents and could enhance risk-taking behaviours. Research has confirmed that people with high assurance in their capabilities approach life-threatening situations with assurance that they can have control over the situation (Ajibola & Mabekoje, 2007). Hardiness was conceptualised into three personality traits namely, control versus powerlessness, commitment versus alienation and challenge versus threat (Kobasa, 1979).

- Challenge

In challenge, it is said that hardy individuals show openness to change, so instead of them viewing life changes as threats or stressors, they consider such changes as challenges to overcome. This could explain the engagement of adolescents in risk-taking behaviours because instead of them seeing certain behaviours as dangerous, they consider them as challenges to be overcome. Sheppard and Kashani (1991) concur with this statement and maintain that challenge represents the perception of change and the belief that change should be perceived as an opening for growth rather than perceived as a threat.

- Commitment

They experience a feeling of involvement or commitment to their lives, and a sense of purpose in their activities. Commitment has been said to be a sense of dedication to oneself and resulting in active and purposeful engagement in daily activities. Adolescents participate in destructive behaviours because of peer pressure, for fame or as a way of dealing with other problems in a self-destructive manner which could be considered as purposeful.

- Control

They experience a sense of control over their lives, rather than seeing their lives being controlled by outside influences. Coetzee and Harry (2015) maintain that control can also mean the relation

of an individual's beliefs about his or her ability to influence or manage life events and a sense of having personal control over one's experiences. Adolescents believe that they have control over lives although this control is practiced in an inappropriate manner. Sheard and Golby (2007) argue that these three qualities or concepts of hardiness are seen as a mixture of cognitive and affective orientations that establish existential bravery and motivation and adaptive eagerness reflected in a learned, growth-oriented personality style.

Gender and hardiness

Very few studies have been conducted to determine if there are similarities and differences on how hardiness is articulated in males and females. Some researchers have argued that self-reported behaviours show support for such differences (Shepperd & Kashani, 1991). There is a possibility that in males and females, hardiness can be conveyed differently, especially considering the fact that males and females perceive life situations differently. Hardiness research is very limited and it does not help that the results in this issue are inconsistent; Kaur (2011) stated that non-significant gender differences in hardiness are reported. Due to this fact further exploration on gender differences and hardiness is needed.

Latif (2010) posits that males seem to be hardy committed than females. Hystad (2012) argues that although males score higher on overall hardiness, women tend to score higher on hardy control. In application of this statement to male and female adolescents, there is a huge chance that males might score higher on hardiness than female adolescents.

Shepperd and Kashani (1991) conducted a study on a sample of 150 respondents (adolescents); 75 males and 75 females. The relationship between hardiness facets (commitment, control and challenge) and the experience of physical and psychological symptoms was examined in the

study. In order to determine if hardiness facets were interacting with stress to predict health outcomes, a psychosocial stress measure was used. The results revealed that for several health measures, stress, gender and hardiness facets (commitment and control) were the main effects.

In the findings, there was a consistent interaction between variables. Males experiencing few physical and psychological symptoms had low stress, irrespective of their commitment and control levels. Furthermore, males who were found to be having high stress had additional problems and were low rather than high in commitment and control levels. In females, the hardiness facets were found not to be interacting with stress when predicting health outcomes (Shepperd & Kashani, 1991). Although the current study took a different route from the above mentioned study, the above results were an indication that males and females do differ in hardiness and being high or low in hardiness does determine the kind of behaviours one is likely to engage in.

To explain hardiness even further, in situations where the outcomes are doubtful, hardiness creates constitutional confidence or self-assurance. Irrespective of the dangers, and it was also said that hardy people apply their efforts without any fear because this trait allows them to overcome disapproval of their efforts by others. Mckay and Mckay (2012) maintain that hardiness trait enables one to overcome challenges that would daunt conservative judgment or ordinary daring, to set one's teeth and make the phenomenal effort that brings success from apparent failure.

Hardiness trait is also associated with psychological toughness and insensitivity that enables one to follow his or his beliefs/principles and being able to defend them. In terms of criticism or opposition, hardiness trait makes one to have a great extent of indifference. To those involved in businesses and other professions, this characteristic of non-emotional effect on other people is of

massive vocational advantage (Mckay & Mckay, 2012). However, in adolescents, it tends to give them courage to engage in risk-taking behaviours that can have greater impacts on their lives.

