

**THE DARK TRIAD, SENSATION- SEEKING AND IMPULSIVITY IN
YOUNG SOUTH AFRICAN ADULTS**

**By
Rafeeah Manger**

**A mini-dissertation submitted in partial fulfilment of the
requirements for the degree**

MA CLINICAL PSYCHOLOGY

**In the Department of Psychology
at the**

**UNIVERSITY OF PRETORIA
FACULTY OF HUMANITIES,**

Supervisor: Prof M. Makhubela

2019

Declaration

I declare that the mini-dissertation submitted to the University of Pretoria for the degree of Masters in Clinical Psychology has not been previously submitted by me for a degree at this or any other university. I declare that this is my own work in design and execution, and all the material contained within has been duly acknowledged.

Dedication

To my mother and father who never cease to encourage my pursuits of life and have made my journey their journey.

To my husband, Hasan, for his unrelenting love, support and motivation. You inspire me.

To my brother, Riaaz. The strongest person I know and in whose footsteps I follow.

Acknowledgements

I am truly grateful to Prof M. Makhubela for his immense guidance, support and dedication throughout my journey. It has been a privilege to be taken under your wing. I thank you for seeing me through this process.

Abstract

While the Dark Triad traits have been widely researched, such studies have often found conflicting results and generally lack South African context. With risky behaviour being prominent in South Africa, this study investigates the relationship between the Dark Triad traits, impulsivity and sensation-seeking behaviours. A survey was completed by 204 young adults between the ages of 18 and 35 (mean age = 24.40; SD = 5.07). The study followed a quantitative research methodology with a cross-sectional design. Gender differences among the Dark Triad traits were also considered. An interrelationship analysis between the Dark Triad personalities (individually and as a composite), impulsivity and sensation-seeking was estimated. Additionally, a regression analysis was conducted to examine the predicted association between impulsivity, sensation-seeking and the Dark Triad personality traits and found that the Dark Triad traits were related to sensation-seeking and impulsivity at a bivariate level. While, impulsivity was predicted by all the three Dark Triad traits, sensation-seeking was only predicted by Machiavellianism. This study also discusses the recommendations for future studies as well as the limitations of the current study.

Key terms: Dark Triad, narcissism, psychopathy, Machiavellianism, sensation-seeking, impulsivity, gender+

Table of Contents

Dedication	9
Acknowledgements	10
Abstract	11
Table of Contents.....	12
List of Tables.....	Error! Bookmark not defined.
Chapter 1: Overview of the study	14
1. General introduction.....	15
1.1 Introduction	15
1.2 Statement of the problem	16
1.3 Justification, aim and objectives of the study	18
1.4 Conclusion.....	19
Chapter 2: Theoretical perspective and literature review	21
2. Introduction.....	21
2.1 Theoretical perspective: Life history theory	21
2.2 Literature Review.....	25
2.3 Gender differences of the dark personalities, impulsivity and sensation seeking	34
2.4 Conclusion.....	36
Chapter 3: Methodology	38
3. Introduction.....	38
3.1 Research design.....	38
3.2 Sampling	39
3.3 Measurement instruments	39
3.4 Data collection procedure	40
3.5 Ethical considerations.....	41
3.6 Conclusion.....	41
Chapter 4: Results	42
4. Introduction.....	42
4.1 Data analysis strategy	42
4.2 Presentation of results	42
4.3 Conclusion.....	48

Chapter 5: Discussion, recommendations and limitations of the study	49
5. Introduction	49
5.1 Discussion	49
5.2 Recommendations.....	52
5.3 Limitations of the study	52
5.4 Conclusion.....	52
References	54
Appendix A.....	51
Appendix B.....	56
Appendix C.....	63

List of tables

Table 1. Sample demographics.....35

Table 2. Normality, mean and Cronbach's alpha of the research instruments.....36

Table 3. Mean and standard deviation of the study variables.....37

Table 4. Correlations of the study variables.....38

Table 5. The predictions of sensation- seeking.....39

Table 6. The prediction of impulsivity.....40

Chapter 1: Overview of the study

1. General introduction

1.1 Introduction

The Dark Triad traits of personality conceptualised by Paulhus and Williams (2002) are topics of interest since its conceptualisation. Of the many personality traits which may have been aversive, yet non-pathological, psychopathy, narcissism and Machiavellianism have stood out and, through their sharing of a callous and antagonistic core (Vazire et al., 2018), they have been grouped as the Dark Triad. These three personality constructs share, to differing degrees, tendencies towards behaviours that are duplicitous, emotionally cold, aggressive and self-promoting (Paulhus & Williams, 2002). It has been suggested that with these tendencies may be the underlying tendency to engage in risky, impulsive and sensation-seeking behaviour which, at times, may be self-defeating to the individual with such a personality constructs (Paulhus & Williams, 2002).

Following past research studies, this study also investigates the relationship between the Dark Triad traits and behaviours of impulsivity and sensation-seeking. However, since South Africa lacks such research in this particular area, this study focuses on the young adult population of South Africa. With risky behaviour being prominent in South Africa (Morojele et al., 2013) and the possibility that young adults may have a tendency towards such behaviours based on their personality traits suggests that it may be useful to understand the relationship between such behaviour and personality traits that are considered to be somewhat dark but exist within a normal population. Although the Dark Triad traits have

been clinically investigated, non-clinical measures of these personality types are available, making it possible to carry out this study within a normal population (Paulhus & Williams, 2002).

1.2 Statement of the problem

Since the conceptualisation of the Dark Triad of personality traits (i.e., narcissism, psychopathy and Machiavellianism) by Paulhus and Williams (2002), a wealth of research has been conducted on its association with various behaviours. Literature indicates that certain traits of the Dark Triad are related to impulsive and sensation-seeking behaviour (Crysel, Crosier, & Webster, 2013; Malesza & Ostazewski, 2016). These three personality constructs are considered socially aversive and sub-clinically maladaptive and are theorised to facilitate short-term exploitative social tactics. Relatedly, impulsivity, and sensation-seeking are behaviours that do not have a long term aim or focus. Thus, it can be hypothesised that the Dark Triad traits, impulsivity and sensation-seeking behaviour may be positively correlated (Crysel et al., 2013).

While some studies only found psychopathy and narcissism to be linked to impulsive behaviour (Crysel et al., 2013; Jones & Paulhus, 2011), others have found all three traits of the Dark Triad to be associated with impulsivity. These results are contradictory and may be due to the differences in conceptualising and measuring the constructs of impulsivity; thus, they may not be comparable between studies. Prior to the work of Paulhus and Williams (2002), few studies investigated the relationship between psychopathy, narcissism and impulsive behaviour. However, Machiavellianism has not been studied and possibly dismissed due to literature indicating that the Machiavellian personality has no

possible link to impulsive behaviour (Malesza & Ostaszewski, 2016).

In terms of sensation- seeking, a variety of studies exist. However, these studies conceptualise sensation seeking behaviours in very specific ways, such as gambling, sexual behaviour, delinquent behaviour and substance use (Adams, Luevano, & Jonason, 2014; Brewer & Able 2015; Chabrol, Van Leeuwen, Rogers, & Séjourné, 2009; Jones, 2014) and have found varying results due to their focus on specific behaviour, with very few studies investigating an inclination for sensation- seeking at a general level.

Further, many of the studies investigating the Dark Triad and the two proposed correlates of this study are internationally based studies. Accordingly, this proposed study may prove useful in understanding impulsive and sensation- seeking behaviour and the Dark Triad traits in a South African sample. Lastly, a recent study on the risk behaviour among South Africans indicated a large number of adolescents and young adults engaging in behaviours such as substance use, risky sexual behaviour, crimes and delinquent type behaviours (Morojele et al., 2013). The survey by Morojele and colleagues (2013) indicated that approximately 66% of young people reported alcohol use with at least a third of them stating that they had started at a young age (average of 13 years). Drinking behaviours ranged from binge drinking, weekly consumption to weekly drunkenness. Tobacco (47.4%) and cannabis (23.6%) were the second and third most used substances. Furthermore, from the population of sexually active males and females, 60% indicated engaging in unprotected sex, 25.3% reported engaging in sex after drug use and 30% a possibility of impregnating a sexual partner. In terms of delinquent

behaviour, theft (18%), bullying (10%) and physical altercation (14%), the statistics are not as high as that of substance use and risky sexual behaviour (Morojele et al., 2013). These statistics suggest that there is a problem in South Africa regarding risky behaviour in young adults, thus stressing a need for research in this field among young adults.

