

**PREDICTORS OF COPING AMONGST MALE
INCARCERATED OFFENDERS IN A PRIVATE MAXIMUM-
SECURITY CORRECTIONAL CENTRE**

by

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Declaration

I hereby declare that the dissertation I submit for the degree Magister Societates Scientae at the University of the Free State is my personal, independent work and that I have not submitted it previously at/in another university/faculty. Furthermore, I cede copyright of this dissertation in favour of the University of the Free State.



Sheree Elizabeth Pretorius

June 2019

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Dedicated to my son, Dominic.

You are my inspiration and the love of my life

Abstract

Young adult male incarcerated offenders tend to lack adequate coping skills when addressing their personal problems within a correctional environment. Young adult male incarcerated offenders also tend to acquire problematic coping skills in order to survive in the correctional environment, which is marked by overcrowding, deviant subcultures, victimisation, role stripping, loss of goods and loss of autonomy. Although previous research has been conducted on the coping strategies of young adult male incarcerated offenders, relatively few studies have been done on the predictors of coping amongst South African young adult male incarcerated offenders in a private maximum-security correctional centre. There are several variables that can be utilised to predict coping in maximum-security correctional centres and the predictor variables included in this study were offender aggression, decision-making skills, type of offence and age.

The goal of this research study was to determine which variable(s) or set of variables explain the highest variance in coping amongst young adult male incarcerated offenders in a private South African maximum-security correctional centre. Within this study, 187 literate young adult male incarcerated offenders between the ages of 21 and 25 years, with long-term sentences, were randomly selected by using the systematic random sampling technique which is a probability sampling method. The sample of this study included participants between 21 and 25 years of age from all ethnic groups, with various types of offences and differing sentence lengths.

The results of the hierarchical regression analyses indicated that the combination of all the independent (predictor) variables (Type of Crime, Age, Physical Aggression, Verbal Aggression, Hostility, Vigilance, Avoidance, Procrastination and Hyper-Vigilance) statistically and practically significantly predicted Social Support, Problem-Solving and Avoidance amongst young adult male incarcerated offenders. However, Vigilance (MDMQ

subscale) was the only independent (predictor) variable that had a statistically and practically significant influence on the explanation of the variance in the young adult male incarcerated offenders' Social Support and Problem-Solving. This finding implies that young adult offenders that are more vigilant regarding decision-making, are more inclined to solve problems better and to make use of social support in order to cope better.

Key words: coping, problem-solving, seeking social support, avoidance, young adult male incarcerated offenders, aggression, decision-making, correctional centre, maximum-security correctional centre, private maximum-security correctional centre

Opsomming

Jong volwasse manlike gevangenes is geneig om nie oor die gepaste hantering vaardighede te beskik wanneer hulle hul persoonlike probleme binne die gevangenisomgewing moet aanspreek nie. Jong volwasse manlike gevangenes is ook geneig om problematiese hanteringsvaardighede te verkry ten einde te oorleef in die gevangenisomgewing wat gekenmerk word deur oorbevolking, afwykende subkulture, viktimisering, rolstropping, verlies aan goedere en verlies van outonomie. Alhoewel vorige navorsing gedoen is rakende die hanteringstrategieë van jong volwasse manlike gevangenes, is relatief min studies gedoen met betrekking tot die voorspellers van hantering onder Suid-Afrikaanse jong volwasse manlike gevangenes in 'n privaat maksimum-sekuriteit gevangenis. Daar is verskeie veranderlikes wat aangewend kan word om hantering te voorspel in maksimum-sekuriteit gevangenis en die voorspeller-veranderlikes wat in hierdie studie ingesluit is, is oortreder-aggressie, besluitnemingsvaardighede, soort oortreding en ouderdom.

Die doel van hierdie navorsingstudie was om te bepaal watter veranderlike(s) of stel veranderlikes verduidelik die hoogste variansie in hantering onder jong volwasse manlike gevangenes in 'n privaat Suid-Afrikaanse maksimum-sekuriteit gevangenis. Binne hierdie studie is 187 geletterde jong volwasse manlike gevangenes tussen die ouderdom van 21 en 25 jaar met langtermyn vonnisse, ewekansig gekies deur gebruik te maak van die sistematiese ewekansige steekproeftegniek wat 'n waarskynlikheid-steekproefmetode is. Die steekproef van hierdie studie het deelnemers ingesluit tussen 21- en 25-jarige ouderdom van alle etniese groepe, met verskeie soorte oortredings en verskillende vonnislengtes.

Die resultate van die hiërargiese regressie analise het aangetoon dat die kombinasie van al die onafhanklike (voorspeller) veranderlikes (Soort Oortreding, Ouderdom, Fisiese Aggressie, Verbale Aggressie, Vyandigheid, Waaksaamheid, Vermyding, Uitstel en Hiper-waaksaamheid) statisties en prakties beduidend, Sosiale Ondersteuning, Probleemoplossing

en Vermyding voorspel het onder jong volwasse manlike gevangenes. Waaksaamheid (MDMQ subskaal) was egter die enigste onafhanklike (voorspeller) veranderlike wat 'n statisties en prakties beduidende invloed gehad het op die verduideliking van die variansie in die Sosiale Ondersteuning en Probleemoplossing van jong volwasse manlike gevangenes. Hierdie bevinding voer aan dat jong manlike gevangenes wat meer waaksaam is in hul besluitneming, meer geneig is om probleme beter op te los en gebruik te maak van sosiale ondersteuning ten einde beter te *cope*.

Sleuteltermes: hantering, probleemoplossing, soeke na sosiale ondersteuning, vermyding, jong volwasse manlike gevangenes, aggressie, besluitneming, gevangenis, maksimum-sekuriteit gevangenis, privaat maksimum-sekuriteit gevangenis

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Sincerely



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Table of Contents

DECLARATION	II
ACKNOWLEDGEMENTS	III
ABSTRACT	V
OPSOMMING	VII
DECLARATION: LANGUAGE AND APA EDITOR	IX
CHAPTER 1	1
1.1 Introduction	1
1.2 Problem statement	1
1.3 Aim of the Study	3
1.4 Research Goal and Questions	4
1.5 Research Design and Method	4
1.6 Research Participants and Sampling Technique	5
1.7 Data Collection Procedures/Measuring Instruments	5
1.8 Data Analysis	7
1.9 Ethical Considerations	8
1.10 Value of the Study	8
1.11 Clarification of Concepts	9
1.12 Structure of the Manuscript	10
1.13 Summary	11
CHAPTER 2	12
2.1 Introduction	12
2.2 Incarceration	12
2.3 Correctional Centres	14
2.3.1 Correctional centres and experiences of the correctional environment	15

2.3.2 Correctional Centres in South Africa	20
2.3.3 Mangaung Correctional Centre (MCC)	22
2.4 Incarcerated Offenders	24
2.5 Young adult male incarcerated offenders	25
2.6 Coping and Coping Theories	26
2.6.1 Coping Styles	28
2.6.1.1 Emotion-focused Coping	29
2.6.1.2 Problem-focused Coping	30
2.6.1.3 Maladaptive Coping	32
2.6.1.4 Mature Coping	33
2.7 Coping as conceptualised by Desmond, Shevlin and MacLachlan (2006)	34
2.7.1 Avoidance and Coping	34
2.7.2 Problem-Solving and Coping	37
2.7.3 Seeking Social Support and Coping	39
2.8 The Importance of Coping in a Correctional Environment	41
2.9 Predictors of coping amongst young adult male incarcerated offenders	43
2.9.1 Type of Crime and Coping	43
2.9.2 Age and Coping	46
2.9.3 Decision-making and Coping	47
2.9.4 Aggression and Coping	49
2.10 Summary	51
CHAPTER 3	52
3.1 Introduction	52
3.2 Research Design	52
3.3 Research Sample	53

3.4 Measuring Instruments	56
3.4.1 Biographical Questionnaire	56
3.4.2 The Coping Strategy Indicator (CSI)	56
3.4.3 Aggression Questionnaire (AQ)	57
3.4.4 The Melbourne Decision-Making Questionnaire (MDMQ)	58
3.4.5 Internal consistencies for the subscales of the various measuring instruments	60
3.5 Data Gathering	61
3.6 Research Questions	61
3.7 Statistical Procedure	62
3.8 Ethical Considerations	63
3.9 Summary	64
CHAPTER 4	65
4.1 Introduction	65
4.2 Correlation	65
4.3 Hierarchical regression analyses	67
4.3.1 Hierarchical regression analysis with Seeking Social Support as criterion variable	68
4.3.2 Hierarchical regression analysis with Problem-Solving as criterion variable	70
4.3.3 Hierarchical regression analysis with Avoidance as criterion variable	72
4.4 Summary	73
CHAPTER 5	74
5.1 Introduction	74
5.2 Discussion of the Results	74
5.2.1 Discussion of measuring instruments	74
5.2.2 Correlation between Seeking Social Support and Vigilance	76
5.2.3 Correlation between Problem-Solving and Physical Aggression	77

5.2.4 Correlation between Problem-Solving and Vigilance	78
5.2.5 Correlation between Avoidance and Hostility	79
5.2.6 Correlation between Avoidance (Coping) and Avoidance (Decision-making)	79
5.2.7 Correlation between Avoidance and Hyper-vigilance	80
5.3 Results of the Hierarchical regression analyses	81
5.3.1 Hierarchical regression analysis with Seeking Social Support as criterion variable	81
5.3.2 Hierarchical regression analysis with Problem-Solving as criterion variable	83
5.3.3 Hierarchical regression analysis with Avoidance as criterion variable	83
5.4 Limitations	84
5.5 Recommendations	85
5.6 Summary	86
REFERENCES	88

List of Table

TABLE 1: <i>Frequency distribution of participants according to age, ethnicity, mother tongue, school grade, years of study after school, type of crime, sentence length and sentence already served</i>	54
TABLE 2: <i>Descriptive statistics and reliability data for the CSI, AQ and MDMQ for the young adult male incarcerated offenders (N =187)</i>	60
TABLE 3: <i>Correlations between the CSI subscales and age, type of crime, AQ subscales and MDMQ subscales for young adult male incarcerated offenders (N=187)</i>	66
TABLE 4: <i>Contributions of age, type of crime, AQ subscales and MDMQ subscales to R² with seeking social support as criterion variable</i>	68
TABLE 5: <i>Contributions of age, type of crime, AQ subscales and MDMQ subscales to R² with problem-solving as criterion variable</i>	70
TABLE 6: <i>Contributions of age, type of crime, AQ subscales and MDMQ subscales to R² with avoidance as criterion variable</i>	72

List of Appendices

Appendix A: The Coping Strategy Indicator (CSI)	130
Appendix B: The Aggression Questionnaire (AQ)	132
Appendix C: The Melbourne Decision-Making Questionnaire (MDMQ)	133
Appendix D: TurnItIn report	135

Chapter 1

Orientation, Motivation and Aim of the study

1.1 Introduction

Chapter 1 encompasses a discussion regarding the problem statement, research aim, research goal, research questions, research design, research methodology, research participants and sampling technique, data collection, data analysis, ethical considerations, value of the study and clarifications of key concepts used in the study. It will also include an outline of the structure of the manuscript.

1.2 Problem statement

Coping is defined as the conscious and cognitive attempts that an individual utilises in order to regulate emotions, cognition, behaviour, physiology and the environment when responding to stressful events or circumstances (Flouri, Mavroveli, & Panourgia, 2013). However, young adult male incarcerated offenders tend to lack the adequate coping skills and struggle to utilise positive skills when addressing their personal problems (Chubaty, 2001; Rocheleau, 2011). Their coping strategies typically involve avoidance, aggressive behaviour and a temporary escape from their problems without considering the consequences, which tend to worsen their problem situations (Chubaty, 2001).

Young adult male incarcerated offenders need to acquire the necessary coping skills in order to survive in the correctional environment that is known for overcrowding, different subcultures, victimisation, role stripping, loss of goods and loss of autonomy (Peacock, 2008). Young adult male incarcerated offenders are also exposed to bullying, substance

abuse, murder, violence, suicide (De Vigianni, 2007), corruption, sexual offences (Buntman, 2005; Perez, Gover, Tennyson, & Santos, 2009), escapes (Liebling, 2008), property damage (Mandell, 2006) and gang activities (Griffin & Hepburn, 2006). All these factors contribute to the struggle of young adult male incarcerated offenders to successfully cope with life in a correctional centre. It is important that young adult male incarcerated offenders cope effectively, as incarceration can result in exposure to violent victimisation and/or violence in general, which is an ongoing cause of stress for incarcerated males in correctional centres (Hochstetler, Murphy, & Simmons, 2004). Some victims overcome these stressors by developing pro-social coping mechanisms, while others use maladaptive coping strategies when responding to stressors (McCorckle, 1993). Maladaptive coping among incarcerated males can be detrimental to their health and is associated with higher levels of stress and a decrease in physical and mental well-being (Asberg & Renk, 2014). Therefore, if young adult male incarcerated offenders are not able to cope in maximum-security correctional centres, it could lead to depression, anxiety, suicide, suicide ideation, hostility and violence amongst incarcerated males (Asberg & Renk, 2014).