A number of other personality factors have also been found to be correlated with increased risk-taking among adolescents, including greater levels of risk tolerance, sensation seeking and impulsivity. Among all, hardiness seems to be playing a vital role in this kind of behaviour (Fantasia et al., 2012). It enables one to ignore the first onset of risk attendant upon strong physical activity or upon stressful mental application and to easily get one's "second wind," which makes prolonged effort comparatively easy. Shepperd and Kashani (1991) argued that it is a psychological hardiness (coping strategies, attitudes and beliefs that help people work through the stressors of life) that enables adolescents to endure difficult conditions.

Theoretical background

- Theory of planned behaviour

While hardiness is hypothesised to be an influencing construct in adolescents engaging in risk-taking behaviours, the theory of planned behaviour formulated in the 1980s by Ajzen and Fishbein, states that behaviour can be deliberative and planned (Aronson, Wilson & Akert, 2003). The theory of planned behaviour confirms people's intentions to behave in a certain manner to be associated with the frequency of that behaviour, adolescents' intentions to engage in risk-taking behaviours as the possible indicator that their risk-taking behaviours are chosen for this investigation. For instance, usually, risky driving is described as the behaviour that increases the likelihood of the individual to be involved in a traffic crash (dangerous overtaking, passing the red light, over speeding). The assumption is that expressed intentions to behave in such a manner show that adolescents are prone to real risk-taking behaviour (Aronson, Wilson & Akert, 2003).

- Problem behavior theory

The Problem Behaviour Theory (PBT) was also used in this study. Richard Jessor and colleagues developed this theory in the 1960s in an attempt to explain behavioural problems. They realised that young people were part of the rapid and unusual change. It was also observed that more understanding of youth and their development was needed (Zamboanga, Gustavo & Raffaelli, 2004). In PBT, parental and peer influences are categorized under psychosocial variables as the social environment system and values, expectations, beliefs, attitudes and orientations to oneself and society are categorized under the personality system and the last is behaviour system (Jessor, 1991). All psychosocial variables in these groups might be risky or protective factors in

adolescents (Zamboanga et al., 2004). According to PBT, engaging in problematic behaviours is referred to as problem behaviour syndrome and is exactly what adolescents are capable of doing (Møller & Gregersen, 2008). Most of the risk-taking behaviours that adolescents engage in are interrelated (drinking and driving, smoking cigarettes, using drugs, bullying, poor school performance and emotional difficulties) (Bingham & Shope, 2004).

- Gender schema theory

Bem (1981) developed the gender schema theory in order to explain gender differences; the theory was later extended by Martin and Halverson (1988). The theory suggests that gender develops from an early age and children contribute to this development. Information related to certain objects, person or situation is classified by cognitive structure called a schema. From past experiences, individuals are able to make sense of new information by using a schema they create. This applies to gender differences in that males and females, as they grow up, they categorise certain memories and behaviours in accordance with their gender. For instance, at the age of two, a child is able to label him/herself as a boy or girl (Bem, 1981).

As they grow up, they gather information from their surrounding in order to expand their understanding of being male or female. The information gathered guides them in their behaviours. If certain activities do not fit their own gender, they are discarded or rejected. For example, a boy may reject a pink toy or playing at home with girls. Once they are comfortable and relaxed with their own gender, then a reflection in behaviour follows (Martin & Halverson, 1988). With this notion on the development of gender, it becomes easier to understand why male and female adolescents may differ in terms of involvement or engaging in risk-taking behaviours. Male adolescents identify themselves as being hardy since this is what they

remember from their past experiences (while they were still organising information about particular situations). To them, risk-taking behaviours are associated with boys. However, there have been changes in the past 25 years. Nowadays, even females engage in risk-taking behaviours although males might do so more often.

- Social cognitive theory of gender development

Besides the fact that gender differences can be explained from a biological point of view, gender difference can also be explained from a societal design such as stereotypic qualities and roles related to gender (Bandura, 1986 & Bandura (as cited in Pervin & John, 2001). According to Bandura (1986) certain behaviours are learned from the environments. This process takes place through observation, conveying information and modelling the behaviours observed from the society. In this case, adolescents model what they have observed from their communities, with males modelling more risk-taking behaviours from their peers (this is also similar with females).

From this theory, it could be concluded that children can learn gender stereotypes from observing the differential performances of male and female models. Even after several years, one still finds traits of aggressive modelling in males (Bandura & Ross, 1963). Society believes that males are supposed to engage in greater risks than females. From the social learning theory, adolescents model the risk-taking behaviours observed and learned from the environment or society. Males model higher risk-taking behaviours than females because the society consider males to be more courageous than females.