1.3 Justification, aim and objectives of the study

1.3.1 Justification

The justification of this proposed study is twofold. The literature mentioned above indicates that there are generally very few studies investigating the association between impulsivity and the Dark Triad traits. While there is enough evidence to hypothesise the individual trait of the Dark Triad associated with impulsivity (Crysel et al., 2013; Jones & Paulhus, 2011; Malesza & Ostaszewski, 2016; Vazire & Funder, 2006), it is unclear whether there is an association between the joint Dark Triad and impulsivity. Research has found competing results. In terms of sensation-seeking, some studies focus on specific behaviours and not a general propensity to engage in sensation-seeking behaviour.

Secondly, most of the studies on the association between the Dark Triad traits, impulsivity and sensation-seeking behaviour are from developed countries, Euro-American to be specific, with no study conducted in Africa. Also, with high levels of engagement in risky and impulsive behaviour among South African youth (Morojele et al., 2013), this proposed study may provide useful insight into the possible personality factors that may be associated with sensation-seeking and contribute to the lack of knowledge regarding the

associations between the variables of this study in developing countries such as South Africa.

1.3.2 Aim

The aim of this study was to determine whether a relationship exists between the Dark Triad traits and risk-related traits (i.e., impulsivity and sensation- seeking) in young South African adults.

1.3.3 Objectives

To investigate the association between Dark Triad personalities and impulsivity and examine the association between Dark Triad traits and sensation- seeking.

1.3.4 Research questions

1.3.4.1. Is there a relationship between the Dark Triad traits and sensation- seeking behaviour?

1.3.4.2. Is there a relationship between the Dark Triad traits and impulsivity?

1.4 Conclusion

This chapter provides a general overview of this study, which investigates the relationship between the Dark Triad traits, impulsivity and sensation- seeking. The study is based on the hypothesis that the shared social aversion and exploitative tactics of such personality types may mean that there is also a tendency towards impulsive and sensation- seeking behaviour. Past research has often found contradictory results. This study aims at

contributing towards literature in this area, especially within a South African context, considering that there are high levels of engagement in risky and harmful behaviour among South Africans.

Chapter 2: Theoretical perspective and literature review

2. Introduction

This chapter focuses on the theoretical perspective of this study as well as the past literature it is based on. The theoretical perspective is based on the Life History theory which clearly explains systematic differences between human species by suggesting a species' adaptive functioning may be determined by prioritising certain life domains based on the limited supply of resources in the environment. It focuses on specific strategies that fall on a continuum of either a slow life or fast life strategy (Jonason & Tost, 2010; McDonald et al., 2010). Further, this chapter also focuses on literature on the Dark Triad traits as well as impulsivity and sensation-seeking behaviour. Its review focuses on the conceptualisation of the Dark Triad traits as well as past literature on the association between the Dark Triad traits, impulsivity and sensation-seeking. It also outlines the limited research on these variables, more so within the South African context.

2.1 Theoretical perspective: Life history theory

The proposed study is based upon the Life History Theory, a derivative of the Evolutionary theory by Wilson (1975). This theory was initially used to account for differences between living species but has recently been used to understand differences within species. These systematic differences are known as personality traits or individual differences (Jonason & Tost, 2010). The Life History theory is an evolutionary theory that explains adaptive functioning of species and is determined by the species'

experience of the environment (Kavanagh & Kahl, 2018). The limited supply of resources and materials means that organisms need to make important trade-offs between resources at any given phase of life by prioritising life domains such as mating effort, bodily growth, or parental investment on which resources are spent (Jonason, Koenig, & Tost, 2010; Jonason & Tost, 2010; McDonald, Donnellan, & Navarrete, 2010). The allocation of resources to a particular domain depends on environmental factors.

Fast life history strategies are produced in unpredictable environments where there is a high risk of mortality. In fast life history strategy, one would produce more offspring but use fewer resources for the upbringing of these offspring. This strategy is adaptive as more offspring means that there is a higher probability of some offspring to survive regardless of the amount of resources used. A slow life history strategy is produced in more predictable environments where less offspring is produced and more resources are spent on the upbringing of the offspring in order to facilitate survival (McDonald et al., 2010). It is likely that those with a fast life history strategy emphasise short-term and opportunistic perspectives. As such, it indicates short-term mating strategies, impulsive behaviours, instant gratification and risky behaviours that are adaptive to harsh and unpredictable environments (Jonason & Tost, 2010; McDonald et al., 2010).

It is said that in general, humans are a slow strategy species. There may be variation of behaviour within species where some may adopt a faster life strategy in relation to different environmental histories within human species (Kavanagh & Kahl, 2018). One's life history strategy may be influenced by more than personality style, and these factors may be early life experiences

and childhood adversity. Csathó and Birkás (2018) have found that low socioeconomic status is a good indicator of environmental harshness and corresponds to a fast life strategy behaviour such as impulsive and risky behaviour. This, however, can be related not only to the lack of resources in low socioeconomic environments but also high rates of mortality and morbidity and may include dysfunctionality in families, such as a lack of care, absence of parents, or family conflict among others. Csathó and Birkás (2018) have further found that the Dark Triad traits represent adaptive mechanisms related to faster life history strategies, and negative environmental experiences in early life are also associated with the Dark Triad. Additionally, those with Dark Triad traits may generally function on a shorter and more immediate time frame that is, prioritising immediate pleasures and rewards while disregarding future concerns (Jonason et al., 2010; Jonason, Sitnikova, & Oshio, 2018). However, since each Triad trait may have different life histories and functions, it is suggested that narcissism can generally be linked to pleasure and sensation-seeking goals while psychopathy to limited concerns about the future and Machiavellianism to some concerns about the future (Jonason, 2018).

The Life History theory is an increasingly popular understanding of the development of mental illness or pathological traits in the human population. It is proposed that the configuration of one's life history strategy can either increase or decrease the risk of developing pathological traits (Kavangh & Kahl, 2018). Although the basis of the study is not to understand the Dark Triad traits as pathological but rather human personality traits, this perspective of the Life History theory may explain the behaviours associated with the Dark Triad traits. Those on the spectrum of a fast life strategy

are likely to be characterised by traits such as sensation- seeking, impulsivity and disinhibition among others. Those on the spectrum of a slow life history strategy can be characterised as conscientious, agreeable, and avoiding risky behaviour or actions with likely negative outcomes (Kavanagh & Kahl, 2018). These fast life strategies traits reflect those that are encompassed by the Dark Triad traits (McDonald, Donnallen, & Navarrette, 2010).

The characteristics of the Dark Triad members can be understood through the fast life history strategy. Jonason and colleagues (2010) conducted a study on the Dark Triad composite scores and life history strategies and found that the Dark Triad had a faster life strategy. However, other research found that the Dark Triad traits can also be represented by slow life strategy due to the different constructs and aspects that encompass the three traits. McDonald and colleagues (2011) found that narcissism and psychopathy have some features of a slow life history strategy and can be explained by high levels of confidence, low anxiety and social dominance, some aspects of the narcissistic and psychopathic personality traits. These aspects are features of a slow life strategy. However, in contrast, the Machiavellian personality trait is more significantly linked to behaviours that are aggressive and unrestricted in nature with signs of a lack of self-control and a willingness to use others for self-gain. This indicates a clear fast life strategy (McDonald, Donnellan, & Navarrete, 2011). While these traits may be considered to be socially aversive and sub-clinically maladaptive, they may not necessarily be psychopathological, or an indication of a mental illness. Thus, this raises the questions as to why not everyone on the further end of the spectrum of a fast or slow life strategy develop these traits as psychopathological. Kavanagh and Kahl (2018) propose that this

can be determined by whether one's adaptive response (life strategy) matches that of the environment, and whether these adaptive responses are flexible enough to change with environment changes.

The current study is based on Life History Theory with the assumption that those with high levels of the Dark Triad traits have a fast life strategy. While there is no research on the life history strategies of the South African young adult population, considering the nature of the environment, and the history of the country, it is proposed that many South African young adults should adopt a fast life strategy to adapt to often difficult environments with limited resources for many as well as negative early life experiences, as suggested by Csathó and Birkás (2018).

2.2 Literature Review

2.2.1 The Dark Triad

Over the last decade or more, there has been an increasing amount of literature on three personality constructs that may be perceived as malevolent and “dark”, although they are not or not yet considered pathological (Paulhus & Williams, 2002; Vize et al., 2018). While these traits share some similarities and are often studied together as a combined construct, each has its own empirical basis. These constructs, namely narcissism, Machiavellianism and psychopathy have received considerable attention since their introduction into personality research (as a single construct) in 2002 by Paulhus and Williams (Rauthmann & Kolar, 2012; Stead, Fekken, Kay, & McDermott, 2012). While, these three personality traits are different from each other, there is

contrary belief that they present in the same manner or are the same in non-clinical, 'normal', populations (Paulhus & Williams, 2002). There is some division in opinion with regards to the Dark Triad traits being three different constructs or just one construct. The unitary perspective is that the three traits are simply nuances or elements of one global personality trait while the opposing perspective is that each trait comprises of distinct dimensions (Rauthmann & Kolar, 2012). These three traits also account for, in various ways, similar behaviour syndromes such as those related to reward seeking, short short-sighted behaviours of a risky nature, as well as impulsive behaviours (Jonason, Sitnikova, & Oshio, 2018).