During incarceration, young adult male incarcerated offenders are faced with a lot of sufferings, problems and stressful circumstances and events (Rocheleau, 2015). Previous research indicated that young adult male incarcerated offenders lack the necessary problem-solving skills that is needed for survival (Coylewright, 2004). Enhanced problem-solving skills amongst young adult male incarcerated offenders can positively impact their rational thinking abilities, control their impulses, aid their problem-solving skills and enable them to engage in positive interactions with each other (Coylewright, 2004). Cautious decision-making skills caused by negative emotions (e.g. anger and fear), may lead to prison misconduct amongst young male incarcerated offenders (Bouffard, 2008). When young adult male incarcerated offenders make better decisions, it can positively impact their interaction

with other offenders and staff during their incarceration period (Loewenstein & Lerner, 2003). Social support influences the behaviour of young adult male incarcerated offenders in various ways, and it also acts as a facilitator of self-control amongst offenders (Jiang & Fisher-Giorlando, 2002; Pratt & Godsey, 2002). Consistent social support decreases offender rule violations and strengthens family ties, which in turn, reduces young adult male incarcerated offenders' stress and the pains of incarceration, leading to mediation of rule violations and increased positive behaviour in a correctional centre (Jiang et al., 2002).

1.3 Aim of the Study

Previous research has been conducted regarding the coping strategies of young adult male incarcerated offenders, although relatively few studies have been done on the predictors of coping amongst South African young adult male incarcerated offenders in maximum-security correctional centres (Gullone, Jones, & Cummins, 2000; Mohino, Kirchner, & Forns, 2004; Reed, Alenazi, & Potterton, 2009). There are several variables that can be utilised in order to predict coping in maximum-security correctional centres. Predictor variables included in this study are offender aggression, decision-making skills, type of offence and age.

Aggression is linked to coping in a correctional environment. Young adult male incarcerated offenders that use outward aggression as a coping mechanism tend to have greater incidents of institutional misconduct, while offenders that cope effectively tend to be less aggressive (Mills & Kroner, 2003) and have better decision-making skills (Creyer & Kozup, 2003). Furthermore, maladaptive coping tends to negatively impact the decision-making processes of offenders (Creyer & Kozup, 2003). Negative emotions, such as anger and fear, reduce a young adult male incarcerated offender's ability to make deliberate decisions and it leads to more cautious decision-making (Bouffard & Bergseth, 2008; Carmichael & Piquero, 2004). Differences have been found between non-violent and violent

young adult male incarcerated offenders' coping abilities (Feelgood, Cortoni, & Thompson, 2005). Violent offenders, such as rapists, often make use of maladaptive coping strategies and emotion-focused coping, as compared to the coping strategies that non-violent offenders employ (Feelgood, Cortoni, & Thompson, 2005). Violent young male incarcerated offenders also tend to demonstrate a general predisposition for ineffective coping (Feelgood et al., 2005).

1.4 Research Goal and Questions

The goal of this research study is to determine which variable(s) or set of variables explain the highest variance in coping amongst young adult male incarcerated offenders in a private South African maximum-security correctional centre.

The following research questions will be explored:

- Can the combination of decision-making, aggression, age and type of crime explain a significant percentage of variance in the coping of young adult male incarcerated maximum-security offenders?
- Do any of the individual predictors being studied significantly contribute to the variance of coping amongst young adult male incarcerated maximum-security offenders?

1.5 Research Design and Method

The research approach in this research study will be quantitative and the nature of the research is non-experimental. The central aim of this study is to determine the relationships between variables, thus a correlational design (Stangor, 2011, 2015) will be the most effective design to use.

1.6 Research Participants and Sampling Technique

Official permission was obtained from the General Human Research Ethics Committee of the Faculty of the Humanities, University of the Free State, and the Department of Correctional Services, South Africa, for a previous study (Jordaan, 2014) titled “*The development and evaluation of a life skills programme for young adult offenders*”. The data set of this previous study will be used in the current study. Within the previous study, 187 literate young adult male incarcerated offenders between the ages of 21 and 25 years, with long-term sentences, were randomly selected by using the systematic random sampling technique (Stangor, 2011, 2015), which is a probability sampling method. This method entails that every n th person from the sampling frame is randomly selected (Stangor, 2011, 2015). Participants between the ages of 21 and 25 years from all ethnic groups, with various types of offences and different sentence lengths were included in the sample of this study. There were three exclusion criteria, namely (i) offenders with a literacy level lower than Grade 8; (ii) offenders that were not able to speak or understand English; and (iii) offenders that were near their date of release from the maximum-security correctional centre.

1.7 Data Collection Procedures/Measuring Instruments

Four questionnaires were administered to the young adult male incarcerated offenders in the previous study. The following measures were utilised in the study:

- Biographical questionnaire

A biographical questionnaire was administered in order to collect demographic information from the participants, such as (i) age, (ii) gender, (iii) ethnicity, (iv) home language, (v) school grade, (vi) tertiary education, (vii) type of sentence, (viii) sentence length and (ix) number of years already incarcerated.

- The Coping Strategy Indicator (CSI)

The *Coping Strategy Indicator* (CSI) (Desmond, Shevlin, & MacLachlan, 2006) was used to measure the offenders' coping skills in adverse conditions. The CSI is a self-administered questionnaire with 33 items which consists of three subscales, namely Problem-Solving, Avoidance and Social Support. The items of the CSI are scaled on a three-point Likert-type scale, with 1 resembling “*not at all*”, 2 “*a little*”, and 3 resembling “*a lot*” (Amirkhan, 1990, 1994; Joseph & Kuo, 2009). Higher scores on each subscale suggests a higher probability to make use of the associated coping strategy (Amirkhan, 1994). Adequate internal consistency for each of the subscales is indicated by Cronbach's alpha coefficient ranging from 0.68–0.90 for Problem-Solving, 0.72–0.86 for Seeking Social Support and 0.62–0.72 for Avoidance (Amirkhan, 1990, 1994; Jordaan, 2014; Jordaan, Beukes, & Esterhuyse, 2018).

- Aggression Questionnaire (AQ)

The *Aggression Questionnaire* (AQ) (Buss & Perry, 1992) was administered in order to measure the offenders' levels of aggression. The AQ is a self-report inventory and consists of 29 items which is divided into four factors, namely Physical Aggression, Verbal Aggression, Anger and Hostility. The scale is rated on a five-point Likert-type scale, with 1 indicating that the statement is “*extremely uncharacteristic of me*” and 5 that the statement is “*extremely characteristic of me*”. Higher scores on each factor suggests higher levels of aggression (Buss & Perry, 1992; Palmer & Thakordas, 2005; Scarpa, 2001). The internal consistency reliability (Cronbach alpha) of each factor on the AQ has been identified in various studies as Physical Aggression (0.62–0.80), Verbal Aggression (0.40–0.67), Anger (0.72–0.77) and Hostility (0.74–0.87) with a high internal consistency for the overall scale (0.86–0.90) (Buss & Perry, 1992; Jordaan, 2014; Jordaan et al., 2018; Loots, 2010; Palmer & Thakordas, 2005; Scarpa, 2001).

- The Melbourne Decision-Making Questionnaire (MDMQ)

The *Melbourne Decision-Making Questionnaire* (MDMQ) (Mann, Burnett, Radford, & Ford, 1997) was used to measure the young adult male incarcerated offenders' decision-making abilities. The four subscales of the MDMQ are Buckpassing, Procrastination, Vigilance and Hyper-vigilance (Certel, Bahadir, & Sönmez, 2013; Di Fabio & Blustein, 2010; Mann et al., 1998; Umeh & Omari-Asor, 2011). The MDMQ consists of 22 items where the participants had to evaluate how the statements corresponded with their situations, based on a three-point Likert-type scale, with 1 referring to “*not true*”, 2 to “*sometimes true*” and 3 to “*true*” (Certel et al., 2013; Di Fabio & Blustein, 2010; Mann et al., 1998). An increase in decision-making skills is indicated by high scores on the Vigilance subscale and low scores on the Hyper-vigilance, Procrastination and Buckpassing subscales. The internal consistency reliability (Cronbach alpha) for each subscale are 0.73–0.83 for Buckpassing, 0.67–0.79 for Procrastination, 0.67–0.83 for Vigilance and 0.16–0.71 for Hyper-vigilance (Jordaan, 2014; Jordaan et al., 2018; Mann et al., 1998).

1.8 Data Analysis

All the collected data will be analysed by means of the Statistical Package for the Social Sciences, SPSS version 25 (IBM Incorporated, 2017). Internal consistency reliabilities (Cronbach alphas) will be calculated for the various scales in order to ensure reliability. Descriptive statistics will also be done for this study. Furthermore, a hierarchical multiple regression analysis will be done in an attempt to identify which variable(s) explain the highest percentage of variance of coping amongst young adult male incarcerated offenders. Multiple regression will be utilised to predict a criterion variable, which in this case is coping, with a set of predictor variables namely, aggression, decision-making, type of offence and age.

1.9 Ethical Considerations

Young adult male incarcerated offenders are a vulnerable group of research participants due to the rising interest that researchers have on incarcerated offenders and thus this study's aim was to simply understand which variables could be identified as possible predictors of coping amongst male incarcerated offenders in a private maximum-security correctional centre. This study adhered to the rules and regulations of the Code of Conduct constructed by the South African Professional Board of Psychology. Official permission was obtained in order to conduct this research study in a South African maximum-security correctional centre. The nature and objectives of the research were explained to the participants and informed consent was obtained before the participants were allowed to partake in this study. Confidentiality and anonymity of the participants were guaranteed during the research process. Furthermore, voluntary participation was explained to the participants. They could withdraw from the study at any given time during the research process and did not receive any incentives as motivation to partake in this study. Counselling services was also available to the young adult male incarcerated offenders who participated in this study.

1.10 Value of the Study

Young adult male incarcerated offenders face difficulties when they are unable to facilitate the appropriate coping skills while in a correctional centre. The value of this study is to determine which variables are the best predictors of coping amongst young adult male incarcerated offenders and can contribute to future research regarding male offenders. Previous research has shown that improved coping techniques are part of all offenders' processes of adapting to correctional centres. In order to survive long-term sentences of incarceration, offenders must find appropriate ways to cope (Hulley, Crewe, & Wright, 2016). This study aims to contribute to the development of young adult male incarcerated

offenders by understanding the appropriate coping skills in order to survive in a correctional centre. In addition, this study can also contribute to future South African research, which can assist with the understanding of offenders held in maximum-security correctional centres.

1.11 Clarification of Concepts

For the purpose of this study, the concepts used are clarified as follow:

- *Coping*

Coping is defined as the conscious and cognitive attempts that an individual utilises in order to regulate emotions, cognition, behaviour, physiology and the environment when they respond to events or circumstances that they experience and deem as stressful (Flouri et al., 2013).

- *Young adult incarcerated males*

Young adult incarcerated males in this study refers to young adult offenders held in a maximum-security correctional centre, aged between 21 and 25 years.

- *Literate*

Literate in this study refers to the offenders that has a literacy level of Grade 8 or above.

- *Aggression*

This refers to the behaviour of an individual that deliberately seeks to harm another individual (Baron & Richardson, 1994). In the Aggression Questionnaire (AQ), Buss and Perry (1992) categorised aggression into four factors, namely Physical Aggression, Verbal Aggression, Hostility and Anger.

- *Decision-Making*

The action or process of making important decisions (Simpson, Weiner, & Oxford University Press, 1989). The four subscales that Mann et al. (1998) classified on the MDMQ include Buckpassing, Procrastination, Vigilance and Hyper-vigilance.

- *A Correctional Centre*

It is an institution that is developed as a form of punishment, where offenders are forced to be confined and where they are deprived of any range of liberties.

- *A Maximum-security correctional centre*

An institution developed for maximum security offenders who is considered by the state and society as dangerous and who serves long sentences (Silverman, 2001).

- *A private maximum-security correctional centre*

An institution where offenders are held captive by a third party due to a command given by the government (Matshaba, 2007).

1.12 Structure of the Manuscript

Chapter 1 emphasises the problem statement and the clarification of numerous concepts, including the aims of the study. The focus in Chapter 2 is on an extensive literature review of coping amongst young adult male incarcerated offenders and its related concepts. Chapter 3 encompasses the research methodology of the study, while Chapter 4 presents the results and discussion thereof. The dissertation is concluded in Chapter 5 with the conclusions of the study, limitations and recommendations for future research and practice.

1.13 Summary

Chapter 1 entailed a short discussion on the problem statement, aim of the study, the research aims and the research questions. It also included a discussion on the research methodology, the research participants and sampling technique as well as the data collection procedures and data analysis. The ethical considerations, value of the study, clarification of the concepts used in this study and an outline of the structure of the manuscript were also included in this chapter.

Chapter 2

Coping in the Correctional Environment

2.1 Introduction

The purpose of this chapter is to theorise the various concepts of incarceration, correctional centres, young adult male incarcerated offenders, coping in a correctional environment, theories of coping as well as the importance of coping within the correctional environment.