- Bio-psychosocial perspective

A BPS model was first presented by Engel (1977) as an alternative to the medical model of illness. Since then, this model has been developed and used to explain various behavioural problems among individuals. In all developmental stages, adolescence is considered to be the most critical stage. It is at this stage that a lot of changes take place in one's life. These changes could be physical, emotional, cognitive or social. It is at this time where adolescents gain some form of independence, go through physiological changes, their family relationships change, they strive to gain a sense of belonging with peers, form intimate relationships, develop own identity, gain insight on values and morals and also mature at an emotional and cognitive level. With all these changes going on in the adolescent's life, it is argued that adolescents are more likely to engage in risk-taking behaviours since there are so many predisposing factors happening around them.

AIM OF THE STUDY

The aim of this study was to examine the influence of hardiness and gender on risk-taking behaviours of adolescents. Risk-taking behaviours encompass self-harm, suicide, substance abuse, violence and risky sexual behaviour. Hardiness trait was measured using the Hardiness scale and risk-taking behaviours were measured using Risk-Taking (RT) and Self-Harm (SH) Inventory for Adolescents (RTSHIA).

OBJECTIVES OF THE STUDY

The objectives of the study were to:

- Examine whether hardiness will influence risk-taking behaviours of adolescents in Limpopo Province

- Determine if gender will influence risk-taking behaviours of adolescents in Limpopo Province.
- Determine if there will be an interaction effect of hardiness trait and gender on scores of risk-taking behaviours.

Significance of the study

The significance of the study is both practical and theoretical. The findings made from the study will improve understanding of the behavioural problems of adolescents. The study also seeks to update knowledge on trends in risk-taking behaviours of adolescents, thereby making effective policies and practices that will help reduce behavioural problems. It also seeks to establish hardiness as one of the constructs influencing risk-taking behaviours in adolescents. Among professionals who deal with adolescents with behavioural problems, the study will provide insights on hardiness as one of the possible influences of risk-taking behaviours, and encourage the study of hardiness and risk-taking behaviours among other researchers (who could further study this construct and develop theories, scales and models). Theoretically, it will add more knowledge to existing theories related to this study. The study also presents the differences between males and females in risk-taking behaviours. It is important that parents, educators and other stakeholders in Limpopo Province be aware of the prevalence of risk-taking behaviours, and factors that promote such behaviours.

Hypotheses

- Hardiness will significantly determine risk-taking behaviours of adolescents.
- Gender will significantly influence risk-taking behaviours of adolescents.
- There will be an interaction effect of hardiness trait and gender on risk-taking behaviours among adolescents.

Methodology

Design

An Ex-post facto research design within a quantitative research approach was used in conducting this study. The aim was to measure variables and generalise findings obtained from a representative sample from the total population. The variables were hardiness (control, commitment and challenge), gender (male and females) and risk-taking behaviours (suicide, self-harm, substance abuse, violence and risky sexual behaviour). A 2X2 ANOVA was conducted to test all hypotheses, since it seeks to understand if there is an interaction between the two independent variables on the dependent variable. Mean scores were also used to justify differences in analyses.

Sample

Learners who attend school in Khwevha, located in Shayandima area (Vhembe district) and Thivhilaeli secondary school located in Maniini area (Vhembe district) of Limpopo Province were used as participants in the study. Participants were randomly selected using a table of random numbers of "Yes" and "No". The age of all participants ranged between 14 and 19 years (M = 16.2) (SD = 1.2). The number of learners who completed the questionnaires was as follows: males = 155 and females = 195. A questionnaire divided into two sections (A and B) was used to collect data. Section A comprised of demographic items and two sub-scales (Risk-taking scale and Self harm scale) measuring risk-taking behaviours in adolescents while B consisted of a hardiness scale with items measuring control, commitment and challenge.

Instruments and psychometric properties

The primary instruments used to collect data were the Risk-Taking (RT) and Self-Harm (SH) Inventory for Adolescents (RTSHIA) (Vrouva, Fonagy, Fearon & Rossouw, 2010) and Hardiness scale (Kobasa, 1985). A description of each of the instruments is given below.

- Risk taking and self-harm inventory for adolescents

RTSHIA consists of 38 items. RTSHIA was developed by Vrouva *et al*. (2010) and designed to assess adolescent risk taking and self-harm in community and clinical settings. RTSHIA was developed "for use with young people and is composed of behaviours consistent with the adolescent perspective". The items on this scale are on a 4-point Linkert scale and answered by selecting "never", "once", "more than once", "or many times". Inter-item and test-retest reliability were high for both components (Cronbach's alpha = .85 and .93, *r* tt = .90 and .87) and considerable evidence emerged in support of the convergent, concurrent and divergent validity of the measure. Three-month test-retest reliability (Pearson *r*) for the RT and SH sub-scales was .90 and .87 respectively.