The psychopathic personality type is associated with impulsive and thrill-seeking behaviours (Paulhus & Williams, 2002; Stead et al., 2012). It is characterised by the lack of empathy and remorse for actions with negative consequences for others with a bold or impulsive behaviour that is usually against the norm (Muris et al., 2017). The conceptualisation of psychopathy can largely be attributed to the works of Cleckley (1941), Karpman (1941) and McCord and McCord (1964). This psychopathic personality type is largely related to personality traits that are antagonistic, such as those mentioned above, as well as meanness and callousness and, in its extreme form, is often related to antisocial behaviour (Vize et al., 2018).

The narcissistic personality is associated with feelings and beliefs of grandiosity, dominance, superiority over others (Paulhus & Williams, 2002; Stead et al., 2012). The narcissistic personality is encompassed by the seeking of gratification from a point of self-admiration and vanity (Muris et al., 2017). The label of "narcissism"

originates from Greek mythology of a younger male hunter, Narcissus, who was preoccupied and overcome with his own beauty and greatness and, in his arrogance, dismissed and disliked the attention and love of others. The core features of narcissism is that of an egocentric admiration for one's own qualities and abilities which have negative effects on how one with a narcissistic personality trait may relate interpersonally (Muris et al., 2017). Narcissism can be further characterised into two variants: grandiose and vulnerable. The grandiose type is what most research on the Dark Triad is based on. It encompasses individuals that are motivated by exhibitionism, a dominating behaviour in interpersonal relationships, a lack of humility and modesty, selfishness and a general lack of trust in others as well as a need for attention and to be recognised and idealised by others (Vize et al., 2018).

While the subclinical construct of psychopathy and narcissism are derived from clinical psychopathic and narcissistic personality disorders, Machiavellianism is derived from the philosophy of Machiavelli who authored a book on how to secure power through cruel and immoral ways (Furnham, Richards, & Paulhus, 2013; Muris et al., 2017). This personality type was derived through the findings that those in agreement with the statements based on Machiavellian philosophy will also behave that way in reality – cynical and manipulative (Furnham, Richards, & Paulhus, 2013). The Machiavellian personality type is associated with manipulative behaviours towards others; it is characterised by a cynical disregard for morality, deceitful interpersonal relations, with behaviours focusing on self-interest and personal gain at the expense of others (Muris et al., 2017). In theory, such individuals may be strategic and skilled in the manipulation of others, and may

be callous pragmatists who aim to achieve with a relatively good ability for impulse control. Such characteristics may prove useful in competitive contexts and can be related to antisocial behaviours in such contexts (Vize et al., 2018).

Conceptually, the Triad traits overlap each other in several but different ways. There is some debate as to whether each of these traits represent constructs which are more similar than different, and research has found that psychopathy and Machiavellianism are conceptually similar in that they are both associated with little concern for morality and poor emotional bonding with others (Crysel et al., 2013). The psychopathic and narcissistic personality types share behaviours for self-enhancing purposes which is absent in the Machiavellian personality type, therefore suggesting that Machiavellians are more grounded and realistic in terms of self-knowledge (Paulhus & Williams, 2002). Research by Vize and colleagues (2018) found that narcissism is significantly distinct from psychopathy and Machiavellianism; however, it found that there is a great overlap between the constructs of psychopathy and Machiavellianism. However, these distinctions and overlap were somewhat dependent upon the types of measures used to measure the constructs of the Dark Triad (Vize et al., 2018).

Further research has shown that the Dark Triad traits can effectively be conceptualised as Social Symptomatology – a form of psychopathology. Social Symptomatology consists of deviant socialisation, problematic relationships with others during the developmental phases and impulse control problems (Stead et al., 2012). Narcissism is suggested to be related to impulsivity while psychopathy and Machiavellianism are linked to low self-control and exhibit little to no concern for future consequences or

implications of behaviour. These behaviours are linked to impulsivity, thus suggesting that psychopathy and Machiavellianism have some link to impulsive behaviour as well (Jonason & Tost, 2010; Stead et al., 2012). Additionally, each member of the Triad is linked to some form of deviant social behaviour. Narcissism is associated with dominating, intrusive and vindictive behaviours within interpersonal relationships while Machiavellians often tend to be over controlling in interpersonal relationships and may experience problems with intimacy and sociability. On the other hand, the psychopathic personality may present with increasingly social deviant problems, such as violence towards others, substance use and financial crises (Stead et al., 2012).

2.2.2 Impulsivity

Impulsivity involves a lack of planning and a tendency to act without thinking (Zuckerman, Kuhlman, Joireman, Teta, & Kraft, 1993). It may be related to other behaviours such as excessive gambling, self-defeating behaviour, attention-seeking, disinhibition and lack of self-control (Crysel et al., 2013; Malesza & Ostaszewski, 2016; Vazire & Funder, 2006). Impulsive people are more likely to engage in delinquent and risky sexual behaviours, show more aggression and violence and prefer instant gratification rather than long-term rewards (Vazire & Funder, 2006). Impulsivity is generally characterised by the inability to act with forethought and deliberation and inhibit inappropriate behaviours (Malesza & Ostaszewski, 2016). It can further be characterised into two variants: functional impulsivity and dysfunctional impulsivity. Functional impulsivity is useful in situations where it is preferable to think and act fast and where the accuracy of an act outweighs the

speed of an act. Dysfunctional impulsivity is characterised by disorderly and erratic behaviour, where decision making results in poor negative outcomes (Jones & Paulhus, 2011).

2.2.3 Impulsivity and the Dark Triad

Research findings on the association between the Dark Triad and impulsivity are contradictory. While, some research has shown that only two of the three traits of the Dark Triad may be associated with impulsivity (Malesza & Ostaszewski, 2016), others have found that all traits are actually related to impulsivity (Crysel et al., 2013). Jones and Paulhus (2011) distinguished between functional impulsivity and dysfunctional impulsivity and suggested that narcissism is better linked to functional impulsivity, which indicates the ability to generate ideas quickly and act swiftly in situations where the benefits of acting fast outweighs the benefits of accuracy. On the other hand, psychopathy is suggested to be associated with dysfunctional impulsivity, which is indicated by erratic disorderliness, poor and inaccurate decision making as well as suicide ideation (Jones & Paulhus, 2011; Malesza & Ostaszewski, 2016).

A study by Malesza and Ostaszewski (2016) investigated the associations between impulsivity and the Dark Triad traits and measured impulsivity using self-reported measures as well as laboratory behavioural measures. The distinction was made due to the assumption that self-report measures only measure impulsive traits and was insufficient in producing significant results, as behavioural measures measured actual impulsive behaviours. Thus, this study hypothesises that self-report measures will have little to no correlation with the behavioural measures (Malesza &

Ostaszewski, 2016). The study found that both measures of impulsivity were linked to the Dark Triad. Self-report measures were significantly and positively related to narcissism and psychopathy, suggesting high scores on both these traits relate to higher impulsivity. Two different behavioural measures, the Stop-Signal Task and the Delay Discounting Measure were used in the study. Both were significantly associated with psychopathy, whereas narcissism was seen to be only associated with the Stop-Signal task. In contrast, this study found no significant association between both behavioural or self-reported measures and Machiavellianism (Malesza & Ostaszewski, 2016).

Prior to the above mentioned study, Crysel and colleagues (2013) investigated the associations between the Triad traits and impulsivity. The study found significant correlations between self-reported scores of impulsivity and the Dark Triad at both composite score level and trait level thus suggesting that narcissism, psychopathy and Machiavellianism are associated with impulsivity. These findings are contradictory to that of Malesza and Ostaszewski (2016).

Vazire and Funder (2006) hypothesised a relationship between narcissism and impulsivity based on the characteristics of subclinical narcissists as having a lack of self-control. Based on a meta-analysis of published and unpublished works, the study aimed to find associations between impulsivity and self-defeating behaviours among narcissists. As narcissists frequently engage in self-defeating behaviour, Vazire and Funder (2006) found that the biological underpinnings of impulsivity better explains the self-defeating behaviour. Biologically, impulsive behaviour may be due

to low levels of serotonin and is shown to be a heritable genetic trait (Vazire & Funder, 2006).