2.2 Incarceration

An estimated 161,054 incarcerated offenders (DCS, 2017) are accommodated in 243 South African correctional centres (Sifunda et al., 2008). Correctional environments are viewed as degrading, dangerous, difficult, stigmatising, stressful, unsafe and violent for incarcerated offenders (Lahm, 2008; Massoglia, 2008; Wolff & Shi, 2009a, 2009b, 2009c). Incarcerated offenders have lost their freedom within correctional settings. Offenders are accommodated in a strict and structured setting that is non-therapeutic, which have antagonistic consequences on their mental well-being (Listwan, Colvin, Hanley, & Flannery, 2010).

Correctional centres expose incarcerated offenders to strict rules and regulations and offenders tend to battle with numerous challenges, such as poor health care and unsafe living conditions (Kerley & Copes, 2009; Listwan et al., 2010) that can negatively impact their physical and mental health during their incarceration time. These challenges include assault on other offenders, assault on staff, and becoming part of a gang, inadequate food intake,

monotonous environment, overcrowded accommodation, poor health care services, victimisation, no privacy and psychological concerns (Blevins, Listwan, Cullen, & Johnson, 2010; Bonta & Gendreau, 1990; Condon, Hek, & Harris, 2008; Wolff & Shi, 2009c; World Health Organization [WHO], 1998). It is imperative that incarcerated offenders cope with these stressors of incarceration, since the lack thereof could result in maladaptive coping (Blevins et al., 2010; Bonta & Gendreau, 1990; Condon et al., 2008; Mandell, 2006; Tasca, Griffin, & Rodriguez, 2010; Trulson, 2007; Visher & Travis, 2003; Wolff & Shi, 2009c). Misconduct, such as being bullied, overuse of substances, murder, violence between offenders, violence between offenders and staff, corruption, and sexual offences, is a consistent factor in correctional centres that management of correctional centres wishes to minimise (Mandell, 2006).

If incarcerated offenders participate in misconduct once, they are more likely to commit disciplinary violations in future. Thus, it is important that incarcerated offenders acquire the necessary and appropriate coping skills to survive life in a correctional environment (Blatier, 2000; Crawley & Sparks, 2006; Islam-Zwart & Vik, 2004). However, offenders might not have the necessary resources or abilities to cope effectively in correctional centres and therefore correctional settings should be a place that facilitates the necessary coping skills and provide rehabilitation opportunities (Hochstetler, DeLisi, & Pratt, 2010; Kerbs & Jolley, 2009).

Furthermore, there is a distinct difference between passive incarceration and active incarceration when referring to correctional services. Passive incarceration refers to the rehabilitation of offenders by utilising passive methods as a means of supervision. An example includes locking up incarcerated offenders, handcuffing them in an acceptable manner and keeping them under active custody, thus the possibility of escaping becomes impossible (Hesselink-Louw, 2004). However, active incarceration refers to rehabilitation

that utilises active methods, such as intervention and prevention programmes (Hesselink-Louw, 2004). These programmes aim to educate incarcerated offenders to cope in positive ways in the correctional centre and to teach them effective social skills that will enable them to address problems and challenges effectively during their sentence period, which will prepare them for positive reintegration upon their return to societal settings (Blevins et al., 2010; Cropsey, Wexler, Melnick, Taxman, & Young, 2007; Wooldredge, 1999).

2.3 Correctional Centres

Correctional centres are lonely, confined and dark and are controlled environments where untrustworthy and immoral individuals live after having committed horrendous crimes. Logan (1993) proposes that the key function of a correctional centre is to discipline incarcerated offenders through sentence lengths that best fit their crimes according to the confinement model. Another key aspect concerning confinement is to ensure the safety of the public and the incarcerated offenders by restraining them inside fences and walls (Daggett & Camp, 2009). According to Logan (1993), offenders must always know their place, be healthy and remain stimulated and busy. Correctional centres ensure limited personal control by the incarcerated offenders themselves by sustaining a static and well-ordered environment. Incarceration minimalises crime through discouragement and prostration and not through reduction in repetition (Barbarino & Mastrobuoni, 2007; Giffard & Muntingh, 2006). If incarcerated offenders have no personal control over their immediate environment or situation they will struggle to adjust to the correctional environment (Islam-Zwart & Vik, 2004; Steiner & Wooldredge, 2008). Personal control is important in the psychological well-being of incarcerated offenders (Condon et al., 2008; Rivera, Cowles, & Dorman, 2003) and consists of three notions, namely (i) efficiency to catalyse, (ii) being able to choose from all the different alternatives available and (iii) predictability (Rivera et al., 2003). Therefore,

psychological well-being refers to the offenders' experience and view of their insecurities, perceived stress, depression, aggression levels, low self-esteem and their level of loneliness while being incarcerated in the correctional centre (Wooldredge, 1999).

Correctional centres meet the basic needs of incarcerated offenders by providing basic services and are therefore seen as a last resort for being institutionalised (Cropsey et al., 2007). The greatest task, however, is to identify and address the basic needs of the incarcerated offenders in order to ensure that they are more productive (Cropsey et al., 2007). Even though these individuals are exposed to others with cruel backgrounds, a correctional centre is the best environment for these individuals to be rehabilitated or redeveloped into better individuals (Cropsey et al., 2007) and thus these young adult male incarcerated offenders need to be able to cope in a correctional environment (Leban, Cardwell, Copes, & Brezina, 2005).

2.3.1 Correctional centres and experiences of the correctional environment

Correctional centres are viewed in general as ill environments where young adult male incarcerated offenders enter a much different social world that contains values, rituals and rules which are aimed at controlling, observing, disempowering and solidifying them to the system in a submissive manner. In order to survive and cope with the emotional and psychological stressors in a correctional centre, young adult male incarcerated offenders need to be able to tolerate the deprivations that these correctional environments cause (De Vigianni, 2007).

Correctional centres are not always the most suitable environment for young adult male incarcerated offenders, as they are vulnerable and susceptible to poor health, which negatively impacts their chances of returning to society in a fit state to rebuild their lives.

Research conducted in the past confirms that the physical and mental health of young adult male incarcerated offenders in comparison to individuals in the general society, are in a poorer condition (Camp & Gaes, 2005; Camp, Gaes, Langan, & Saylor, 2003; De Vigianni, 2007). It is widely recognised that health problems are a direct result from the circumstances exposed to while being incarcerated, such as overcrowding, violence, drug abuse, lack of purposeful activities, being separated from family networks and being emotionally deprived (Camp & Gaes, 2005; De Vigianni, 2007; Trulson, 2007).

Young adult male incarcerated offenders' socio-economic backgrounds, adverse experiences in correctional centres and victimisation inside and outside of a correctional centre have also been linked directly to self-harm, some neurotic disorders, epilepsy, suicide, coronary heart disease, asthma, infectious diseases and mental health issues (Camp & Gaes, 2005; De Vigianni, 2007; Trulson, 2007). Therefore, correctional centres are viewed as harmful as it deprives young adult male incarcerated offenders of their basic human rights and needs, which causes physical, mental and social harm, leaving them feeling less empowered and institutionalised. The Deprivation Theory of Adjustment states that facets of the correctional environment, such as the type of correctional centre, overcrowding and the type of supervision influences the psychological health of offenders (Fedock, 2017). Deprivations caused by incarceration have significant physical, psychological, emotional and social impacts on young adult male incarcerated offenders (Camp & Gaes, 2005; De Vigianni, 2007; Trulson, 2007). Sykes (1958) asserted that incarceration deprives young adult male incarcerated offenders of certain main rights, privileges and possessions (e.g. goods and services), including liberties, heterosexual relationships, autonomy and security. These 'deprivations' cause sufferings in young adult male incarcerated offenders and threatens their sense of personal growth, identity and self-esteem (De Vigianni, 2007).

However, the Importation Theory of Adjustment highlights offender-level variables, such as demographics and adversity histories, and correlates it with the psychological health of incarcerated offenders (Fedock, 2017). The Importation Theory investigates how the incarcerated offenders' characteristics (e.g., trauma history) relate to their adjustment in the correctional environment and suggests that an incarcerated offender's demographics and previous experiences establishes his psychological adjustment in the correctional environment (Fedock, 2017). Some individuals experience health problems long before the start of their sentences, which might result in the precipitation of their criminal behaviour during incarceration (Camp & Gaes, 2005; De Vigianni, 2007; Gover, MacKenzie, & Armstrong, 2000). Due to all the stressors that young adult male incarcerated offenders face during incarceration, they are more likely to develop health issues, abuse drugs, inflict self-harm and become involved in disorderly conduct (Camp & Gaes, 2005; Camp et al., 2003; De Vigianni, 2007; Gover, et al., 2000; Trulson, 2007). Therefore, the effects of incarceration can be detrimental, regardless if it sets off physical attacks and injuries or causes more insidious effects on the young adult male incarcerated offenders' mental and social well-being (De Vigianni, 2007). The incarcerated offenders' individual characteristics form their perceptions and reactions to their surroundings. Researchers that utilises this theoretical perspective are interested in the following four variables, namely:

- i. demographics that propose that it is more difficult for offenders who enter the correctional centre with a higher socio-economic status to adjust to the new surroundings, further implying that White, married offenders who were employed before incarceration and have higher education levels than other offenders are more likely to struggle with adjustment in the correctional centre (Loper, 2002; Vuolo & Kruttschnitt, 2008; Warren et al., 2002);

- ii. family and personal histories of the participants that propose that traumatic and adverse histories, specifically sexual assault histories, negatively impact offenders' psychological adjustment to life in a correctional environment (Islam-Zwart & Vik, 2004; Kruttschnitt, Gartner, & Miller, 2000; Warren, Hurt, Loper, & Chauhan, 2004);
- iii. substance use indicating that substance use amongst incarcerated offenders is highly prevalent and is linked to their mental health requirements (Messina, Burdon, & Prendergast, 2003); and
- iv. mental health prior to incarceration indicating that offenders with prior mental health treatment, suicide concerns and substance abuse before incarceration utilises more mental health services during incarceration than offenders without these histories (Faust & Magaletta, 2010).

Importation factors in general are viewed as risk factors that are assessed when offenders enter incarceration in order to direct their custody determination, levels of risk for recidivism and misconducts in the correctional environment, and it also provides specific treatment interventions, such as substance abuse groups and parole decisions (Moloney, Van den Bergh, & Moller, 2009).

King and Elliot (1997) argued that young adult male incarcerated offenders struggling to integrate successfully into the correctional environment, tend to become socially withdrawn and isolated but in due course they become immersed in the correctional environment and evidently adapt to it. Unfortunately, the adaptation is usually criminal and antisocial in nature (Camp & Gaes, 2005; De Vigianni, 2007; Trulson, 2007). Sykes (1958) referred to above mentioned as 'survival strategies', as it allows young adult male incarcerated offenders to adapt, adjust and fit into the correctional centre community. However, it is not likely that such behaviour will result in positive outcomes for young adult male incarcerated offenders, especially since they are reinforcing a social hierarchy that is solely based on exploitation and

victimisation of other offenders. Social order can therefore lead to significant health problems for young adult male incarcerated offenders (De Vigianni, 2007).

Some young adult male incarcerated offenders project a 'tough' persona in an attempt to display their coping abilities despite being incarcerated, whilst continually striving to suppress and refute any signs of fear, weakness or suffering, and also attempting to avoid having to co-operate with correctional centre staff, they avoid 'ganging up' with fellow offenders, mask out appearing gay and they attempt to come across as prepared and being able to fight and defend their honour, especially when challenged by fellow offenders (Camp et al., 2003; De Vigianni, 2007; Gover et al., 2000; Trulson, 2007). In general, young adult male incarcerated offenders become involved in battles for dominance, fighting for recognition and legitimacy and hiding any signs of weaknesses and subordination (Camp et al., 2003; De Vigianni, 2007; Trulson, 2007).

Being violent, intimidating and bullying fellow incarcerated offenders represent young adult male incarcerated offenders' struggles for legitimisation and reputation (Camp & Gaes, 2005; Gover et al., 2000). Sim (1990) stated that violence is the main element used in order to obtain a social life in a correctional environment, since physical fights, victimisation and bullying are the norm, and that being institutionalised and engaging in symbolic rituals are typically found in such a hostile environment (Camp et al., 2003; De Vigianni, 2007; Trulson, 2007). Sim (1990) also argued that incarceration is effectively 'double punishment' as it not only deprive young adult male incarcerated offenders of their liberty but it also causes significant physical and psychological distress (De Vigianni, 2007).

However, it is also argued that correctional centres are not a vile experience for all young incarcerated offenders, especially those with strengths and who reserve to maintain some degree of self-control over their own circumstances (Caulfield, Wilkinson, & Wilson, 2016; Cohen & Taylor, 1981; Ross & Auty, 2018).

2.3.2 Correctional Centres in South Africa

South African correctional centres are categorised into three categories, namely minimum-security, medium-security and maximum-security centres (Neser, 1993). Minimum-security correctional centres accommodate incarcerated offenders who are a limited threat to society and whose rights are minimally restricted (Matshaba, 2007). Medium-security correctional centres accommodate incarcerated offenders posing a moderate risk to the safety of society and their rights with regard to privileges, movement and association are moderately restricted. Maximum-security correctional centres accommodate incarcerated offenders that are viewed as a danger to society and who pose great risk to other individuals; and their rights regarding privileges, movement and association are severely restricted (Neser, 1993). Maximum-security correctional centres are always secured and controlled and incarcerated offenders are under strict and direct supervision in order to ensure that they have restricted moving and association abilities (Matshaba, 2007).