The 12 RT-related items ranged from mild behaviours such as smoking tobacco and taking chances while doing one's hobbies, to serious risk-taking, such as participating in gang violence and putting oneself at risk of sexual abuse. The 22 SH-related items are about self-mutilation. There was also a free-response question about other self-destructive behaviours not mentioned in the inventory which participants might have engaged in, and another question requesting whether participants knew somebody who had deliberately injured him/herself.

- Hardiness scale

The hardiness scale consisted of 12 items measuring personality hardiness. This scale was in the 1980s by Kobasa, Maddi and reported reasonable results on validity and reliability for the 53 items measuring personality hardiness. A more detailed and shorter version with 12 items was later developed by Kobasa (1985). Personality hardiness has been found to be a stress/health moderator in a wide range of studies. The items on this scale are on a 4-point Linkert scale and answered by selecting "0 = strongly disagree", "1 = mildly disagree", "2 = mildly agree", "3 = strongly agree". The 12 items include "positively as well as negatively keyed items covering the three conceptually important hardiness facets of commitment, control and challenge". To compute the three component scores, the following equations were used:

Control score (#1+#7) – (#2+#8) =_____

Commitment score (#3+#9) – (#4+#10) =_____

Challenge score (#5+#11) – (#6+#12) =_____

To obtain the total hardiness score = *control* + *commitment* + *challenge* =_____

The following are scoring categories: "Hardy personality = 10 to 18 points", "Moderate hardiness = 0 to 9" and "Low hardiness = Below 0**".**

The scale shows psychometric properties including Cronbach's alpha coefficients ranging from .70 to .77 for the facets, to .83 for the overall scale. On a three month test-retest reliability, coefficient was .52 (N=95). This scale has demonstrated appropriate criterion related and predictive validity in several samples, with respect to both health and performance under high stress conditions.

Procedure

Ethical approval for the study was obtained from the North-West University, Mafikeng Campus (Appendix A) as well as from the department of Education (Appendix B) and other institutions where data was collected. After consent was obtained from the provincial office of the department of Education and authorities from the respective schools, days set aside for data collection were communicated to all institutions concerned. On these dates, learners who ticked "yes" were invited to participate in the study. The questionnaire was administered from 14h30 to 16h00 during studies time under the supervision of the researcher, two (2) assistants appointed by the researcher and one (1) teacher appointed by the school principal. Questionnaire items carefully explained to participants by the researcher. Learners completed the questionnaires anonymously and without any discussion or interruptions. After completing the questionnaires, the researcher and the assistants collected the questionnaires from learners and they were thanked for participating in the study.

Results

The study was guided by the following three hypotheses: 1) Hardiness will significantly determine risk-taking behaviours of adolescents; 2) gender will significantly influence risk-behaviours of adolescents; 3) there will be an interaction effect of hardiness trait and gender on risk-taking behaviours among adolescents. To test for the first and second hypotheses, a 2X2 ANOVA was conducted showing results of gender and hardiness traits on risk-taking behaviours. Hypothesis three (3) was tested using a 2X2 Analysis of Variance to determine the interaction effect of hardiness trait and gender on risk-taking behaviours.

Table 1: Distribution of demographic characteristics of respondents (N=350)

Demographic variable	Frequency	Percentage
Name of school		
Khwevha	245	70.0
Thivhilahaleli	105	30.0
Gender		
Male	155	44.3
Female	195	55.7
Age		
14	13	3.7
15	94	26.9
16	125	35.7
17	69	19.7
18	30	8.6
19	19	5.4
School (grade)		
9^{th}	8	2.3
10^{th}	291	83.1
11^{th}	51	14.6
Race		
White	1	0.3
African	349	99.7
Place of residence		
With parents	252	72.0
With grandparents	92	26.3
With foster family	3	0.9
In shelter care	2	0.6
Independently	1	0.3

*X-bar= 16.2 years (SD= 1.2)
*Age range = 14-19 years

The results are presented below. The first hypothesis stated that hardiness trait will significantly determine risk-taking behaviours of adolescents, while hypothesis two (2) expected that gender will significantly influence risk-taking behaviours of adolescents.