A study by Crawley and Martin (2006) investigated the association between types of impulsivity, impulsivity, aggression and impulsive aggression and subclinical psychopathy among females and found that impulsive aggressive individuals exhibited higher scores of self-reported psychopathy than individuals found to be only aggressive or impulsive. However this study was unable to adequately differentiate between the groups to understand the characteristics that contribute to the impulsive group being different from the impulsive-aggressive group and the non-impulsive but aggressive group. This was quite a significant limitation of the study, as it was found that the impulsive-aggression group together showed some similarities to anti-social personality disorder, as outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

2.2.4 Sensation- seeking

Zuckerman defines sensation- seeking as “the seeking of varied, novel, complex and intense sensations and experiences, and the willingness to take physical, social, legal and functional risks for the sake of such experiences” (1979, p 10). Sensation- seeking is associated with many important behaviours and daily life outcomes and is often seen to play a role in behaviours such as substance use, gambling and risky sexual behaviour (de Vries, de Vries, & Feij, 2009; Worthy, Jonkman, & Blinne-Pike, 2010). Sensation-seeking is also found to be linked to the general trait of impulsivity (Worthy et al., 2010). Sensation- seeking behaviours include non-harmful acts such as trying new foods or engaging in extreme

sports. Harmful behaviours include recreational drug use or gambling. Sensation- seeking behaviours are only considered to be risky and impulsive if done without the consideration of implications (Crysel et al., 2013).

2.2.5 Sensation- seeking and Dark Triad traits

The Dark Triad has a shared tendency towards high impulsivity, thrill seeking and aggression, which are characteristics of sensation- seeking behaviours. Thus, it can be assumed that the Dark Triad traits are associated to sensation seeking (James et al., 2014). James et al. (2014) investigated the relationship between the Dark Triad traits and an interest in sensation- seeking and found that individuals with a higher level of Dark Triad traits expressed a greater interest in sensation- seeking behaviours involving drugs, weaponry, criminality and death. Psychopathy in particular was strongly associated with ideas of combat and violence and can be explained by the correlation of impulsivity and lack of empathy among individuals with a psychopathic personality (James et al., 2014).

A study by Crysel and colleagues (2013) further investigated the relationship between the Dark Triad and sensation- seeking and found a positive relationship among university students. Another study investigated the relationship between the Dark Triad traits and financial misbehaviour such as gambling (i.e., an indicator of sensation- seeking). It was found that those who were higher on the Triad traits were more likely to engage in gambling of their own money. However, those who were higher in psychopathy were shown to be willing to gamble money that would implicate another person, with the knowledge of possible punishment. The same did

not apply to the narcissistic and Machiavellian traits (Jones, 2014). These findings concluded that those with psychopathic traits were unable to alter their behaviour to act accordingly when large risks were involved.

2.2.6 The Dark Triad, impulsivity and sensation- seeking

James and colleagues (2014) suggest that sensational interests and the Dark Triad traits indicate high impulsivity. Narcissism may be related to functional impulsivity, and psychopathy can be associated with dysfunctional impulsivity, suggesting sensation-seeking behaviours are more significantly related to psychopathy due to the element of dysfunctional impulsivity (James et al., 2014). Their study found that those who scored higher on the Dark Triad measures also showed a greater interest in sensational topics related to “dark pastimes” or sensation- seeking behaviours. The strong association found in the study between psychopathy (dysfunctional impulsivity trait) and a Militarism and Criminal Identity subscale suggested that individuals with high impulsivity and low empathy would enjoy sensational behaviour related to war, guns, and weaponry. Therefore, it appears that impulsivity in the above research is not a separate construct but may mediate in some way the association between sensation seeking and the Dark Triad traits.

2.3 Gender differences of the dark personalities, impulsivity and sensation- seeking

As the Dark Triad traits are associated with behaviours such as impulsivity, dominance and prestige, Jonason and Davids (2018) proposes that the Dark Triad traits are greatly associated to

masculine sex differences rather than feminine sex differences due to the more masculine nature of the behaviours associated with the Dark Triad (Jonason & Davids, 2018). Their study on gender differences and the Dark Triad traits found that men scored higher than women on the Dark Triad traits, but that these differences were only significant when considering the levels of masculinity and femininity. The gender differences of each of the Dark Triad traits were better associated with limited femininity, but not necessarily high masculinity (Jonason & Davids, 2018).

Malesza and Ostaszewski (2016) found that males scored higher on Machiavellianism and psychopathy with no significant gender difference on narcissism. It is suggested that males generally score higher on the Dark Triad traits than females and use social exploitation as an adaptive function (Malesza & Ostaszewski, 2016). Using four different measures of the Dark Triad, Jonason and Tost (2010) also found that males scored higher on the three traits on three of the measures compared to females.

In terms of gender differences and impulsivity, Malesza and Ostaszewski (2016) also found that males scored higher on the impulsivity measures than females. However, Jonason and Tost (2010) found that there were no gender differences on measures of self-control suggesting that males and females may have similar levels of impulsivity associated with low levels of self-control. In terms of sensation-seeking, a study by López-Bonilla and López-Bonilla (2010) investigated sensation-seeking and internet use and found that males scored higher on a sensation-seeking scale than females did when internet use was not taken into account. This result was corroborated with other studies that also found that males are more likely to engage in behaviours relating to

sensation- seeking, although such studies were conducted several years ago (Galloway & Lopez, 1999; Zuckerman et al., 1978).

2.4 Conclusion

The Life History theory discussed above serves as the theoretical foundation of this study, suggesting that an individual's life history strategy may possibly shed some light on the possession of Dark Triad personality traits, which some may possess, along with any impulsive or sensation- seeking behaviour that it could be related to. Furthermore, the review of literature indicates that much has been studied about the Dark Triad traits, impulsivity and sensation-seeking.

There has been an increase in literature on the Dark Triad traits which consist of three dark personalities, namely, narcissism, psychopathy and Machiavellianism. These traits can be conceptualised as Social Symptomatology suggesting that they consist of deviant socialisation and impulse control issues, among others (Stead et al., 2012). Impulsivity is related to behaviours that involve lack of planning and acting without thinking (Kuhlman, Joireman, Teta, & Kraft, 1993).

There is a wealth of studies on the relationship between the Dark Triad traits and impulsivity, however many studies find contradictory results. Sensation-seeking is also linked to the general trait of impulsivity, and include non-harmful acts such as engaging in extreme sports, and harmful behaviours such as recreational drug use (Crysel et al., 2013). The Dark Triad has a shared tendency towards thrill-seeking and impulsive behaviours,

and as such can be assumed that Triad traits are associated to sensation-seeking (James et al., 2014).

Research has also found that impulsivity may be a mediator between the association of sensation-seeking and the Dark Triad (e.g. James et al., 2014). It is also suggested that the Dark Triad traits are associated with masculine sex differences rather than feminine sex differences due to the masculinity of the behaviours associated to the Dark Triad. It is generally found that men score higher on the traits than females (Jonason & Davids, 2018).

However, particular conflicts among the studies do exist. One particular conflict of note is the differing perception that the Dark Triad traits are separate constructs or a single personality trait with nuances of the three traits (Rauthmann & Kolar, 2012). Further, conflicts are also notably profound among studies investigating relationships between impulsivity and the Dark Triad traits where some studies have found clear associations among the variables while others have not (Crysel et al., 2013; Malesza & Ostaszewski, 2016). Lastly, it is evident that such studies do not exist within the South African context, although risky and impulsive behaviour is rife in South Africa (Morojele et al., 2013), thus providing an adequate basis for this current study.

Chapter 3: Methodology

3. Introduction

The present study is based on an empiricist paradigm. This paradigm is useful for understanding and implementing quantitative research, as it allows for empirical and objective investigations of variables (Babbie & Mouton, 2014). The most effective way of investigation for the study was through the use of quantifiable data by making use of questionnaires. As such the results obtained from the study are objective and understood based on the analysis of the data. The researcher had room for limited bias and subjective interpretation of results (Babbie & Mouton, 2014). The methodology outlined below is in line with this paradigm and was effective in producing the results to accurately investigate the research question.

3.1 Research design

This research followed a quantitative methodology with a cross-sectional design. This research design facilitates the comparison of variables among the selected sample at a single point in time without the need for re-testing (Breakwell & Rose, 2000). However, this design does not allow for causal inferences (Breakwell & Rose, 2000). Thus, any significant correlation among the Dark Triad traits and impulsivity and sensation-seeking behaviour cannot be interpreted as causing the one or other to occur.