South Africa also consists of two types of maximum-security correctional centres, namely (i) governmentally operated maximum-security correctional centres and (ii) private maximum-security correctional centres. Private maximum-security correctional centres are private companies that are contracted by the government to render and control correctional centres on their behalf (Du Preez & Luyt, 2006; Hesselink-Louw, 2004; Matshaba, 2007; Seiter, 2008). In South Africa there are two of these private correctional centres (Du Preez & Luyt, 2006; Hesselink-Louw, 2004; Matshaba, 2007) and they are usually operated and managed differently compared to governmentally operated maximum-security centres. In private correctional centres the staff are better qualified and management supervision and control are done more effectively (Du Preez & Luyt, 2006). These private centres also guarantee no overcrowding, with incarcerated offenders following strict schedules and

programmes daily in order to ensure that various interventions and developmental programmes take place (Du Preez & Luyt, 2006; Matshaba, 2007).

In order to guarantee that incarcerated offenders successfully reintegrate back into society, private maximum-security correctional centres provide each offender with a unique developmental plan that is regularly evaluated, which will result in these individuals obtaining the necessary skills and development. It has been suggested that public maximum-security correctional centres should implement approaches utilised by private maximum-security correctional centres in order to obtain optimum development and treatment of incarcerated offenders (Hill, Cunningham, & Gentlemen, 2016; Matshaba, 2007; Wolff, Frueh, Shi, & Schumann, 2012), as the quality of care provided by public maximum-security correctional centres is not on par, compared to those in private maximum-security correctional centres (Goyer et al., 2000; Hill et al., 2016; Seiter, 2008).

In accordance with the Correctional Services Act (Act 111 of 1998), private maximum-security correctional centres may not:

1. “Take corrective action against incarcerated offenders nor impose penalties on them;
2. Be immersed in determining of calculating sentences;
3. Decide at which correctional centre an incarcerated offender must be detained;
4. Determine placement or release of an incarcerated offender;
5. Be involved in the enactment of community corrections;
6. Grant temporary leave;
7. Subcontract, yield, allocate or delegate any of the affairs under the contract unless under authorisation given in the contract” (Republic of South Africa, 1998, p. 65).

Therefore, private maximum-security correctional centres have no authorisation in deciding where incarcerated offenders are detained, nor may they make decisions regarding which incarcerated offender they will receive and house in their correctional centres. The

Department of Correctional Services (DCS) classifies incarcerated offenders and according to this classification the chosen correctional centre where these incarcerated offenders will be institutionalised, are determined. The two existing private correctional centres in South Africa are both maximum-security correctional centres that house incarcerated offenders that received a maximum-security classification by the DCS (Matshaba, 2007). However, incarcerated offenders can still apply for a transfer to or away from a private maximum-security correctional centre, which is reviewed and approved/disapproved by the DCS (Matshaba, 2007).

2.3.3 Mangaung Correctional Centre (MCC)

This research study was conducted at the Mangaung Correctional Centre (MCC) and it is the first privately operating correctional centre in South Africa, which became operational on 1 July 2001. MCC in partnership with the Government of South Africa is located on the outskirts of Bloemfontein, Free State and is entrusted with 2928 maximum security incarcerated offenders whose needs are administered by a 25-year contract with the Government (Mangaung Correctional Centre (MCC), 2003, 2010).

The main aim of the MCC is to develop and empower incarcerated offenders to become responsible citizens upon their release back into society. By reaching this aim, MCC increases the safety of the community. This aim is reached through a variety of developmental, empowering and therapeutic interventions, such as the Inmate Care and Empowerment Approach that is known as a strength-based and proactive approach. Assessment of the incarcerated offenders is done in order to implement effective sentence planning (Mangaung Correctional Centre, 2008). Examples of such assessments include pre-employment assessments, medical assessments, psychological assessments, security checks as well as exit interviews (Mangaung Correctional Centre, 2008). The care of the

incarcerated offenders comprises of aspects such as acceptance, tolerance, respect, showing of concern, empathy, active listening, guardianship, protection, being considerate, sensitive to needs, a therapeutic relation, mentoring, a belief in potential and having hope. MCC believes that when incarcerated offenders are treated in this manner, their well-being will be the object of care (Manguang Correctional Centre, 2008). Control of incarcerated offenders includes the nine principles of direct supervision, namely effective control, effective supervision, competent employees, safety of both employees and offenders, manageable and cost-effective operations, effective communication, classification and orientation, justice and fairness and ownership (Mangaung Correctional Centre, 2008). Empowerment of incarcerated offenders is grouped into two categories, namely offence specific and offence related. Offence specific empowerment includes programmes such as:

- Sexual Offender Programme,
- Economic Offending Programme,
- Homicide Offending Programme and
- Anger Management Programme.

Whereas, offence related programmes include:

- Induction Programme,
- Life Skills Development Programme,
- Anger Prevention Programme,
- Sexuality and HIV/Aids Prevention Programme,
- Sexuality and HIV/Aids Treatment Programme,
- Substance Abuse Prevention Programme,

- Substance Abuse Treatment Programme,
- Stress Management Programme,
- Intermediate Intervention Programme,
- Pre-release Programme,
- Restorative Justice Programme,
- Values Programme, Education, Vocational training,
- Religious care and Industries (Mangaung Correctional Centre (MCC), 2008).

Support for incarcerated offenders at the MCC entails a peer restorative support group, education programmes, psychological and psychiatric interventions, access to legal information, personal officer scheme, direct supervision officer, assessment, anti-bullying approach, suicide and self-harm management, family reintegration programme, pre-release programme, value programme and a HIV support group. In order to sustain incarcerated offenders, the multidisciplinary team are responsible for continuous assessments of the incarcerated offenders, recommendation to the CMC regarding the compilation and reviewing of the sentence plans, monitoring and assessing of their progress, engaging with incarcerated offenders in a professional manner, modelling the expected behaviour, reinforcement of positive behaviour and recommendation to the Parole Board.

2.4 Incarcerated Offenders

Incarcerated offenders are classified as lonely individuals that are detained in unfavourable correctional settings (Morgan & Flora, 2002), evidently becoming part of a defenceless and excluded population (Condon et al., 2008). Incarcerated offenders are also viewed as a

population with a higher risk of suffering poor psychological health that is ascribed to the various exposures in correctional centres (Carcedo, Lopez, Orgaz, Toth, & Fernandez-Rouco, 2008). Incarceration implies that the individual is removed from society and his family and friends, and housed in a location where there is a lack of resources and structure and control is exercised. At the start of their sentences, it is difficult for incarcerated offenders to adjust and cope with life in a correctional centre (Mandell, 2006; Rocheleau, 2011). Therefore, incarcerated offenders are individuals who struggle to cope effectively to life stressors, as they lack positive social skills and are unable to assure the advantages that is offered by life. Incarcerated offenders need to learn effective coping skills in order to survive in correctional environments and ensure prevention of returning to a life of crime (Marshall, Turner, & Barbaree, 2008).

2.5 Young adult male incarcerated offenders

Suspected offenders are usually individuals that come from a lower socio-economic background and who are young, male and unemployed (Jewkes, 2005). Young male incarcerated offenders are classified as males aged between 18 and 25 years. Certain correctional centres contain separate facilities for young male incarcerated offenders in order to separate them from the older incarcerated offenders, especially since young male incarcerated offenders tend to have special needs and unique security concerns (Cropsey et al., 2007). Furthermore, young incarcerated male offenders are more susceptible to victimisation (Perez et al., 2009) and thus requires assistance. These young male incarcerated offenders are still in the process of maturing, more difficult to manage, and although they did commit horrendous crimes, are classified as adult offenders (Social Exclusion Unit [SEU], 2002).

Young male incarcerated offenders are in a “life stage” where they are close to adult offending, thus requiring adequate coping skills in order to survive incarceration and to refrain from falling back into their old habits of committing offences (SEU, 2002). Young adult male incarcerated offenders view a correctional environment as a revolving door, as they find themselves back in the dark space of incarceration after reoffending (Kethineni & Falcone, 2007). The development of young adult male incarcerated offenders is important, as it ensures effective coping with the various stressors found in a correctional centre and it guarantees that they will not leave the correctional centres with more problems as compared to what they originally had (Cesaroni & Peterson-Badali, 2010). The focus of this study is on young adult male incarcerated offenders aged between 21 and 25 years.

2.6 Coping and Coping Theories

Coping is defined as the conscious and cognitive attempts that an individual utilises in an attempt to regulate emotions, cognition, behaviour, physiology and the environment in response to stressful events or circumstances (Duhacheck, 2005; Flouri et al., 2013; Lazarus & Folkman, 1984). Coping is also viewed as a persistent and complex psychological process that is rooted in a network of attitudinal, behavioural and cognitive correlates (Carver & Scheier, 1994; Lazarus & Folkman, 1984) and it includes various strategies that individuals utilise when faced with a stressful encounter. According to the cognitive-phenomenological model of stress and coping as proposed by Lazarus and Folkman (1984), the consequences of stress impact the relationship between stable factors and situational factors. Situational appraisals that is predicted by individuals’ preferences, reflect individuals’ subjective judgement of the consequences of the perceived stressor or event to his/her own level of well-being (Folkman, 1984). The degree to which an event is perceived as stressful (primary appraisal) is a key component of an individual’s cognitive appraisal (Baumeister & Bushman,

2018; Lazarus & Folkman, 1984). When the level of appraised stress surpasses the coping skills and available resources of the individual, it could negatively influence their adjustment capabilities (Aldwin & Revenson, 1987; Fugate, Kinicki, & Scheck, 2002; Scheck & Kinicki, 2000; Thoits, 1983). Individuals depend on primary appraisal during a stressful event and also utilises secondary appraisal, which is a reaction on the stressor that reflects the judgement of what can be done to control the stressful encounter (Baumeister & Bushman, 2018; Lazarus & Folkman, 1984). Self-efficacy appraisal (secondary appraisal) refers to an individual's certainty in his/her ability to perform a proactive action that is required to meet the pressures of a stressful encounter. Coping strategies are implemented by individuals with the goal of decreasing the effects of stress (Baumeister & Bushman, 2018; Billings & Moos, 1981; Lazarus & Folkman, 1984).

Coping is linked to an individual's feelings of being able to control their life, having authority and optimism, expecting positive consequences and viewing stressors as challenges rather than obstacles. As an individual experiences a stressful encounter, they rely on their own perception of the experienced threat and the available resources in order to control the threat, resulting in the individual possibly experiencing feelings of being overwhelmed (Utsey, Ponterotto, Reynolds, & Cancelli, 2000). Personal psychosocial resources, which include an individual's ability and agency to cope with and feel that they are in control of their own life experiences, are of utmost importance for a healthy lifestyle. If the individual experiences difficulties to cope, it leads to strain, frustration, helplessness and hopelessness (Hinton & Earnest, 2010).

Past research distinguished between two coping orientations, namely approach-coping and avoidance-coping (Baumeister & Bushman, 2018; Suls & Fletcher, 1985). Approach-coping is defined as an active coping strategy that aims to reduce, abolish or control the internal and external strains of a stressor. Avoidance-coping, however, is defined as the disengagement

from the stressful event where the aim is to ignore, elude or extract oneself from the stressor or its emotional response (Baumeister & Bushman, 2018; Suls & Fletcher, 1985).

2.6.1 Coping Styles

Coping styles are separated into two comprehensive categories that is emotion-focused coping and problem-focused coping (Baumeister & Bushman, 2018; Lazarus & Folkman, 1984). Problem-focused coping is likely to be utilised when an individual assesses a stressful encounter as changeable, while emotion-focused coping is the most preferable choice if the problem associated with the stressful encounter seems unchangeable. However, in almost all stressful events, both strategies are utilised in combination (Folkman & Lazarus, 1985).

Emotion-focused coping entails that an individual attempts to decrease or control the emotional outcomes that is linked to the stressor (Baumeister & Bushman, 2018; Folkman & Lazarus, 1985; Lazarus & Folkman, 1984), thus directing individuals into emotional states and actions that retain them from dealing directly with stressful events they may be experiencing (Baumeister & Bushman, 2018; Yeung & Fung, 2007). This approach requires the use of emotional support, humour and disengagement as an effort to be in control of their emotional responses to a stressful event. However, problem-focused coping entails that an individual alters or removes the stressor itself, thus making an active effort to deal with a stressful event (Baumeister & Bushman, 2018; Yeung & Fung, 2007). Both categories contribute to mediate the influence of appraisal after the manifestation of a stressful event (Riley & Park, 2014). These coping styles will be discussed in the sections below.