The results in Tables 2 and 3 show that adolescents with high hardiness traits (M = 54.406) significantly reported higher risk-taking behaviours than those with low hardiness traits (M = 50.556); $F(1, 346) = 11.479$, $p < .001$. Male adolescents (M = 58.505) significantly reported

higher risk-taking behaviours than female adolescents (M = 46.456); F (1, 346) = 112.424, p < .000. Therefore, these results partially confirm hypotheses one (1) and two (2).

Table 2: 2X2 ANOVA of hardiness trait and gender on risk-taking behaviour

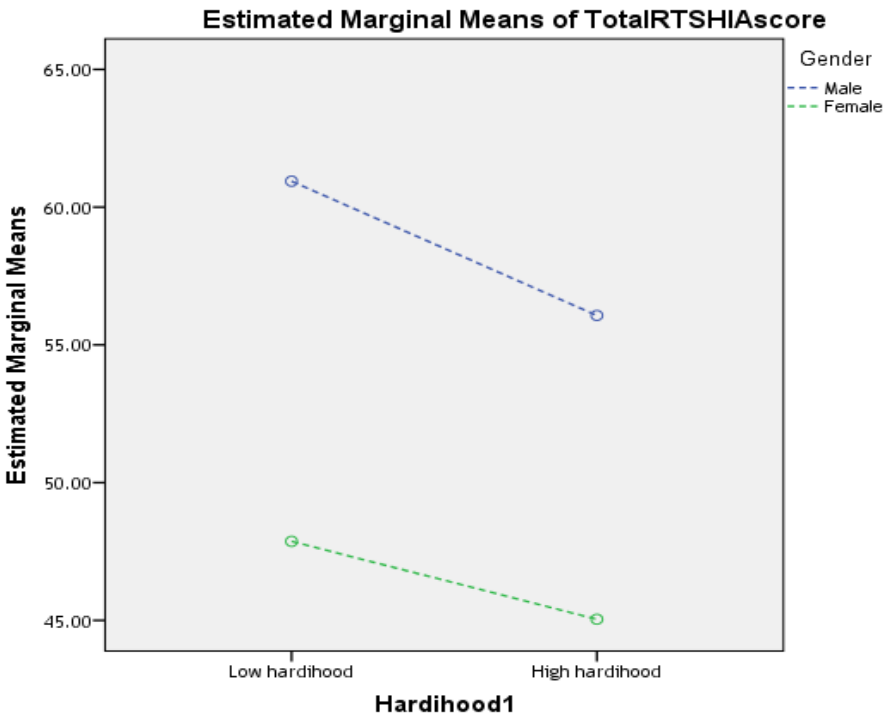
Source	Sum of square	df	Mean square	F	P
Hardiness trait	1243.965	1	1243.965	11.479	.001
Gender	12183.701	1	12183.701	112.424	.000
Hardiness & gender	87.679	1	87.679	0.809	ns
Error	37496.840	346	108.372		
Total	**51012.185**	**349**			

Table 3: Estimated marginal means of hardiness and gender

		Mean	Std Error	95% Confidence interval	
				Lower bound	Upper bound
Hardiness	Low hardiness	50.556	.736	49.109	52.002
	High hardiness	54.406	.866	52.702	56.109
Gender	Male	58.505	.843	56.848	60.162
	Female	46.456	.763	44.956	47.956

The third hypothesis stated that there will be an interaction effect of hardiness trait and gender on risk-taking behaviours among adolescents, the results of 2X2 ANOVA in Table 2 show no interaction effect on risk-taking behaviours among adolescents $F(1, 346) = 0.809$, $p = .369$. In order words, male adolescents who were low in hardiness trait ($M = 60.941$) were not significantly different in risk-taking behaviours compared to male adolescents who were high in hardiness trait ($M = 56.069$). Similarly, female adolescents who were low in hardiness trait ($M = 47.870$) were not significantly different in risk-taking behaviours compared to female adolescents who were high in hardiness trait ($M = 45.042$). The result of no interaction effect of hardiness trait and gender on risk-taking behaviours is further presented in Figure 1. Therefore, hypothesis three was rejected.

Figure 1


Estimated Marginal Means of TotalRTSHIAscore
Gender
Male
Female
Estimated Marginal Means
65.00
60.00
55.00
50.00
45.00
Low hardihood
High hardihood
Hardihood1

Discussion and conclusion

The study was guided by the following three hypotheses: (1) the relationship between hardiness trait and risk-taking behaviours; (2) gender influence on risk-taking behaviours; and (3) the interaction effect between hardiness trait and gender on scores of risk-taking behaviours.