3.2 Sampling

The study made use of non-probability convenient sampling. A convenient sample was selected based on the availability, proximity and accessibility of participants and is more appropriate for a small-scale study such as the proposed one. Two-hundred and five participants were recruited from residents of Gauteng (Pretoria and Johannesburg). The targeted group of participants comprised of young adults between the ages of 18 and 35 years. Diversity of participants was not a necessity in this study. Respondents were approached individually at their homes and public spaces by the researcher and research assistant. The assistants were postgraduate students trained on how to approach participants, administer the questionnaires and were briefed on ethics and confidentiality. An open invitation was extended to all the potential participants, and those who showed interest and volunteered to participate in the research were included in the study. Those who agreed to participate completed the questionnaires on their own and the researcher collected them later or the participants mailed them back to the researcher.

3.3 Measurement instruments

The following instruments were used in the research study:

3.3.1 The Dirty Dozen (DD)

The DD is a 3 subscale, concise measure of the Dark Triad traits using 12 items on a Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). This scale can serve as either a one-dimensional (the Dark Triad) or three-dimensional construct

(narcissism, psychopathy and Machiavellianism). Each scale of the Triad has 4 items. The DD has a good internal consistency ($\alpha = 0.83$) (Jonason & Webster, 2010).

3.3.2 Impulsivity and Sensation-Seeking Scale (ImpSS)

The ImpSS is a 19-item true or false scale that forms a part of the Zuckerman-Kuhlman Personality Questionnaire. The 19 items produce a general score and two subscale scores for impulsivity (Imp) and impulsive sensation-seeking (SS). The items on the ImpSS are general and not indicative of any specific activities such as drinking or sex. These items involve a lack of planning and acting without thinking or experience seeking and willingness to take risks for the sake of thrilling experiences. The scale has a good reliability of $\alpha = 0.77$ (Zuckerman et al., 1993).

3.4 Data collection procedure

Participants for this study were obtained based on willingness to participate. Participants were required to sign a consent form that outlined the study and informed the participant about the confidentiality of the study. Data was collected after ethical clearance was granted by the Faculty of Humanities' Research and Ethics Committee. The survey involved a self-report questionnaire that was self-administered and mailed back or collected later by the researcher. Two hundred and five informed consent forms, letters of invitation and survey questionnaires were distributed to the respondents, together with a stamped self-addressed envelope. The objectives of the research were explained in the open invitation letter and the participants' information sheet.

3.5 Ethical considerations

Prior to the commencement of this study, the researcher sought ethical approval from the Faculty of Humanities' Research and Ethics Committee at the University of Pretoria. Informed consent was obtained from all those who participated in this research study. All participants took part in the study on a voluntary basis and reserved the right to withdraw at any time for any reason without any consequences. Debriefing arrangements for those who may require debriefing were made and were to be provided at the Itsoseng Clinic at the University of Pretoria's Mamelodi campus. No identifying information was sought from the participants. The aim was to obtain useful data without causing any harm to any party participating in the study. The raw data will be securely stored (i.e., HSB 11–23) for reuse and archiving for a minimum period of 15 years. During this period, other researchers will also have access to the data for further use.

3.6 Conclusion

This chapter clearly outlines the research methodology employed in this study, which followed an empiricist paradigm for quantitative data collection and analysis with a cross-sectional design. Voluntary, non-probability sampling was used to obtain the 205 participants. The measurement instruments used were the Dirty Dozen (DD) and the Impulsivity and Sensation-Seeking Scale (ImpSS). The data was collected following ethical approval from the Humanities Research and Ethics committee at the University. Lastly, several ethics were taken into consideration upon commencing the research study to ensure safety, confidentiality and anonymity of participants.

Chapter 4: Results

4. Introduction

This chapter focuses on the data analysis process of the study for determining sample characteristics and analysing relationships between the various variables of the study. Further, this chapter also outlines the results obtained from the data, including data quality and reliability coefficients of the research instruments, gender mean comparisons, and the relationship between, and predictions of the Dark Triad traits, impulsivity and sensation-seeking.

4.1 Data analysis strategy

The data was analysed with the SPSS 25.0. Preliminary analysis was conducted to determine and describe among others the sample characteristics (e.g. normality of the distribution study variables) and descriptive statistics for demographic characteristics of the participants. Following this, a linear relationship analysis between the Dark Triad personalities, impulsivity and sensation-seeking was estimated. Independent variables (Dark Triad) that were found to be significantly associated with impulsivity and sensation-seeking were selected for the regression analysis. Regression analysis was conducted to examine the prediction of impulsivity and sensation-seeking using Dark Triad personality traits (Machiavellianism, narcissism and psychopathy).

4.2 Presentation of results

4.2.1 Descriptive data

Table 1 presents the demographic data of the study. The participants in this study were 205 young adults from the Johannesburg and Pretoria area. Of all the respondents, 130 (63.4%) classified themselves as 'black', 12 (5.9%) as 'white', 46 (22.4%) as 'Asian' and 17 (8.3%) as 'coloured'. One hundred and six (51.7%) participants were male while 99 (48.3%) were female. Ninety seven (47.4%) of the participants were between the ages of 18 and 23 years old, 70 (34.1%) between 24 and 29 years old and 43 (18.4%) between 30 and 35. The mean age was 24.40 (SD = 5.07), with an age range of 18 years to 35 years.

Table 1
Sample demographics

		Frequency	Percentage
Ages	18-23 years	97	47.4
	24-29 years	70	34.1
	30-35 years	43	18.4
Race	Black	130	63.4
	Coloured	17	8.3
	White	12	5.9
	Asian	46	22.4
Gender	Female	99	48.3
	Male	106	51.7

4.2.2 Data quality and reliability coefficients of the research instruments

The normality of distribution for the data and the psychometric properties of the scales were tested. The skewness and kurtosis for each scale are within limits. The Dark Triad, ImpSS scale and respective subscales exhibited high reliability estimates (see Table 2).

Table 2
Normality, mean and Cronbach's alphas of the research instruments

	Skewness	Kurtosis	Mean	SD	α	Items
DD total	0.283(0.170)	-0.622(0.338)	47.46	19.8	0.877	12
Machiavellianism	0.253(0.170)	-0.932(0.338)	16.75	7.24	0.792	4
Narcissism	0.180(0.170)	-1.116(0.338)	12.53	7.24	0.777	4
Psychopathy	0.752(0.170)	-0.173(0.338)	18.18	9.14	0.866	4
ImpSS total	-0.129(0.170)	0.008(0.339)	10.67	4.19	0.776	19
Impulsivity	0.258(0.170)	-0.924(0.339)	3.64	2.30	0.731	8
Sensation Seeking	0.058(0.170)	0.898(0.339)	6.21	3.11	0.750	11

Note: α = Cronbach's Alpha

4.2.3 Gender mean comparisons

Only narcissism and total Dark Triad gender difference were statistically significant ($t_s = 3.22; 2.27, p < 0.01$) (see Table 3). The results suggest that males scored higher than females on the narcissism subscales and the total Dark Triad measure.

Table 3
Mean, standard deviations of the study variables

	Total		Males	Females	<i>t</i>	<i>p</i>	<i>d</i>
	<i>M</i> (SD)	Range ^a	<i>M</i> (SD)	<i>M</i> (SD)			
1. Machiavellianism	16.75(8.17)	4-36	17.70 (8.19)	15.74(8.07)	1.72	0.086	0.24
2. Narcissism	12.53(7.24)	4-36	14.07(7.70)	10.89(6.36)	3.22	0.001*	0.45
3. Psychopathy	18.18(9.14)	4-36	18.74(8.70)	17.59(9.59)	0.89	0.371	0.12
4. Dark Triad	47.46(19.8)	12-99	50.50(19.93)	44.21(19.1)	2.27	0.024**	0.32
5. ImpSS	10.67(4.19)	2-22	10.80(3.92)	10.53(4.48)	0.46	0.641	0.06
6. Sensation Seeking	6.21(3.11)	0-20	6.38(2.88)	6.04(3.34)	0.78	0.436	0.10
7. Impulsivity	3.64(2.30)	0-8	3.40(2.11)	3.89(2.48)	-1.51	0.132	0.21

Note: ^aRefers to observed range; * $p < 0.01$; ** $p < 0.05$.

4.2.4 Relationship between the Dark Triad, impulsivity and sensation- seeking

Table 4 provides the results of the association between the study variables. The results suggest that the Dark Triad personality traits were all significantly associated with both impulsivity and sensation-seeking. Specifically, impulsivity and sensation-seeking have medium positive correlations with the Dark Triad personality traits.