2.6.1.1 Emotion-focused Coping

Emotion-focused coping refers to a person's effort to change or minimise negative emotions by suppressing and overcoming the emotional reaction that the stressor causes or by increasing positive emotions (Baker & Berenbaum, 2007; Baumeister & Bushman, 2018; Lazarus & Folkman, 1984). Cognitive emotion-focused coping is defined as the means in which a person tries to use positive emotions to change their way of thinking about a problem, while behavioural emotion-focused coping is defined as the behaviour that a person utilises in an attempt to feel better (Baker & Berenbaum, 2007; Lazarus & Folkman, 1984). Emotion-focused coping entails attempts to control emotional distress by altering the perception or interaction of the stressor by utilising cognitive or behavioural efforts through minimisation, positive judgements and by seeing positive values in negative incidents (Lazarus & Folkman, 1984). Individuals who utilise emotion-focused coping rely more on avoidance-coping when they experience stressful encounters and negative effects (Baker & Berenbaum, 2007; Eaton & Bradley, 2008).

Emotion-focused coping often includes various strategies, such as denial, dampening of feelings, venting emotions, seeking social support, positively reinterpreting events and disengagement (Baker & Berenbaum, 2007). However, these strategies are viewed as adaptive ways of coping when an individual is faced with a highly stressful event which they cannot control or manage in order to solve the problem (Ben-Zur, Breznitz, Wardi, & Berzon, 2000; Carver, Scheier, & Weintraub, 1989; Compas, Connor, Saltzman, Thomsen, & Wadsworth, 2001; Lazarus, 1983; Miller, Combs, & Kruus, 1993; Zeidner & Saklofske, 1996), especially since emotion-focused coping responses can cause negative moods, such as reappraisal, wishful thinking or seeking social support (Stanton, Danoff-Burg, Cameron, & Ellis, 1994).

Therefore, optimal coping and adjustment outline high resiliency in terms of acute and prolonged positive adjustment. It has also been found that offenders utilise emotion-focused coping strategies in order to cope in a correctional environment, as incarcerated offenders resign to fate and inactivity due to being stripped of their fundamental human rights and becoming psychologically or emotionally helpless. Agbakwuru and Awuyo (2017) found that young adult male incarcerated offenders deal with various challenges of the correctional environment, such as overcrowding, poor sanitation services, financial strains, inadequate food, medicines, denial of social support from family and friends, loss of freedom, fear of not knowing what will become of their family members, fear of surviving in the correctional environment, stigma, extensive noise, being isolated, being sexually intimidated, lack of manpower and regimented life to the extent that strict control is placed on all activities in the correctional environment, thus becoming involved in religious activities, forming surrogate families in the correctional environment, engaging in education and vocational training and making use of emotion-focused coping strategies. However, maladaptive coping outlines acute and prolonged negative adjustment and exemplifies significant risk factors for the individual (Agaibi & Wilson, 2005; Agbakwuru & Awujo, 2016).

2.6.1.2 Problem-focused Coping

Problem-focused coping refers to a coping style in which a person exercises practical approaches in order to change the situation that causes stress (Baumeister & Bushman, 2018; Lazarus & Folkman, 1984; Reeves, Merriam, & Courtenay, 1999). Individuals utilise problem-focused coping in an attempt to manage a given stressor, especially since it is directed toward the management of a stressor and also due to the individual engaging with the stressor in a proactive way, thus resulting in better adjustment. Problem-focused and avoidance-coping have been found to be effective in various stressful situations, such as

stressful work situations, entering a new job, unemployment and significant organisational alterations (Armstrong-Stassen, Cameron, Mantler, & Horburgh, 2001; Ashford, 1988; Ashford et al., 2003; Feldman & Brett, 1983; Judge, Thoresen, Pucik, & Welbourne, 1999; Leana & Feldman, 1988; McKee-Ryan, Song, Wanberg, & Kinicki, 2005).

Lapierre and Allen (2006) described problem-focused coping as a person's defence versus environmental stressors which anticipate defining a problem, produce alternative solutions, consider alternatives according to costs and benefits, select the best solution and perform on it. According to Ivancovich (2004), this coping style attempts to directly confront and control the crisis. Problem-focused coping strategies include active coping, self-control and social support (Lazarus & Folkman, 1984; Reeves et al., 1999). Carver et al. (1989) referred to problem-focused coping as the active attempts of an individual to engage in and change the cause of the stressor that is initiated by the stressful event. In previous research, problem-focused coping has been found to positively relate to an increase in self-esteem (Utsey et al., 2000; Van Harreveld, Van der Pligt, Claassen, & Van Dijk, 2007). In various social psychology literature, several strategies are classified to control negative emotions (Lazarus & Folkman, 1984). Problem-solving coping aims at solving problems that produces negative emotions. Problem-focused coping is viewed as a coping strategy that is less likely to be utilised by incarcerated offenders because it is less effective in a correctional environment due to a shortage of available behavioural coping resources and because the incarcerated offender cannot undo the crime that he committed (Van Harreveld et al., 2007). Thus, emotion-focused coping is viewed as more effective in these correctional settings. Previous research indicated that emotion-focused coping tends to be more effective than problem-focused coping when individuals' controllability of negative outcomes is low. Emotion-focused coping has been found to positively impact the psychological well-being, overall health and cognitive functioning of incarcerated offenders (Baum & Singer, 1987).

2.6.1.3 Maladaptive Coping

Maladaptive coping refers to the anti-social ways in which incarcerated offenders respond to stressors (McCorckle, 1993). Maladaptive coping amongst young adult male incarcerated offenders can be harmful to their health and is also associated with individuals experiencing higher levels of stress and poorer physical and mental well-being (Asberg & Renk, 2014). Therefore, if offenders do not have the ability to cope in maximum-security correctional centres, it could lead to depression, anxiety, suicide, suicide ideation, hostility and violence amongst incarcerated males (Asberg & Renk, 2014; Clement & Schonnesson, 1998; Holmes & Stevenson, 1990).

Furthermore, maladaptive coping, such as utilising avoidance and rumination as a means of coping, has been linked to individuals experiencing Posttraumatic Stress Disorder symptoms, specifically amongst victims of rape (Dunmore, Clark, & Ehlers, 2001; Snyder & Pulvers, 2001; Ullman & Filipas, 2001; Ullman, Townsend, Filipas, & Starzynski, 2007) and also regarding other forms of interpersonal violence (Dunmore et al., 2001; Johnson, Sheahan, & Chard, 2003). Aggression and physical attacks in violent situations are also categorised as maladaptive coping (Littleton & Radecki Breitkopf, 2006). Individuals that use maladaptive coping styles in combination with anxiety, depression and alcohol are predisposed to mental health issues and psychological distress (Fledderus, Bohlmeijer, & Pieterse, 2010).

Clark, Anderson, Clark and Williams (1999) stated that maladaptive coping responses is prone to intensify negative outcomes, while adaptive coping responses decrease the negative outcomes that are caused by stressful encounters. Furthermore, seeking social support acts as a protective factor when victims use maladaptive coping strategies after the initial stressful encounter, resulting in those with strong social support systems to rely less on maladaptive

coping as opposed to the victims that do not receive social support at all (Ullman et al., 2007).

2.6.1.4 Mature Coping

Mature coping is defined by Robert Johnson (1996) as being responsible and also as one's ability to deal responsively with everyday life problems and seeking autonomy without overstepping or violating the rights of other individuals. Mature coping further entails ensuring security without utilising deception or violence, and having the ability to fully relate to other individuals in an attempt to uphold an optimal human identity (Soderstrom, Castellano, & Figaro, 2001). While Johnson (1996) agrees that most young adult male incarcerated offenders fail to utilise mature coping strategies, he also asserts that all people are capable of achieving autonomy, security and relatedness with regards to other individuals. Therefore, it is advised that young adult male incarcerated offenders' experience of incarceration should be built on these inclinations and not be prevented to achieve it (Johnson, 1996).

Johnson (1996) argues that the most important factor of mature coping is facing problems directly and utilising all available legitimate resources. In order to achieve this, individuals should make use of assertiveness, a sense of personal efficacy as well as an internal locus of control (Soderstrom et al., 2001). People who do succeed in this level of mature coping are likely to be more autonomous than other individuals (Johnson, 1996). Mature coping individuals express choice and control over their lives, without coming across as being hedonistic, impulsive or predatory. However, in general, young adult male incarcerated offenders lack mature coping skills and are viewed as ineffectual individuals who displays maladaptive coping mechanisms, such as aggressive behaviour, hostility and denial that usually adds to the problems they regularly face and encounter (Soderstrom et al., 2001).

A second trait of mature coping is the ability to address the encountered problems without resorting to deception or violence, unless deemed necessary for self-defence (Johnson, 1996). Unfortunately, numerous life observers in correctional centres (e.g., correctional centre staff, social workers and family of the incarcerated offenders) state that deception and manipulation are key characteristics of the culture of young adult male incarcerated offenders. While incarcerated, young adult male incarcerated offenders rather turn to lying, cheating and aggression as a means of survival (Soderstrom et al., 2001).

The third trait of mature coping is the ability to show empathy towards others, help those in need and to work together as a community to achieve a more secure and gratifying existence (Johnson, 1996). It is evident that a correctional centre environment does not support the development of safe, gratifying and rewarding communities. However, these key traits of mature coping require that coping strategies and problem-solving skills be used as a central intermediate effect that aims to assess the effectiveness of interventions that attempts to promote mature coping (Soderstrom et al., 2001).

2.7 Coping as conceptualised by Desmond, Shevlin and MacLachlan (2006)

Desmond et al. (2006) developed the Coping Strategy Indicator (CSI) that focuses on Avoidance, Problem-Solving and Seeking Social Support in order to measure the coping abilities of individuals. These constructs will be discussed in the sections below.

2.7.1 Avoidance and Coping

Amirkham (1990) stated that coping is generally classified in three types, namely Avoidance, Problem-Solving and Support Seeking. Avoidance-coping is characterised by an individual's behavioural and cognitive attempts to not think about a stressful event or stressor (Carver et al., 1989; Herman-Stahl, Stemmler, & Peterson, 1995) and it also entails avoiding

a stressful encounter by taking part in a task that is not associated with the stressor (Clark et al., 1999; Endler & Parker, 1990, 1999; Fledderus et al., 2010). Furthermore, it is seen in general to be linked to negative adjustment outcomes (Carver & Scheier, 1994; Stanton, Kirk, Cameron, & Danoff-Burg, 2000). Therefore, avoidance-coping has been viewed to impair an individual's ability to adjust when they experience stress (Jordan, Ashkanasy, & Hartel, 2002; Lazarus & Folkman, 1984; Skinner, Edge, Altman, & Sherwood, 2003; Staw, Sandelands, & Dutton, 1981).

After experiencing uncontrollable life-threatening encounters, individuals tend to make use of avoidance-coping due to the heightened anxiety and depression they experience, resulting in utilising the avoidance strategies, such as denial, disengagement and distraction (Jin, Pang, & Cameron, 2007, 2008). Therefore, when individuals come face-to-face with the realisation of their own mortality, they tend to utilise a variety of defence mechanisms in order to guard themselves against the anxiety that is caused in response to the probability of imminent future death (e.g., decreasing the situational threat, denying personal vulnerability and social distraction) (Ben-Zur & Zeidner, 2009). Self-blame has been classified as a type of avoidant coping strategy (Schwartz, Hogben, Liddon, Augenbraun, McCormack, Rubin, & Wilson, 2008), which has been strongly linked to psychological distress (David, Montgomery, & Bovbjerg, 2006; Shaw, Han, Hawkins, McTavish, & David, 2008).

Previous research involving coping has found a connection between coping and a variety of psychological and physical health outcomes, with avoidant coping usually leading to poorer outcomes, such as depression, anxiety, the development of psychological difficulties and pain related outcomes as well as negative effects or neuroticism (Welch & Austin, 2001; Bal, Van Oost, De Bourdeaudhuij, & Crombez, 2003; Barnes & Lightsey, 2005; Bonanno, Keltner, Holen, & Horowitz, 1995; Carr et al., 1995; Compas, 1995; Danoff-Burg, Prelow, & Swenson, 2004; Ehlers & Clark, 2000; Ekelund & Andersson, 2007; Felton & Revenson,

1984; Flett, Blankstein, & Obertynski, 1996; Foa & Rothbaum, 1998; Foa, Cascardi, Zoellner, & Feeny, 2000; Holahan, Moos, Holahan, Brennan, & Schutte, 2005; Lazarus & Folkman, 1984; Maes, Leventhal, & De Ridder, 1996; Merrill, Thomsen, Sinclair, Milner, & Gold, 2001; Mitchell & Hudson, 1983; Moos & Schaefer, 1993; Schreurs, Van de Willige, Brosschot, Tellegen, & Graus, 1993; Utsey et al., 2000; Webster, McDonald, Lewin, & Carr, 1995; Welch & Austin, 2000; Wortman & Silver, 1989). However, the other two strategies (problem-solving and social support) are related to positive outcomes (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996; Penley, Tomaka, & Wiebe, 2002; Snow, Swan, & Raghavan, Connell, & Klein, 2003). In addition, it has also been found that avoidant coping may be beneficial for individuals who live with intense and domineering circumstances that they cannot change (Felton & Revenson, 1984; Herman-Stahl et al., 1995; Lazarus & Folkman, 1984; Mitchell & Hudson, 1983; Moos & Schaefer, 1993; Shorter-Gooden, 2004).