The results obtained revealed that that there was a strong significance for hardiness and gender in influencing risk-taking behaviours with adolescents with high hardiness traits (M= 54.406) significantly reporting higher risk-taking behaviours than those with low hardiness traits (M= 50.556); $F (1, 346) = 11.479$, $p < .001$. Male adolescents (M = 58.505) significantly reported higher risk-taking behaviours than female adolescents (M = 46.456); $F (1, 346) = 112.424$, $p < .000$. These results, to a certain extent, confirmed hypotheses 1 and 2.

The third hypothesis stated that there will be an interaction effect of hardiness trait and gender on risk-taking behaviours of adolescents. The results for hypothesis three showed no interaction effect on risk-taking behaviours $F (1, 346) = 0.809$, $p = .369$. This is an indication that male adolescents who were low in hardiness trait (M = 60.941) were not significantly different in risk-taking behaviours compared to male adolescents who were high in hardiness trait (M= 56.069). Similarly, female adolescents who were low in hardiness trait (M= 47.870) were not significantly different in risk-taking behaviours compared to female adolescents who were high in hardiness trait (M= 45.042).

From the literature and various theories, it was revealed that hardiness traits and gender are influential when it comes to risk-taking behaviours in adolescents since adolescents are at a critical stage where everything around them is changing. High-risk behaviours in adolescents often co-occur and share common backgrounds (Terzian, Andrew & Moore, 2011). These risk-

taking behaviours include substance abuse, sexual behaviours, violence and self-harm. Such behaviours have consequences on the growth of adolescents (physical, mental, cognitive, emotional and social) (Pfeifer et al, 2011). How adolescents engage in these risk-taking behaviours differs but it is of importance that certain measures be taken to reduce the prevalence of such behaviours.

Hypothesis one results revealed that hardiness traits significantly influence risk-taking behaviours. The results concur with the findings of Boyles (2007); Ajobola & Mabokoje (2007) who maintain that adolescents are very aware of the consequences of risk-taking behaviours such as drinking, smoking, and taking drugs, but they are just hardwired to ignore what they have learned. Hardiness can serve as an encouragement to adolescents to continue seeking challenges and growth that can result in risk-taking behaviours. In this study, gender was also found to play a crucial role in risk-taking behaviours with males scoring higher than their female counterparts.

The results for gender are also in line with other studies conducted in the past by MacArthur et al., (2012) and CARRS-Q (2010). They reported that males were overly represented in risk-taking behaviours or injury statistics. They further maintained that from an early age, males have been found to be more likely to engage in risk-taking behaviours. From the results obtained in this study, it is concluded that males scored higher than females in risk-taking behaviours ($M = 58.505$ versus $M = 46.456$). This finding concurs with the literature.

Theoretically, the findings of this study concur with the theory of planned behaviour (Ajzen & Fishbein, 1980) problem behaviour theory (use of alcohol, risky sexual behaviours and violence) (Jessor, 1991), bio-psychosocial perspective (Engel, 1977) and social learning theory on gender development (Bandura, 1999). According to the social learning theory, it is said that adolescents

model risk-taking behaviours they observe and learn from the environment or society. Males model higher risk-taking behaviours than females because culturally, males are considered to be braver and more courageous than females (hardy in personality), that is, hardiness as modelled in the society. Gender can influence the kind of behaviours adolescents engage in, which are usually risk-taking behaviours (Bandura, 1999).

Based on the findings of the study, the following conclusions are made:

- Hardiness trait influences engagement of adolescents in risk-taking behaviours;
- Gender significantly influences risk-taking behaviours in adolescents with males scoring higher in risk-taking behaviours than females, that is, they are both involved in such behaviours but the pattern varies between males and females; and
- It was also concluded that gender and hardiness do not have a combined influence on risk-taking behaviours among adolescents.

Limitations of the study

The study was subjected to some methodological limitations which should be taken into consideration when interpreting the findings. A significant limitation of the study is its reliance on single-item scales as indicators of hardiness and risk-taking behaviours. The measurement of hardiness could be improved in future studies.

The questionnaire administered (RTSHIA) included four (4) additional items on self-harm, what part of the body and if adolescents knew someone who had injured him/herself and what they thought could be the reason for such person to behave in this manner (but there were comparative reasons not considered in the data analysis). The inter-item correlations between the items employed to measure hardiness were rather very weak (Cronbach's $\alpha = .072$, indicating a

very low reliability on the construct. Another shortcoming of the study was the hardiness scale used in general. The scale is not specifically developed to assess the hardiness of adolescents. The last limitation of the study was the issue of language. Some participants had difficulties in terms of understanding some items on the questionnaire even though translations were done by the researcher.