Table 4
Correlations of the study variables

	1	2	3	4	5	6	5
1. Machiavellianism	1						
2. Narcissism	.516**	1					
3. Psychopathy	.534**	.418**	1				
4. Dark Triad	.840**	.765**	.828**	1			
5. ImpSS	.422**	.298**	.322**	.429**	1		
6. Sensation Seeking	.422**	.306**	.323**	.432**	.946**	1	
7. Impulsivity	.346**	.348**	.332**	.421**	.684**	.526**	1

Note: ** $p < 0.01$

4.2.5 The prediction of sensation- seeking by the Dark Triad personality traits

A multiple regression analysis was conducted to test the associations (see Table 5). The model shows that sensation seeking was only predicted by Machiavellianism ($\beta = 0.308$, $p = 0.00$). The model explained 19.9% of variance in the sensation- seeking score ($R^2 = 0.199$, $F_{[1,3]} = 16.512$, $p = 0.00$). The results imply that only Machiavellianism significantly predicted sensation-seeking behaviour in this sample,

suggesting that those who score higher on the Machiavellian trait are expected to score highly on sensation-seeking.

Table 5
The prediction of sensation seeking

Variables	Model
Machiavellianism	0.308**
Narcissism	0.120
Psychopathy	0.098
R ² (Adj. R ²)	0.199 (0.186)
ΔR ²	0.199
F	16.512

Note: ** $p < 0.01$

4.2.6 The prediction of impulsivity by the Dark Triad personality traits

A multiple regression analysis was conducted to test the associations (see Table 6). The model shows that impulsivity was predicted by all the Dark Triad personality traits (β s = 0.156; 0.167; 0.199). The model explained 17.9% of variance in the impulsivity score ($R^2 = 0.179$, $F_{[1,3]} = 14.509$, $p = 0.00$). The results suggest that each of the Dark Triad traits had a positive significant effect on the scores of impulsivity, indicating that those who scored higher on the Triad traits were most likely to score high on impulsivity.

Table 6
The prediction of impulsivity

Variables	Model
Machiavellianism	0.156*
Narcissism	0.167**
Psychopathy	0.199**
R ² (Adj. R ²)	0.179 (0.166)
ΔR ²	0.179
F	14.509

Note: * $p < 0.05$; ** $p < 0.01$

4.3 Conclusion

This chapter presented the statistical findings of this study as well as the reliability of the study instruments.

Chapter 5: Discussion, recommendations and limitations of the study

5. Introduction

This section focuses on the discussion of the results presented in the previous chapter by providing an understanding of the results based on previous findings from other literature. It also focuses on the recommendations for future studies and the limitations of this current study.

5.1 Discussion

5.1.1 Gender differences on Dark Triad personalities

In this study, there were no significant gender differences within the different variables except for that of narcissism and the Dark Triad (total). Specifically, males endorsed narcissistic personality traits more than females, as measured by the Dirty Dozen questionnaire. In addition to this, the combination of the three personality traits within the Dark Triad were significantly endorsed by males than by females. According to the literature, gender differences exist within all three Dark Triad traits, including narcissism, only if the levels of masculinity and femininity are taken into consideration (Jonason & Davids, 2018). The finding of this study contradicts that of other findings where males scored higher on psychopathy and Machiavellianism, but no significant difference was found among the narcissistic trait (Malesza & Ostazewski, 2016). Males may have a tendency to seek gratification through self-admiration; and motivation for certain behaviours or actions may be promoted by the need for attention and recognition and they may sometimes present as being domineering in relationships, selfish or showing a lack of trust in others. This may explain why males score higher on narcissism than females (Muris et al., 2017; Paulhus & Williams, 2002; Stead et al., 2012; Vize et al., 2018).

However, there is also a statistical mean difference between males and females for the Dark Triad variable as a one dimensional construct on its own, suggesting fewer females scored highly on the Dark Triad measure compared to males. These findings are in line with past literature where males have generally scored higher on the Dark Triad traits than females (Jonason & Tost, 2010). According to this literature, males may have a more malevolent personality structure and feel more prone to engaging in transgressive behaviours. This may be explained by the tendency for males to externalise psychopathology from a young age, such as engaging in behaviours associated with conduct problems and delinquency (Muris et al., 2017; Paulhus & Williams, 2002).

5.1.2 Relationship between the Dark Triad, impulsivity and sensation- seeking

The findings of the present study show that Dark Triad personalities are related to sensation- seeking and impulsivity. In terms of impulsivity, previous findings have been contradictory as to its relationship with the Dark Triad. Other studies have found that impulsivity is specifically associated with narcissism and psychopathy only (Malesza & Ostaszewski, 2016). The findings of this study are congruent with the findings of Crysel and colleagues (2013), where impulsivity was significantly associated to the Dark Triad traits.

These findings may have some meaning for the young adult population in South Africa. Harsh and unpredictable environments warrant a fast life history strategy associated with impulsive and risky behaviours (Jonason & Tost, 2010; McDonald et al., 2010). The Dark Triad traits are representative of adaptive mechanisms related to a fast life strategy, and that environmental factors are associated with the Dark Triad as well (Csathó & Birkás, 2018). This may mean that the lack of resources and environmental instability experienced by the young adult population may explain the high scores on the Dark Triad and its association to impulsivity.

5.1.3 The prediction of sensation- seeking by the Dark Triad personality

In terms of sensation-seeking and the Dark Triad, this study found that sensation- seeking was only significantly predicted by the Machiavellian trait, suggesting that those who scored high on Machiavellianism are likely to score high on sensation-seeking as well. These results are different to previous studies, where sensation seeking was predicted by all three traits as one construct and individually by psychopathy, especially high-risk sensational behaviour (James et al., 2014; Jones, 2014). However, some research has shown that Machiavellians may engage in sensational behaviour for the purpose of obtaining some reward or outcome, as well as engaging in behaviours for the sole purpose of experience seeking (Brewer & Able, 2015). Considering the Life History theory, the limited resources in the South African context mean that there is a need for survival and engaging in such behaviour may mean an adaptive functioning for young adults, especially those with a Machiavellian personality structure. However, those with a fast life strategy may engage in sensation-seeking behaviours for the sake of experience and not necessarily to facilitate survival.

5.1.4 The prediction of impulsivity by the Dark Triad personality traits

This study also indicated that impulsivity was predicted by the Dark Triad traits. This suggests that while these two variables are correlated, there is some certainty that those who score higher on the Dirty Dozen questionnaire are somewhat more likely to engage in behaviours that may be regarded as impulsive. Jones and Paulhus (2011) found that those with narcissistic and psychopathic personality traits may have a bigger tendency towards impulsivity than were those with a Machiavellian personality type. After accounting for the different types of impulsivity (functional or dysfunctional), it is concluded that the narcissistic personality may engage in more functionally impulsive behaviour while

the psychopathic personality may have a tendency towards dysfunctional impulsivity. This suggests that when a quick response is needed over an accurate response, the narcissistic personality may thrive, especially in short-term relationships. However, those with psychopathic tendencies are more likely to engage in less adaptive impulsive behaviour that are likely to result in negative outcomes (Jones & Paulhus, 2011).

5.2 Recommendations

In future, it may be worthwhile to study the associations of the Dark Triad traits in the form of a longitudinal study to investigate the effects of such personality traits and behaviours over a long period of time and examine consistent patterns of behaviour with the Dark Triad personalities. Further, it can be hoped that future studies such as a longitudinal study will focus on the South African population. While there is an increasing amount of research on these topics, it is quite limited in the South African context. Therefore, further and more in-depth exploration of these variables may prove beneficial for the scope of personality research in South Africa.

5.3 Limitations of the study

While this study resulted in some significant outcomes, it may have benefitted from a larger sample size to improve the reliability of the study.

5.4 Conclusion

The aim of the study was to investigate whether a relationship exists between the Dark Triad personality traits, impulsivity and sensation seeking. As expected, based on the previous literature, there were some significant relationships among the variables. Impulsivity and sensation-seeking were positively correlated to the Dark Triad traits as a composite score. However, only the Machiavellian trait predicted sensation seeking,

whereas the Dark Triad traits, as a composite score, predicted impulsivity. This study also investigated the gender differences on the Dark Triad traits and found no significant difference except for narcissism and the total Dark Triad, where males significantly endorsed both of these variables. Lastly, this chapter also considers the limitations of our findings and provides recommendations for future studies within this domain.