Cooper, Wood, Orcutt and Albino (2003) stated that an individual's risk behaviours can be explained by low impulse control and utilising an avoidant coping style when dealing with negative emotions. Avoidance-coping is reinforced when it results in temporary relief or an escape from the stressful situation and the feelings associated with the event. As time passes, this initial escape behaviour changes the narrowing ways of thinking from abstract to basic thoughts, resulting in a fixed way of coping, behaving and acting during stressful events (Baumeister, 1991; Heatherton & Baumeister, 1991). Making use of avoidance-coping leads to the individual restricting his/her interpersonal contact (Batten, Follette, & Aban, 2001; Dalrymple & Herbert, 2007; Hayes et al., 1996; Karekla, Forsyth, & Kelly, 2004; Luciano & Hayes, 2001; Norberg, Wetterneck, Woods, & Conelea, 2007; Spira, Zvolensky, Eifert, & Feldner, 2004; Yazgan, Dedeoglu, & Yazgan, 2006) and fosters greater vulnerability to the incarcerated offenders (Carr, Lewin, Webster, & Kenardy, 1997; Ticehurst, Webster, Carr, & Lewin, 1996). Minimising avoidance by means of non-judgemental awareness of thoughts

and feelings experienced during the stressful event can assist individuals to cope effectively and to experience psychological flexibility (Chartier et al., 2010).

Therefore, a coping perspective proposes that avoidance as a means of coping empowers an individual's risk-taking behaviour after experiencing a life threatening event or stressful situation. More specifically, avoidance-coping serves to control and channel the negative emotions that is caused by the stressor(s). Thus, the more threats an individual experiences, the more he/she will use avoidance-coping to deal with the negative information, evidently leading to risk-taking behaviour (Ben-Zur & Zeidner, 2009).

2.7.2 Problem-Solving and Coping

Spivack and Levine (1963), D'Zurilla and Goldfried (1971) as well as Feuerstein (1980) proposed that in order to cope effectively and to address stressful encounters successfully, individuals need to utilise various component skills that can be applied to altering problem-solving phases. Problem-solving coping styles entail any coping behaviour that an individual utilises that aims to solve a certain problem or remove a certain stressor, evidently leading to resilience (D'Zurilla & Nezu, 2001; Nezu, 2004; Oliveira, Carlotto, Vasconcelos, & Dias, 2014; Hirsch, Barlem, Thomaschewski-Barlem, de Oliviera, & Lunardi 2015; Ramos & Carvalho, 2007). According to Sudha and Kumar Reddy (2017), different personalities utilise different coping styles in different situations, thus proposing that effective coping styles can decrease the intensity of the individual's reaction when he experiences high levels of tension. Sudha and Kumar Reddy (2017) further states that individuals that posit a more optimistic and positive personality tend to be more prone to positively evaluate a stressful encounter and engage in pro-active coping strategies, while pessimistic, anxious and fearful individuals tend to negatively evaluate a stressful encounter and evidently underestimate their

ability to cope with the stressor, thus leading to more stress and maladaptive coping behaviour.

Santos and Soares (2018) asserted that problem-solving necessitates the correct selection of coping strategies and underlines how social skills are of critical importance for individuals in order to better understand their interpersonal relationships with other individuals. In general, it is discovered that coping strategies, problem-solving (Ramos & Carvalho, 2007) and humour (Oguz-Duran & Yüksel, 2010) are associated with decreased levels of stress. Therefore, Oliveira et al. (2014) stated that coping strategies based on problem-solving and social support are associated with better adaptation to the demands experienced.

Lizarraga et al. (2010) also discovered that utilising decision-making abilities stimulates mental activities, as included in the analysis of information, production of alternative strategies for problem-solving and the selection of the best alternative. Santos and Soares (2018) emphasised that individuals that obtained high scores on problem-solving also obtained high scores on their coping abilities. It is perceived in general that effective problem-solving abilities is positively associated with better psychological and physical health, more effective coping abilities and better adjustment (Lucas, 2004). Problem-solving skills can aid individuals to cope with conflicts, assist with decision-making and help them solve relational difficulties (Del Prette & Del Prette, 2013). However, a study conducted by Novo, Pereira, Vázquez and Amado (2017) found that incarcerated offenders are more inclined to utilise avoidant coping strategies to solve their problems, which includes cognitive avoidance, acceptance or resignation, seeking other rewards and emotional discharge, instead of approach-coping strategies, such as logical analysis. Coylewright (2005) stated that incarcerated offenders fail to foresee problems, and therefore are incapable of coming up with appropriate solutions to their problems. Without effective coping methods and appropriate

problem-solving skills needed to function as productive members of society, incarcerated offenders will be less inclined to transform from being a criminal to a successful citizen (Coylewright, 2005). By providing incarcerated offenders with dispute resolution skills will aid in their transition from the correctional environment to a community environment. It is imperative to teach incarcerated offenders problem-solving skills, how to settle disputes and how to effectively communicate as well as how to take responsibility for their behaviour and actions (Coylewright, 2005).

Interpersonal characteristics (e.g., social skills and assertiveness, impulse control and anger, stress management, coping abilities, empathy and problem-solving) often lead to less criminal infractions (Bourke & Van Hasselt, 2004). Compas and Phares (1991) found that utilising problem-solving to cope with stressful events is linked to lower levels of maladjustment. In addition, recent studies indicated that solving problems inadequately through emotion-focused coping and avoidance-coping is associated with a criminal lifestyle in general and it is also linked to recidivism in incarcerated offenders, especially sexual offenders (Feelgood et al., 2005; Hanson, Harris, Scott, & Helmus, 2007; Looman, Abracen, DiFazio, & Maillet, 2004; Van Horn & Wilpert, 2017).

2.7.3 Seeking Social Support and Coping

Social support is defined as the support obtained (e.g., informative, emotional or instrumental) or the resources of the support (e.g., family or friends) that improve individuals' self-esteem, coping abilities or deliver stress-related interpersonal assistance (Dumont & Provost, 1999). Seeking social support is seen as a "buffering effect" as it serves as a protective function when individuals experience intense degrees of stress (Cohen & McKay, 1984) and it also delivers positive changes in individuals' lives (Bozo, Gundogdu, & Buyukasik-Colak, 2009), including the improvement of their emotional well-being (Dunkel-

Schetter, 1984; Holland & Holahan, 2003). Various potential manners exist on how social support can impact individuals' coping strategies (e.g. individuals who consist of a strong social support system may be more inclined to utilise it to help them in applying adaptive coping strategies) (Kim, Han, Shaw, McTavish, & Gustafson, 2010; Lazarus & Folkman, 1984; Littleton & Radecki Breitkopf, 2006; Silver & Wortman, 1980). These individuals may also feel more confident in their ability to cope actively when confronted with a traumatic or stressful event (Garnezy & Masten, 1991; Littleton & Radecki Breitkopf, 2006; Silver & Wortman, 1980). External support systems, whether perceived or utilised, promotes positive coping (Agaibi & Wilson, 2005). An existing support system assists individuals to participate in a range of activities that initially seems difficult and provides them with a way to vent (Fletcher, Schneider, & Harry, 2010). Previous studies done on coping found that individuals from less supportive families are confronted with more uncontrollable stressful situations and therefore more predisposed to resort to emotion-focused coping (Cunningham, 2002). Adequate social support motivates individuals to utilise positive reassessment of their physical health (Holohan, Moos, Holohan, & Brennan, 1995; O'Brien & DeLongis, 1997; Thoits, 1986) and to assist in active coping decision-making, which could lead to proactive participation of other individuals that impacts the individual's efforts to control their physical and emotional circumstances (O'Brien & DeLongis, 1997; Thoits, 1986). Individuals that are part of the support system can propose manners in which the individual can manage their physical or emotional distress or they can actively participate in the individual's efforts to cope (Thoits, 1986). Social support can aid in boosting individuals' self-esteem and their sense of control over their stressful encounters (Brown & Harris, 1978). A powerful sense of control and the individual's confidence may reinforce the individual's coping efforts by directing them to depend on proactive coping strategies rather than passive coping strategies (Kim et al., 2010).

In the event of a stressful situation, perceived social support has been found to influence individuals' dependence on different coping strategies, and this chosen coping strategy would thus most likely influence their emotional well-being. Perceived social support impacts not only the decision-making skills of individuals, but also their choice of coping strategy, which can either decrease or increase the impact of social support on their emotional well-being. Therefore, the more and better social support the individual experiences, the higher the chances to improve their psychological well-being by means of better decision-making, especially with regards to coping strategies (Kim et al., 2010).

2.8 The Importance of Coping in a Correctional Environment

Young adult male incarcerated offenders need to acquire a set of coping skills in order to survive in the correctional environment where overcrowding, different subcultures, victimisation, role stripping, loss of goods and loss of autonomy are the norm (Peacock, 2008). Furthermore, young adult male incarcerated offenders are exposed to bullying, substance abuse, murder, violence, suicide (De Vigianni, 2007), corruption, sexual offences (Buntman, 2005; Perez et al., 2009), escapes (Liebling, 2008), property damage (Mandell, 2006) and gang activities (Griffin & Hepburn, 2006; Rocheleau, 2015). All these factors contribute to the struggle of young adult male incarcerated offenders to successfully cope with life in a correctional centre. It is important that young adult male incarcerated offenders cope effectively because incarceration could result in exposure to violent victimisation and there is always the possibility of violence within a correctional centre, which is a chronic source of stress for incarcerated males (Hochstetler et al., 2004). Previous research indicated that young adult male incarcerated offenders lack the necessary problem-solving skills that is needed for survival (Coylewright, 2004). According to Abakwuru & Awuyo (2016), when young adult male incarcerated offenders adopt an effective coping strategy, it will aid in the

moderation of stress that the incarcerated offender experiences and evidently improve the probability of the incarcerated offender's survival from the confrontations of incarceration (Agbakwuru & Awujo, 2016). This proposition is thus evident when an individual considers the psychological impact that arrest, trial, incarceration and life in a correctional environment has on them, especially when they view their circumstances as too stressful, thus leading to the incarcerated offender acknowledging the need for effective coping strategies in order to survive (Agbakwuru & Awuyo, 2016). Some victims overcome stressors by developing pro-social coping mechanisms, while others respond to stressors in anti-social ways by making use of maladaptive coping (McCorckle, 1993). Maladaptive coping among incarcerated males can be detrimental to their health and this type of coping is associated with higher levels of stress and decreased physical and mental well-being (Asberg & Renk, 2014). Therefore, if young adult male incarcerated offenders are not able to cope in maximum-security correctional centres, it may lead to depression, anxiety, suicide, suicide ideation, hostility and violence amongst incarcerated males (Asberg & Renk, 2014). Risky decision-making skills caused by negative emotions (e.g., anger and fear) may lead to misconduct in correctional centres amongst young male incarcerated offenders (Bouffard, 2008).

Enhanced problem-solving skills amongst young adult male incarcerated offenders can positively impact their rational thinking ability, it can control their impulses, solve their problems and enable them to positively interact with each other (Coylewright, 2004). When young adult male incarcerated offenders make better decisions, it can also positively impact their interaction with other offenders and staff during their incarceration period (Loewenstein & Lerner, 2003). Social support influences young adult male incarcerated offenders' behaviours in multiple ways and it serves as a facilitator of self-control amongst offenders (Jiang & Fisher-Giorlando, 2002; Pratt & Godsey, 2002). Consistent social support decreases offender rule violations, strengthens family ties, thus reducing young adult male incarcerated

offenders' stress and pains of incarceration and leading to mediation of rule violations and ultimately increasing positive behaviour in a correctional centre (Jiang et al., 2002).

2.9 Predictors of coping amongst young adult male incarcerated offenders

There are numerous variables that serve as predictors of coping amongst young adult male incarcerated offenders. Some of these variables are inherent characteristic traits of the individual offender whilst others are demographic factors related to the coping of the young adult male incarcerated offenders. The four variables used in this study in order to predict coping are Type of Crime, Age, Aggression and Decision-making. These four predictor variables will be discussed in the sections below.

2.9.1 Type of Crime and Coping

Crime is defined as “conduct which common or statute law prohibits and expressly or impliedly subjects to punishment remissible by the state alone and which the offender cannot avoid by his own act once he has been convicted” (Van der Walt & Pienaar, 1999). Various psychological theories of crime propose that individual differences in behaviour causes individuals to become more predisposed to commit criminal acts than others. The psychodynamic school of thought assert that all individuals have innate unconscious instincts and drives which may contain criminal means (Podder & Raychaudhuri, 2015). Ego defences and other internal coping mechanisms that is developed during childhood through the internalisation of role models (e.g., parental figures), aids in constricting these innate instincts and drives. However, disruptions in the above mentioned may lead to the development of psychological disturbances, causing the formation of antisocial impulses within the individual. These antisocial impulses can be either inward (conveying the pathway

to becoming neurotic), or it can be outward (manifesting into criminal acts) (Podder & Raychaudhuri, 2015).