Recommendations

The following recommendations are made in the study:

- Hardiness trait should be considered by professionals as a significant construct in programmes or interventions aimed at reducing the rapid growth of risk-taking behaviours in adolescents, not only in South Africa but throughout the world.
- Considering the limitations of the present study, there is a need to conduct more research on hardiness trait as a determinant of adolescent risk-taking behaviours.
- More research is also needed on the link between hardiness trait and gender.
- Future research should seek to apply better measures on hardiness construct.
- As outlined above, further research on the determinants of risk-taking behaviours by adolescents will ideally lead to the development of new theory that takes better account of hardiness issues.
- Research suggests that interventions that are very broad, including various elements of the community such as the school, family and other institutions may be most successful in dealing with risk-taking behaviours of adolescents (Verkooijen, 2006).
- Considering the fact that very few studies have assessed the influence of interventions on risk-taking behaviours, outcomes of risk-taking behaviours should be collected and

reported. Follow-up sessions should be done, especially on interventions that take time to be established and the impacts of such interventions should be assessed according to gender.

- Such interventions will help stop young people from engaging in risk-taking behaviours and promote good parental influences and healthy school environments.
- Policy-makers should be aware of and act on the evidence that broader social change is needed to reduce societal influences on the development of adolescents.

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Appendix A: Letter of Request

North West University (Mafikeng Campus)

Private Bag X2046

Mmabatho

South Africa, 2735

Tel: 018 389-2111

Fax: 018 389-5775

Date_____

Enquiries: Fhulufhelo Motlabeng

Cell no: 0834711324

Email address: fmuthaphuli@yahoo.com

Department of education Request Letter

I am a masters student in the Department of Psychology at the North West University (Mafikeng Campus). I hereby request to be granted permission to conduct a research study entitled "Hardiness and gender as determinants of risk-taking behaviours of adolescent learners in Limpopo Province, South Africa".

The nature of the study will be conducted in a way that confidentiality will be maintained and participants will not be harmed in any way. Participation is voluntary and they are free to withdraw from the study if no longer comfortable to participate.

Yours Sincerely

Motlabeng F……

Appendix B: Consent Form to be signed by the participant

Enquiries: Fhulufhelo Motlabeng

Cell no: 0834711324

Email: fmuthaphuli@yahoo.com

CONSENT FORM

I_____ hereby agree to participate in this research study entitled "Hardiness and gender as determinants of risk-taking behaviours of adolescent learners in Limpopo Province, South Africa". The terms and conditions of the study have been thoroughly explained to me and I thus understand my rights and freedom in participating in this study. I also understand my freedom and the right to withdraw should I feel like at any time.

I understand that the outcomes of this study will not benefit me personally, and I also understand that my identifying details provided in this form will not, in any way be linked to the results of this study. I understand that my name and responses will remain confidential.

Signature _____ Date _____

Appendix C

Section A

Geographical information and RTSHIA scale

School: _____

Gender: Male Female **Age: _____**

In what grade of school are you?

a. 9th

b. 10th

c. 11th

d. 12th

How do you describe your race/ethnicity?

a. White

b. African

c. Hispanic

d. Asian/Pacific Islander

e. Native American

f. Other/Mixed

Where are you now living?

a. with a parent(s).

b. with a grandparent(s) or other family member(s)

c. with a foster family

d. in shelter care

e. in residential group care

f. independently

g. other

Please complete this questionnaire on your own.

- If a statement is not applicable to you, please circle *Never*.
- You do not have to answer any questions that you prefer not to answer.
- Please try to answer as truthfully as possible.
- All your answers are kept strictly confidential.

	Never	**Once**	**More than Once**	**Many times**
1. Have you ever taken chances while doing your hobbies (e.g. not wearing your helmet and other safety gear, riding risky stances on your skateboard, etc)?				
2. Have you ever deliberately crossed the road dangerously or driven recklessly (e.g. raced, did not fasten your seatbelt, drove while intoxicated or drunk)?				
3. Have you ever put yourself in a risky situation (such as classroom cheating, traveling without a valid ticket, shoplifting etc) knowing that you may get caught?				
4. Have you ever been suspended (i.e. punished with exclusion) or dropped out of school?				
5. Have you ever stayed out late at night, without your parents knowing where you are?				
6. Have you ever participated in gang violence, physical fights or held a weapon?				
7. Have you ever been promiscuous (i.e. had many sexual partners within a short period of time)?				
8.*Have you ever had sex avoiding precautions against sexually transmitted diseases or pregnancy?				
9. Have you ever put yourself at risk of sexual abuse?				
10. Have you ever had so much alcohol that you were really drunk?				
11. Have you ever used drugs (such as marijuana, cocaine,LSD etc)?				
12. Have you ever smoked tobacco?				