References

- Adams, H.M., Luevano, V.X., & Jonason, P.K. (2014). Risky business: Willingness to be caught in an extra-pair relationship, relationship experience, and the dark triad. *Personality and Individual Differences*, 66, 204–207. doi: 10.1016/j.paid.2014.01.008
- Babbie, E., & Mouton, J. (2014). *The practice of social research*. Cape Town: Oxford University Press.
- Breakwell, G.M., & Rose, D. (2000). Research: Theory and method. In G.M. Breakwell, S. Hammond & C. Fife-Schaw (Eds.). *Research methods in psychology* (2nd ed., pp. 5–21). London: Sage Publications.
- Brewer, G., & Abell, L. (2015). Machiavellianism and sexual behaviour: Motivations, deception and infidelity. *Personality and Individual Differences*, 74, 186–191. doi: 10.1016/j.paid.2014.10.028
- Csathó, A., & Birkás B. (2018). Early-life stressors, personality development and fast life strategies: An evolutionary perspective of malevolent personality features. *Frontiers in Psychology*, 305(9), 16. doi: 10.3389/fpsyg.2018.00305
- Chabrol, H., Van Leeuwen, N., Rodgers, R., & Séjourné, N. (2009). Contributions of psychopathic, narcissistic, Machiavellian, and sadistic personality traits to juvenile delinquency. *Personality and Individual Differences*, 47, 734–739. doi: 10.1016/j.paid.2009.06.020
- Christie, R., & Geis, F.L. (1970). *Studies in Machiavellianism*. New York, NY: Academic Press.
- Crawley, T., & Martin, F.H. (2006). Impulsive-aggression, antisocial behaviour and subclinical psychopathy: Preliminary findings from an undergraduate female sample. *Psychiatry, Psychology and Law*, 13(2), 232–242.
- Crysel, L.C., Crosier, B.S., & Webster, G.D. (2013). The dark triad and risk behaviour. *Personality and Individual Differences*, 54, 35–40. doi: 10.1016/j.paid.2012.07.029

- de Vries, R.E., de Vries, A., & Feij, J.A. (2009). Sensation seeking, risk taking, and the HEXACO model of personality. *Personality and Individual Differences, 47*, 536–540. doi: 10.1016/j.paid.2009.05.029
- Furnham, A., Richards, S.C., & Paulhus, D.L. (2012). The dark triad of personality: A 10 year review. *Social and Personality Psychology Compass, 7*, 199–216. doi:10.1111/spc3.12018
- James, S., Kavanagh, P.S., Jonason, P.K., Chonody, J.M., & Scrutton, H.E. (2014). The dark triad, schadenfreude, and sensational interests: Dark personalities, dark emotions and dark behaviours. *Personality and Individual Differences, 68*, 211–216. doi: 10.1016/j.paid.2014.04.020
- Jonason, P.K., & Buss, D.M. (2012). Avoiding entangling commitments: Tactics for implementing a short-term mating strategy. *Personality and Individual Differences, 52*(5), 606–610.
- Jonason, P.K., & Davids, M.D. (2018). A gender role view of the dark triad traits. *Personality and Individual Differences, 125*, 102–105.
- Jonason, P.K., Koenig, B.L., & Tost, J. (2010). Living a fast life: The dark triad and the life history theory. *The Human Nature Journal, 21*, 428–442. doi: 10.1007/s12110-010-9102-4
- Jonason, P.K., Sitnikova, M., & Oshio, A. (2018). The Dark Triad and views of time in three countries. *Personality and Individual Differences, 120*, 107-111.
- Jonason, P.K., & Tost, J. (2010). I just cannot control myself: The dark triad and self-control. *Personality and Individual Differences, 49*, 611–615.
- Jonason, P.K., & Webster, G.D. (2010). The dirty dozen: A concise measure of the dark triad. *Psychological Assessment, 22*(2), 420–432.
- Jones, D. (2014). Risk in the face of retribution: Psychopathic individual persist in financial misbehaviour among the dark triad. *Personality and Individual Differences, 67*, 109–113. doi: 10.1016/j.paid.2014.01.030

- Jones, D.N., & Paulhus, D.L. (2011). The role of impulsivity in the dark triad of personality. *Personality and Individual Differences*, *51*, 679–682. doi: 10.1016/j.paid.2011.04.011
- Malesza, M., & Ostaszewski, P. (2016). Dark side of impulsivity: Associations between the dark triad, self-report and behavioural measures of impulsivity. *Personality and Individual Differences*, *88*, 197–201. doi: 10.1016/j.paid2015.09.016
- Malesza, M., & Ostaszewski, P. (2016). The utility of the dark triad model in the prediction of the self-reported and behavioural risk-taking behaviours among adolescents. *Personality and Individual Differences*, *90*, 7–11. doi: 10.1016/j.paid.2015.10.026
- Maples, L.J., Lamkin, J., & Miller, J.D. (2014). A test of two brief measures of the dark triad: The dirty dozen and short dark triad. *Psychological Assessment*, *26*, 326–331. doi: 10.1037/a0035084
- McDonald, M.M., Donnellan, M.B., & Navarrete, C.D. (2011). A life history approach to understanding the dark triad. *Personality and Individual Differences*, *52*(5), 601–605.
- Morojele, N., Myers, B., Townsend, B., Lombard, C., Plüddemann, A., Carney, T...., Nkosi, S. (2013). *Survey on Substance Use, Risk Behaviour and Mental Health among Grade 8-10 Learners in Western Cape Schools, 2011*. Cape Town: South African Medical Research Council.
- Muris, P., Merckelbach, H., Otgaar, H., & Meijer, E. (2017). The malevolent side of human nature: A meta-analysis and critical review of the literature of the dark triad (narcissism, Machiavellianism, and psychopathy). *Perspectives on Psychological Science*, *12*(2), 183–204. doi: 10.1177/1745691616666070
- Paulhus, D.L., & Williams, K.M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, *26*, 556–563.
- Rauthmann, J.F., & Kolar, G. (2012). How “dark” are the dark triad traits? Examining the perceived darkness of narcissism, Machiavellianism, and psychopathy.

Personality and Individual Differences, 53, 884–889. doi: 10.1016/j.paid.2012.06.020

- Siegel, A.W., Cousins, J.H., Rubovits, D.S., Parson, J.T., Lavery, B., & Crowley, C.L. (1994). Adolescents' perceptions of the benefits of their own risk taking. *Journal of Emotional and Behavioural Disorders*, 2(2), 89–98.
- Stead, R., Fekken, G.C., Kay, A., & McDermott, K. (2012). Conceptualizing the dark triad of personality: Links to social symptomatology. *Personality and Individual Differences*, 53, 1023–1028.
- Vazire, S., & Funder, D.C. (2006). Impulsivity and the self-defeating behaviour of narcissists. *Personality and Social Psychology Review*, 10, 154–165.
- Vize, C.E., Lyam, D.R., Collison, K.L., & Miller, J.D. (2018). Differences among the dark triad components: A meta-analytic investigation. *Personality Disorders: Theory, Research and Treatment*, 9(2), 101–111.
- Williams, K.M., Nathanson, C., & Paulhus, D.L. (2003). Structure and validity of the self-report psychopathy scale-III in normal populations. In 111th Annual Convention of the American Psychological Association.
- Wilson, E.O. (1975). *Sociobiology: The new synthesis*. Cambridge, MA: Harvard University Press.
- Worthy, S.J., Jonkman, J., & Blinn-Pike, L. (2010). Sensation-seeking, risk-taking, and problematic financial behaviours of college students. *Journal of Family and Economic Issues*, 31, 161–170. doi: 10.1007/s10834-010.9183-6
- Zuckerman, M. (1979). *Sensation-seeking: Beyond the optimal level of arousal*. Hillsdale, NJ: Lawrence Erlbaum.
- Zuckerman, M., Kuhlman, D.M., Joireman, J., Teta, P., & Kraft, M. (1993). A comparison of three structural models for personality: The big three, the big five, and the alternative five. *Journal of Personality and Social Psychology*, 65(4), 757–768. doi: 10.1037/00223514.65.4.757

Appendix A: Information sheet and consent form



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities

Department of Psychology

INFORMATION FOR PARTICIPANTS

PROJECT TITLE: “Dark triad, impulsivity, sensation seeking, and risk-taking behaviour in young adults”

PROJECT LEADER: Rafeeah Mangera

1. You are invited to participate in the following research project:

“Dark triad, impulsivity, sensation seeking, and risk-taking behaviour in young adults”

2. Participation in the project is completely voluntary and you are free to withdraw from the project (without providing any reasons or consequences) at any time.

3. It is possible that you might not personally experience any advantages during the project, although the knowledge that may be accumulated through the project might prove advantageous to others.

4. You are encouraged to ask any questions that you might have in connection with this project at any stage. The project leader will gladly answer your question(s).