In this research study a clear distinction is made between (i) violent incarcerated offenders, which includes offenders who were incarcerated for murder, sexual offences, assault and robbery, and (ii) non-violent incarcerated offenders who were incarcerated for house-breaking, fraud and forgery. According to Wilson and Herrnstein (1985), both criminal and non-criminal behaviours holds advantages and disadvantages for individuals. An individual is more likely to commit a crime when the potential advantage of the crime outweighs the disadvantages. As a result of individual differences in delaying immediate gratification of the needs and demands, some individuals are more prone to commit criminal offences than others (Wilson & Herrnstein, 1985). Individuals that are unable to link adverse consequences and negative feelings to the criminal act tend to commit the crime without anticipation. This is due to physiological arousal determining the comfort in which individuals are classically conditioned (Wilson & Herrnstein, 1985).

Past research conducted on violent offenders found that differences occur between the coping abilities of murderers and rapists due to the important role that coping plays in the sexual offence process (Feelgood et al., 2005). Violent offenders tend to utilise maladaptive coping strategies, such as avoidance-coping and emotion-focused coping more often than non-violent incarcerated offenders (Cortoni, 1998; Feelgood et al., 2005; Marshall, Anderson, & Fernandez, 1999; Marshall & Fernandez, 2000; Miner, 2000). An example of emotion-focused coping that Cortoni and Marshall (2001) discovered is violent offenders being more prone to use actual sex, pornography, rape, molestation and sexual fantasies to cope with stressful encounters than non-violent offenders and that these incarcerated offenders reported that rejection by other incarcerated offenders and little self-control leads them to rely on the rewards of sexual coping in order to obtain a sense of control and pleasure in their lives

(Cortoni & Marshall, 2001; Marshall, Hudson, & Hodgkinson, 1993). Emotion-focused coping correlates with psychological dysfunction amongst violent incarcerated offenders, such as child molesters, rapists and murderers (Feelgood et al., 2005; Marshall, Cripps, Anderson, & Cortoni, 1999; Marshall, Serran, & Cortoni, 2000). However, cognitive misrepresentations and unsuccessful coping behaviours appear as essential components in major aetiological theories of violent offending (Cortoni & Marshall, 2001; Finkelhor, 1984; Hall & Hirschman, 1991; Marshall & Barbaree, 1990; Pithers, 1990; Ward & Siegert, 2002) and in sexual offending revert theories (Pithers, 1990; Ward & Hudson, 2000). These cognitive distortions may be utilised because at different stages of the incarceration process, it tends to reduce internal inhibitors, for example shame and guilt that the individual experiences when facing a stressful encounter (Ward, Hudson, Johnston, & Marshall, 1997). When individuals reduce these negative states before and after committing an offence, it could prolong the motivation for such behaviour (Feelgood et al., 2005; Miner, 2000; Miner, Day & Nafpaktitis, 1989; Ward & Hudson, 2000; Ward et al., 1997).

When violent incarcerated offenders utilise ineffective coping strategies, it may facilitate them to commit offences through the mediating effect it has on the negative emotional state of the individual (Hanson, 2000; Ward & Hudson, 2000). The violent incarcerated offenders' predisposition to utilise ineffective coping strategies can lead to a repeating cycle of stressors, maladaptive coping, increased negative emotional states and further complications in general, including their health. (Looman, 1995; McKibben, Proulx & Lusignan, 1994; Proulx, McKibben, & Lusignan, 1996).

In some studies, it was found that young adult male incarcerated offenders who committed violent crimes tend to be more aggressive than young adult male incarcerated offenders who were incarcerated for non-violent crimes (Finn, 1995; Wooldredge, 1991).

2.9.2 Age and Coping

The age of a young adult incarcerated male offender has an impact on his coping ability in a correctional centre. Previous research studies indicate that older individuals tend to regulate their emotions better (Lawton, 2001), place more importance on the emotional facets of their surroundings (Carstensen & Mikels, 2005) and utilise more passive ways in regulating their emotions when faced with a stressful encounter that is experienced as out of their control (Blanchard-Fields & Irion, 1988). Young incarcerated offenders that is older than 25 years shows a decrease in the severity and frequency of disciplinary violations in correctional centres, which indicates that as age increases, coping ability does too (Mandell, 2006).

Previous research evidently revealed that age is the most significant predictor of adjustment and aggression in a correctional environment (Camp et al, 2003; Craddock, 1996; Gover et al., 2000; Toch, Adams, & Grant, 1989). It is proposed that as the young adult male incarcerated offenders' age increase, they learn the expenses and consequences of aggression, including the probability of punishment (Greenberg, 1985; Wilson & Hernstein, 1986) and in turn, the frequency and rigorousness of disciplinary violations decrease (Camp et al., 2003; Craddock, 1996; Faily & Roundtree, 1979; Flanagan, 1983; Goetting & Howsen, 1986; Kuanliang, Sorenson, & Cunningham, 2008; Mandell, 2006; Toch et al., 1989). The age of the young adult male incarcerated offender at the beginning of his sentence is contrariwise related to how likely misconduct in correctional centres will happen. Younger adult male incarcerated offenders tend to be involved in disciplinary violations, offender on offender assault and offender on personnel assault due to poorer coping abilities (Ekland-Olson, Barrick, & Cohen, 1983; Finn, 1995; Flanagan, 1980; Kerley, Hochstetler, & Copes 2009; MacKenzie, 1987; Mandell, 2006; Porporino & Zamble, 1984; Toch et al., 1989; Wright, 1991).

2.9.3 Decision-making and Coping

Individuals differ in how they cope with stressors and the consistent emotions that result from the decision-making processes (Creyer & Kozup, 2003). Decisions evoke emotional and behavioural responses, which is a significant aspect of the choices amongst individuals (Garbarino & Edell, 1997; Luce, James, & John, 2001). During intense stressful encounters, individuals undergo feelings of being overpowered and they tend to struggle to cope with the long-term effects of the prolonged symptoms related to stress. Traumatic stress leads to feelings of intense fear, causing complex allostatic psychological reactions (McEwen, 2002; Thomas & Wilson, 2004; Wilson, 2004; Wilson & Thomas, 2004; Wilson, Friedman, & Lindy, 2001). A more comprehensive understanding of the influence of emotional states, such as anger during decision-making, should be considered when increasing the effectiveness of efforts to prevent or respond to crime (Bouffard, 2015). Zhang and Fitzsimons (1999) found that having a satisfactory choice encounter will lead individuals to utilise a decision-seeking attitude, while an unsatisfactory choice encounter will lead to avoidant behaviour amongst individuals. When individuals lack adequate information on which to base their decision, the decision-making process is prone to be a difficult and an unsatisfactory experience (Zhang & Fitzsimons, 1999). Individuals who experience higher levels of positive emotions tend to convey higher decision-making outcomes (Çolakkadıoğlu & Güçray, 2007; Creyer & Kozup, 2003).

Decisions are therefore seen to shape and direct individuals' lives and past research have found that providing individuals with decision-making training results in increasing these individuals' positive coping styles (Çolakkadıoğlu & Güçray, 2007). Janis and Mann (1977) state that individuals are unsuccessful in making optimal decisions mainly due to the decisional conflict that they experience, subsequently resulting in psychological stress. Furthermore, individuals who receives vigilant decision-making training tend to display

higher self-esteem during decision-making processes and their negative coping styles will evidently also decrease (Josephs, Larrick, Steele, & Nisbett, 1992; Mann, Harmoni, & Power, 1988).

Kerley et al. (2009) assert that decision-making and self-control can result in poor coping. Individuals with low self-control and poor decision-making capabilities are viewed as impulsive and tend to struggle with postponing gratification (Stewart, Elifson, & Sterk, 2004). Therefore, their impulsivity results in their inability to determine the long-term effects of their poor decision-making capabilities and poor interactions with others. Also, individuals with poor decision-making capabilities and low self-control face more risky encounters and utilise more risk-taking behaviour than those who do not have these characteristics. These individuals habitually lean on risky activities without thinking about necessary consequences (Schreck, Stewart, & Fisher, 2006). For example, individuals with poor decision-making capabilities and low self-control are more inclined to aggravate and provoke other individuals without bearing in mind that others may retaliate against them. On the other hand, if a situation occurs where confrontation can be avoided, individuals with low self-control and poor decision-making capabilities would rather utilise verbal or physical aggression than walk away from the encounter (Stewart et al., 2004). Individuals with low self-control and poor decision-making capabilities favour activities of a physical nature rather than engaging in mental activities. They seek physical stimulation and action and these individuals view activities such as sitting still, being quiet and thinking, as unpleasant. They are also unsuccessful in cognitively assessing the encountered risky situations. In conflict situations, they become defensive or opposing, rather than thoughtful or conciliatory (Stewart et al., 2004). Furthermore, individuals with low self-control and poor decision-making capabilities are inclined to have low frustration tolerance and have very short tempers. Also, they are easily annoyed and with the least provocation tend to become angry and upset and

will participate in arguments, physical assault or become counteroffensive towards other individuals (Stewart et al., 2004).

Clark and his colleagues stated that precise understanding of criminal decision-making should take into account the role young adult male incarcerated offenders play during incarceration and their situational factors, including the emotions that they experience during decision-making (Clarke & Felson, 1993; Cornish & Clarke, 1987; Dahlen & Johnson, 2010; Pratt & Cullen, 2005). Toch (1997) proposed that for young adult male incarcerated offenders to cope effectively and perform better in the correctional environment, they need to be proactively involved in a decision-making process that directs their lives and also be more involved with their fellow incarcerated offenders in order to achieve a sense of belonging, commitment, loyalty and validity within the correctional centre. Utilising therapy that concentrates on the development of positive coping strategies and skills will provide young adult male incarcerated offenders with the necessary tools to cope effectively with their incarceration and to make rational and responsible decisions when faced with a stressful encounter within the correctional centre (Dahlen & Johnson, 2010).

The more individuals are faced with cognitively complex judgement tasks where they do not receive adequate guidance or support, the more inclined the individual will rely on inappropriate cues or predetermined biases and the lower the chances of making appropriate decisions (Payne, Bettman, & Johnson, 1993). Gullone, Jones and Cummins (2000) stated that incarcerated offenders who served a longer sentence revealed a greater dependence on routine and a decreased capability to make decisions independently.

2.9.4 Aggression and Coping

Traditionally, aggressive characteristics and coping styles of individuals differ and are associated with criminal behaviour in various literature (Downey, Johnston, Hansen, Birney,

& Stough, 2010; Ermer, Kahn, Salovey, & Kiehl 2012; Ireland, Brown, & Ballarini, 2006; Suris et al., 2004; Vaughn & Howard, 2005). In a study conducted by Curci, Cabras, Lanciano, Soleti and Raccis (2017), emotion-focused coping was found to have an independent effect on aggressive criminal behaviour. This finding can be explained by the fact that the incarcerated offenders were all incarcerated for violent crimes, had a history of criminal infractions where dysfunctional emotion processing occurred within the incarcerated offenders and they focused excessively on their own personal reactions (Marshall et al., 2000; Pagé, Tourigny, & Renaud, 2010).

Young adult male incarcerated offenders' experience of anger has been shown to decrease the influence of costs on decisions (Bouffard, 2015) and it made them more predisposed for cautious deliberations and ineffective coping and therefore increased their aggressive behaviours by means of numerous psychophysiological mechanisms (Loewenstein & Lerner, 2003; Novaco, 2011). Incarcerated offenders who experienced feelings of emotional numbing or emotional overstimulation, anger with no opportunity to vent and intense self-hatred are more likely to employ self-injury as a coping mechanism (Favazza, 1987). Incarcerated offenders engaging in self-injury are seen as distinct from non-injuring incarcerated offenders and are more prone to display mental and physical pathology, more aggression and violence towards themselves and other individuals and also tend to become involved in disciplinary infractions more often (Smith & Kaminski, 2010).

In addition, a correctional environment that causes high stress levels, holds a danger for violence and consists of an intensely repressive daily routine alienate the incarcerated offender from family and society, and may comprise of environmental risk factors that can be linked to their inability to cope and inflict self-injury (Doty, Smith, & Rojek, 2012). Due to the lack of social control and available coping mechanisms during incarceration, vulnerable incarcerated offenders utilise aggressive behaviours and self-injury to reinforce control over

their own lives (Doty et al., 2012). Black (1993) proposes self-help as the management of a grievance through autonomous aggression that is derived from uncomplicated gestures of disapproval, such as glaring at each other to blood feuds and war.

2.10 Summary

After careful consideration of the literature discussed in this chapter, a number of aspects became clear. Firstly, individuals that lack adequate coping abilities can become immersed in crime that can lead to incarceration in a correctional centre. Correctional centres are strict and controlled environments and serve to accommodate offenders as punishment for the crimes they have committed. Secondly, South African correctional centres are divided into three categories, namely maximum-security correctional centres, medium-security correctional centres, and minimum-security correctional centres. In South Africa, there is a clear division between public- and privately-operated maximum-security correctional centres. Thirdly, young adult male incarcerated offenders tend to lack the necessary coping skills during incarceration and they struggle to deal effectively with the challenges that incarceration causes. Also, young adult male offenders are more inclined to struggle with coping in correctional centres than older incarcerated offenders. Fourthly, healthy coping skills in a correctional centre is crucial, as young adult male incarcerated offenders struggling to cope become involved in maladaptive coping, such as misconduct and violent offences during incarceration. Lastly, aggression and decision-making were linked to coping amongst young adult male incarcerated offenders and can serve as predictor variables of coping.