	Never	Once	More than Once	Many times
13. Have you ever intentionally cut your skin?				
14. Have you ever intentionally burned yourself with a hot object (such as a cigarette)?				
15. Have you ever intentionally bitten yourself, to the extent that you broke the skin?				
16. Have you ever intentionally banged your head against something, hit or punched yourself, to the extent that you caused a bruise to appear?				
17. Have you ever intentionally prevented wounds from healing or picked at areas of your body to the point of drawing blood?				
18. Have you ever intentionally scraped, scrubbed or scratched your skin to the point of breaking your skin or drawing blood?				
19. Have you ever intentionally rubbed a sharp object (such as sandpaper) or dripped anything toxic (such as acid) onto your skin?				
20. Have you ever exercised an injured part of your body intending to hurt yourself?				
21. Have you ever deliberately broken a bone in your body either by making yourself fall or in another way?				

22. Please choose A or B

…..A. I've never deliberately injured myself

…..B. I have at least once deliberately injured myself

If you answered B, which body parts did you deliberately injure?

Please tick one (or more) of the following options.

Torso, belly, buttocks, Hands, arms, fingers, nails, head, legs, face, toes, neck or other.

	Never	Once	More than Once	many times
23. Have you ever intentionally pulled your hair out?				
24. Have you ever deliberately inhaled something harmful (excluding cigarette smoke or drugs) or swallowed something Inedible?				
25. Have you ever starved yourself to hurt or punish yourself?				
26. Have you ever used laxatives to hurt or punish yourself? *Laxative*: a drug that makes you go to the toilet				
27. Have you ever forced yourself to eat too much to hurt or punish yourself?				
28. Have you ever stayed in a friendship or a relationship with somebody who repeatedly hurt your feelings on purpose?				
29. Have you ever tried to make yourself suffer by thinking horrible things about yourself?				
30. Have you ever taken an overdose? (i.e. taken an excessive amount of medication without having been prescribed this dosage)				
31. Have you ever seriously thought about harming a part of your body?				
32. Have you ever seriously thought about killing yourself?				
33. Have you ever tried to kill yourself?				
34. Have you ever intentionally hurt yourself in any of the above mentioned ways so that it led to hospitalization or injury severe enough to require medical treatment?				

35. Have you engaged in any other self-destructive behaviours not asked about in this questionnaire? If yes, please describe below

……

36. Please choose A or B

……A. I know no one well that has deliberately injured him/herself

……B. I know someone well who has deliberately injured himself/herself

37. If you answered B, why do you think he/she did this?

……

38. If you answered A or B, why do you think some young people harm themselves?.....

Appendix D

Section B

HARDINESS SCALE

Write down how much you agree with the following statements using this scale;

0 = strongly disagree

1= mildly disagree

2= mildly agree

3= strongly agree

_____l. Trying my best at work makes a difference.

_____2. Trusting to fate is sometimes all I can do in a relationship.

_____3. I often wake up eager to start on the day's projects.

_____4. Thinking of myself as a free person leads to great frustration and difficulty.

_____5. I would be willing to sacrifice financial security in my work if something really challenging came along.

_____6. It bothers me when I have to deviate from the routine or schedule I've set for myself.

_____7. An average citizen can have an impact on politics.

_____8. Without the right breaks it is hard to be successful in my field.

_____9. I know why I am doing what I'm doing at work (or school).

_____10. Getting close to people puts me at risk of being obligated to them.

_____11. Encountering new situations is an important priority in my life.

_____12. I really don't mind when I have nothing to do.

To compute the three component scores, use the following equations (the numbers are the question numbers):

Control score (#1 +#7) - (#2 +#8) _____

Commitment score (#3+#9) - (#4+#10) _____

Challenge score (#5+#11) - (#6+#12) _____

Total Hardiness Score= Control + Commitment + Challenge=_____

Dr. Kobasa- Ouellette provides the followings score categories:

Hardy Personality = l0 to 18 points

Moderate Hardiness = 0 to 9 points

Low Hardiness = Below 0

THANK YOU FOR PARTICIPATING!!!!!!!!