5. There are no known consequences of completing a questionnaire about personality impulsive, sensation seeking and risky behaviour. However, some individuals may react apprehensively; being sensitive to completing questions about situations that were not particularly comfortable for them. If this happens, you will be referred for debriefing at the University of Pretoria's *Itsoseng Clinic* at no cost.

6. Should you at any stage feel unhappy, uncomfortable or is concerned about the research, please contact the researcher (Ms R. Magera) on: 0793703353 or her study supervisor (Prof. M. Makhubela) at the University of Pretoria, tel: 012 420 2830.



CONSENT FORM

PROJECT TITLE: “Dark triad personality traits, impulsivity, sensation seeking, and risk-taking behaviour in young adults”

PROJECT LEADER: Rafeeah Magera

I, _____ hereby voluntarily consent to participate in the following project:

“Dark triad, impulsivity, sensation seeking and risk-taking behaviour in young adults”

I realise that:

1. The study investigates whether an association exists between personality and impulsive, sensation seeking, and risky behaviours.
2. The research project, i.e. the extent, aims and methods of the research, has been explained to me.

3. The procedure envisaged may hold some risk for me that cannot be foreseen at this stage (i.e., sensitivity to completing questions about situations that are not particularly comfortable for you).
4. The Faculty of Humanities' Research and Ethics Committee at the University of Pretoria has approved that individuals may be approached to participate in the study.
5. The project sets out the risks that can be reasonably expected as well as possible discomfort for persons participating in the research, an explanation of the anticipated advantages for myself or others that are reasonably expected from the research and alternative procedures that may be to my advantage.
6. Access to the records that pertain to my participation in the study will be restricted to persons directly involved in the research.
7. Any questions that I may have regarding the research, or related matters, will be answered by the researcher.
8. If I have any questions about, or problems regarding the study, or experience any undesirable effects, I may contact the project leader (Ms R. Mangera: 0793703353).
9. Participation in this research is voluntary and I can withdraw my participation at any stage.
10. The raw data will be securely stored at the Department of Psychology's storage room (HSB 11 - 24) for a minimum period of 15 years for archiving and reuse. During this period the raw data might also be used for further research by other researchers.
11. I indemnify the University of Pretoria and all persons involved with the above project from any liability that may arise from my participation in the above project or that may be related to it, for whatever reasons, including negligence on the part of the mentioned persons.

SIGNATURE OF PARTICIPANT

SIGNATURE OF WITNESS

SIGNATURE OF PERSON THAT INFORMED
THE RESEARCHED PERSON

Signed at _____ this ____ day of _____ 20__

Appendix B: Questionnaire

SECTION A

Instructions: Please note that the information provided below does not in any way identify you as an individual. It is used to gain an even better understanding of the issues investigated in the study.

1. What is your gender?

1.	Male	
2.	Female	

2. My age: _____ years

3. What is your race?

1.	Black	
2.	Coloured	
3.	Asian	
4.	White	

SECTION B

Instructions: Please read the items below and rate the extent to which you agree with each statement. You should then circle the number in the column that best represents your tendency towards each item statement.

Items	Strongly Disagree	Disagree	Moderately Disagree	Mildly Disagree	Undecided	Mildly Agree	Moderately agree	Agree	Strongly Agree
1) I tend to manipulate others to get my way.	1	2	3	4	5	6	7	8	9
2) I have used deceit or lied to get my way.	1	2	3	4	5	6	7	8	9
3) I have used flattery to get my way.	1	2	3	4	5	6	7	8	9
4) I tend to exploit others towards my own end.	1	2	3	4	5	6	7	8	9
5) I tend to lack remorse.	1	2	3	4	5	6	7	8	9
6) I tend to be unconcerned	1	2	3	4	5	6	7	8	9

with the morality of my actions.									
7) I tend to be callous or insensitive.	1	2	3	4	5	6	7	8	9
8) I tend to be cynical.	1	2	3	4	5	6	7	8	9
9) I tend to want others to admire me.	1	2	3	4	5	6	7	8	9
10) I tend to want others to pay attention to me.	1	2	3	4	5	6	7	8	9
11) I tend to seek prestige or status.	1	2	3	4	5	6	7	8	9
12) I tend to expect special favours from	1	2	3	4	5	6	7	8	9

others.									
---------	--	--	--	--	--	--	--	--	--

SECTION C

Instructions: Please read the following items and indicate with an 'X' whether the statements are "true" or "false" in relation to you.

	TRUE	FALSE
1) I tend to begin a new job without much planning on how I will do it		
2) I usually think about what I am going to do before I do it		
3) I often do things on impulse		
4) I very seldom spend much time on the details of planning ahead		
5) I like to have new and exciting experiences and sensations even if they are a little frightening		
6) Before I begin a complicated job, I make careful plans		
7) I would like to take off on a trip with no pre-planned or definite routes or timetables		
8) I enjoy getting into new situations where you can't predict how things will turn out		
9) I like doing things just for the thrill of it		
10) I tend to change interests frequently		
11) I sometimes like to do things that are a little frightening		
12) I'll try anything once		
13) I would like the kind of life where one is on the move and travelling a lot, with lots of change and excitement		

14) I sometimes do "crazy" things just for fun		
15) I like to explore a strange city or section of town by myself, even if it means getting lost		
16) I prefer friends who are excitingly unpredictable		
17) I often get so carried away by new and exciting things and ideas that I never think of possible complications		
18) I am an impulsive person		
19) I like "wild" uninhibited parties		

SECTION D

Instructions: Below is a list of behaviours that people engage in. Read each one carefully and circle the number that corresponds to your engagement in that behaviour.

Items	Never	Rarely (2-3 times a year)		Occasionally (2-3 times a month)			Often (2-3 times a week)		Daily or more
1) Having sex	0	1	2	3	4	5	6	7	8
2) Riding with a drunk driver	0	1	2	3	4	5	6	7	8
3) Drinking alcohol	0	1	2	3	4	5	6	7	8
4) Walking alone at night	0	1	2	3	4	5	6	7	8
5) Getting drunk	0	1	2	3	4	5	6	7	8
6) Binge eating	0	1	2	3	4	5	6	7	8
7) Riding a motorcycle	0	1	2	3	4	5	6	7	8
8) Smoking marijuana	0	1	2	3	4	5	6	7	8
9) Driving a car	0	1	2	3	4	5	6	7	8
10) Taking speed	0	1	2	3	4	5	6	7	8
11) Having sex without a condom	0	1	2	3	4	5	6	7	8
12) Shoplifting	0	1	2	3	4	5	6	7	8
13) Driving after drinking	0	1	2	3	4	5	6	7	8
14) Taking prescription drugs	0	1	2	3	4	5	6	7	8
15) Riding without a seatbelt	0	1	2	3	4	5	6	7	8

16) Contact sports	0	1	2	3	4	5	6	7	8
17) Taking cocaine/crack	0	1	2	3	4	5	6	7	8
18) Smoking cigarettes	0	1	2	3	4	5	6	7	8
19) Sunbathing	0	1	2	3	4	5	6	7	8

Appendix C: Ethics clearance letter



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities
Research Ethics Committee

10 August 2017

Dear Ms Magera

Project: The Dark triad, impulsivity, sensation seeking and risk-taking behaviour in young South African adults
Researcher: R Magera
Supervisor: Dr MS Makhubela
Department: Psychology
Reference number: 17303428 (GW20170710HS)

Thank you for your response to the Committee's comments of 4 August 2017.

I have pleasure in informing you that the Research Ethics Committee formally **approved** the above study at an *ad hoc* meeting held on 10 August 2017. Data collection may therefore commence.

Please note that this approval is based on the assumption that the research will be carried out along the lines laid out in the proposal. Should your actual research depart significantly from the proposed research, it will be necessary to apply for a new research approval and ethical clearance.

We wish you success with the project.

Sincerely

Prof Maxi Schoeman
Deputy Dean: Postgraduate and Research Ethics
Faculty of Humanities
UNIVERSITY OF PRETORIA
e-mail: tracey.andrew@up.ac.za

cc: Dr MS Makhubela (Supervisor)
Prof C Wagner (Acting HOD)

Research Ethics Committee Members: Prof MME Schoeman (Deputy Dean); Prof KI Hawk, Dr J. Bekker, Ms A. van Santen; Dr B. Essau, Ms KT Coetzee; Dr E. Jordaan; Dr C. Pennington; Dr C. Cartergill; Dr D. Pechura; Dr M. Tau; Prof GM Spies; Prof E. Talaid; Ms S. Ezebe; Dr E. van der Kleyn; Dr O. Wolmarans; Ms D. Mukuapa