Chapter 3

Research Methodology

3.1 Introduction

This chapter encompasses a detailed discussion of the research design and research methodology employed in this study. The chapter also focuses on the research sample, measuring instruments, data gathering techniques, research questions, statistical procedures and ethical considerations.

3.2 Research Design

The researcher made use of a quantitative approach and the study was non-experimental in nature. A correlational design (Stangor, 2011, 2015) was the most effective research design to use due to the central goal being to determine the relationship between variables.

Quantitative research is descriptive research that utilises formal measures of behaviour.

These formal measures of behaviour include questionnaires and systematic observation of behaviour, which are designed to be subjected to statistical analysis. One strength of descriptive research is that it attempts to describe the density of everyday behaviour.

Consequently, it is utilised to present a relatively inclusive understanding of current happenings. However, although descriptive research permits us to obtain an idea of what is presently happening, it is inadequate in providing static pictures (Stangor, 2011, 2015).

Quantitative research can be classified into three main classes, namely experimental designs, pre-experimental designs and non-experimental designs. This study made use of a non-experimental design, which is primarily utilised in descriptive research, as the units that have

been selected to participate in the study are measured on all significant variables at a certain time and no manipulation occurs (Maree, 2007). Correlational research includes the measurement of two or more variables as well as an assessment of the relationship among or between these variables. The aim of correlation research is to reveal variables that display systematic relationships with one another. The Pearson Product Moment Correlation coefficient is the most common measure of relationships between variables. A strength of correlational research is that it can be utilised to assess everyday behaviour as it occurs, although it cannot be utilised to identify causal relationships between variables. Furthermore, the possibility exist that neither of the variables caused the other and that some alternative variables accounted for the observed variables to be correlated. Therefore, correlational research is limited to demonstrating relationships between or among variables or to predict future behaviour (Stangor, 2011, 2015).

3.3 Research Sample

Official permission was obtained from the General Human Research Ethics Committee of the Faculty of the Humanities, University of the Free State, and Department of Correctional Services, South Africa, for a previous study (Jordaan, 2014) titled “*The development and evaluation of a life skills programme for young adult offenders*”. The data set of this previous study will be used in the current study. Within this research study, 187 literate young adult male incarcerated offenders were randomly selected by means of the systematic random sampling technique (Stangor, 2011, 2015), which is a probability sampling method. The probability sampling method entails that every *n*th person from the sampling frame was selected randomly (Stangor, 2011, 2015). The age range of the sample was between 22 and 25 years and the participants had long-term sentences. No participant was excluded from the study based on their ethnic group. The following offenders were excluded from this study: (i)

offenders that had a literacy level lower than Grade 8; (ii) offenders that were not able to speak or understand English; and (iii) offenders that were near their date of release from the maximum-security correctional centre. The young adult male incarcerated offenders' literacy level was determined by the help of the Mangaung Correctional Centre (MCC) who identified the incarcerated offenders that had Grade 8 literacy level and higher. The frequencies for the young adult offenders, as illustrated in Table 1, are calculated with regards to their age, ethnicity, mother tongue, school grade, and years of study after school, type of crime, sentence length and sentence already served.

Table 1

Frequency distribution of participants according to age, ethnicity, mother tongue, school grade, years of study after school, type of crime, sentence length and sentence already served

Biographical variable	N	%
<i>Age</i>		
22 years old	6	3.2
23 years old	39	20.9
24 years old	59	31.6
25 years old	83	44.4
<i>Ethnicity</i>		
Black	171	91.4
Coloured	14	7.5
White	2	1.1
<i>Mother tongue</i>		
South Sotho	97	51.9
North Sotho	4	2.1
Xhosa	27	14.4
Zulu	14	7.5
Tswana	27	14.4
Afrikaans	14	7.5
Other	4	2.1
<i>School grade obtained</i>		
Grade 1 – 2	10	5.3
Grade 3 – 4	8	4.3
Grade 5 – 6	18	9.6
Grade 7 – 8	39	20.9
Grade 9 – 10	73	39.0
Grade 11 – 12	39	20.9
<i>Years studied after school</i>		
None	185	98.9
2 years	2	1.1
<i>Type of crime</i>		
Economic	39	20.9
Violent	60	32.1
Sexual	88	47.1
<i>Sentence length</i>		

6 – 10 years	2	1.1
11 – 15 years	82	43.9
16 – 20 years	55	29.4
21 – 25 years	35	18.7
Longer than 25 years	13	7.0
<i>Sentence already served</i>		
1 – 5 years	153	81.8
6 – 10 years	34	18.2

In this research study, 187 young adult male incarcerated offenders were randomly selected to participate. The biographical information attained from the research participants specified that the majority were Black (91.4%), while the rest were Coloured (7.5%) and White (1.1%). The participants' ages ranged between 22 and 25 years. The mean age of the sample was calculated and found to be 24.2 years. The participants' home language was distributed into seven categories, namely South Sotho, North Sotho, Xhosa, Zulu, Tswana, Afrikaans and "Other". According to Table 1, the largest number of participants (51.9%) spoke Southern Sotho, 14.4% were Xhosa, 14.4% Tswana, 7.5% Zulu, 7.5% Afrikaans, 2.1% Northern Sotho and 2.1% of participants spoke other languages. The majority of the participants (47.1%) were sentenced for sexual offences (e.g., rape, groping, sexual abuse of children, torture in a sexual manner and indecent assault), while 32.1% were sentenced for violent offences (e.g., murder, manslaughter and assault) and 20.9% for economic offences (e.g., fraud, money laundering, forgery, bribery and corruption). Most participants (81.8%) had already served out between one and five years of their sentences, while 18.2% had already served out sentences between six and 10 years. Regarding sentence length, most participants (43.9%) were sentenced between 11 and 15 years, while 29.4% received a sentence duration between 16 and 20 years, 18.7% received 21 to 25 years, 7% received 25 years and longer and two participants (1.1%) received sentences between six and 10 years.

3.4 Measuring Instruments

The following instruments were utilised in this study:

- Biographical Questionnaire
- Coping Strategy Indicator (CSI)
- Aggression Questionnaire (AQ)
- The Melbourne Decision-Making Questionnaire (MDMQ)

Each of these measuring instruments will be discussed in more detail.

3.4.1 Biographical Questionnaire

The Biographical Questionnaire was administered in order to collect background information of the young adult male incarcerated offenders. The questions of this questionnaire focused on (i) gender, (ii) age, (iii) ethnicity, (iv) mother tongue, (v) school grade, (vi) years studied after school, (vii) type of sentence, (viii) sentence length and (ix) number of years already incarcerated.

3.4.2 The Coping Strategy Indicator (CSI)

The *Coping Strategy Indicator* (CSI) (Desmond et al., 2006) was used to measure the coping strategies of the incarcerated males. The CSI is a 33-item, self-administered questionnaire that contains three subscales, namely Problem-Solving, Avoidance and Seeking Social Support. The items of the CSI are scaled on a three-point Likert-type scale where 1 indicates “not at all”, 2 “a little” and 3 “a lot” (Amirkhan, 1990, 1994; Joseph & Kuo, 2009; Kirchner, Forns, Munoz, & Pereda, 2008; Marsh, Reynolds, Rogola, Fischer, & Napper, 2010; Shorter-Gooden, 2004; Soderstrom et al., 2001; Sullivan, Schroeder, Dudley,

& Dixon, 2010). The 11 items on the Problem-Solving subscale measure the individual's ability to manipulate his surroundings and the 11 items in the Seeking Social Support subscale measure how much an individual seeks help from others. The 11 items on the Avoidance subscale indicate whether an individual is inclined to avoid situations as part of his coping strategy (Amirkhan, 1990, 1994; Joseph & Kuo, 2009; Kirchner et al., 2008; Marsh et al., 2010; Shorter-Gooden, 2004; Soderstrom et al., 2001; Sullivan et al., 2010). Better coping skills are indicated if higher scores are obtained on the Problem-Solving and Seeking Social Support subscales, while obtaining lower scores on the Avoidance subscale. The Cronbach's alpha coefficients show adequate internal consistency for each subscale ranging from 0.62–0.96 for Avoidance, 0.68–0.98 for Problem-Solving and 0.72–0.98 for Seeking Social Support (Amirkham, 1990, 1994; Desmond et al., 2006; Jordaan, 2014; Jordaan et al., 2018; Soderstrom et al., 2001; Sullivan et al., 2010).

3.4.3 Aggression Questionnaire (AQ)

The *Aggression Questionnaire* (AQ) (Buss & Perry, 1992) was utilised in order to measure the levels of aggression of the incarcerated males. The AQ is a 29-item self-report questionnaire graded on a five-point Likert-type scale where 1 indicates “*extremely uncharacteristic of me*” and 5 “*extremely characteristic of me*”. There are four factors on the AQ, namely Physical Aggression (*nine items*), Verbal Aggression (*five items*), Anger (*seven items*) and Hostility (*eight items*). Higher levels of aggression are indicated if higher scores are obtained on each factor of the AQ (Archer & Webb, 2006; Buss & Perry, 1992; Combs et al., 2006; Daoust, Loper, Magaletta, & Diamond, 2006; Diamond, Wang, & Buffington-Vollum, 2005; Falkenbach, Poythress, Falki, & Manchack, 2007; Gerevich, Bacsikai, & Czobor, 2007; Herzog, Hughes, & Jordan, 2010; Kirsh, Mounts, & Olczak, 2006; Lahm, 2008; Palmer & Thakordas, 2005; Quinsey, Book, & Lalumiere, 2001; Walters,

Ronen, & Rosenbaum, 2010; Scarpa, 2001). The AQ has mostly been utilised on research samples of undergraduate university students or high school learners (Herzog et al., 2010; Hornsveld, Muris, Kraaimaat, & Meesters, 2009; Kirsh et al., 2006; Quinsey et al., 2001; Vigil-Colet, Lorenzo-Seva, Codorniu-Raga, & Morales, 2005). However, the AQ was also utilised by Palmer and Thakordas (2005) on a sample of imprisoned young adult male offenders. Furthermore, Diamond et al. (2005) utilised the questionnaire on mentally ill male offenders and Loots (2010), Jordaan (2014) and Jordaan et al. (2018) administered the questionnaire on male maximum-security offenders in a South African correctional centre. The Cronbach's alpha coefficients have been identified in various studies and indicate internal consistency for each factor ranging from 0.62–0.85 for Anger, 0.71–0.87 for Hostility, 0.62–0.83 Physical Aggression and 0.40–0.90 for Verbal Aggression, with 0.62–0.90 as an indication of high internal consistency for the overall scale (Buss & Perry, 1992; Falkenbach et al., 2007, Gerevich et al., 2007; Jordaan, 2014; Jordaan et al., 2018; Loots, 2010; Moller & Deci, 2010; Ongen, 2010; Palmer & Thakordas, 2005; Scarpa, 2001, Scarpa, Hurley, Shumate, & Haden, 2006).

3.4.4 The Melbourne Decision-Making Questionnaire (MDMQ)

The *Melbourne Decision-Making Questionnaire* (MDMQ) (Mann et al., 1997) was administered in order to measure the young adult male incarcerated offenders' decision-making abilities. The MDMQ consists of four subscales, namely Buckpassing, Procrastination, Vigilance and Hyper-vigilance (Bouckenoghe, Vanderheyden, Mestdagh, & Van Laethem, 2007; Certel et al., 2013; Deemer, Carter, & Lobrano, 2010; Deemer, Martens, & Buboltz, 2010; Di Fabio & Blustein, 2010; Isaksson, Hajdarević, Jutterström, & Hörnsten, 2013; Jurišová & Sarmány-Schuller, 2013; Kamhalová, Halama, & Gurnáková, 2013; Mann et al., 1997; Mann et al., 1998; Umeh & Omari-Asor, 2011). The MDMQ is a 22-item self-

report questionnaire graded on a three-point Likert-type scale where 1 indicates “*not true*”, 2 “*sometimes true*”, and 3 “*true*” based on whether the statement corresponded with their situations (Certel et al., 2013; Di Fabio & Blustein, 2010; Jurišová & Sarmány-Schuller, 2013; Kamhalová et al., 2013; Mann et al., 1997; Mann et al., 1998; Umeh & Omari-Asor, 2011). Buckpassing is the inclination to avoid or escape making decisions by placing the responsibility of making decisions onto others (Certel et al., 2013; Di Fabio & Blustein, 2010; Jurišová & Sarmány-Schuller, 2013; Kamhalová et al., 2013; Mann et al., 1997; Mann et al., 1998; Yates et al., 2010). Procrastination refers to the tendency to put off making decisions (Certel et al., 2013; Di Fabio & Blustein, 2010; Jurišová & Sarmány-Schuller, 2013; Kamhalová et al., 2013; Mann et al., 1997; Yates et al., 2010) and the inability to explore options and change behaviour (Ariely & Wertenbroch, 2002; Murray, 2003). Vigilance is defined as the careful clarification of goals and the evaluation of all the alternatives before decisions are made (Certel et al., 2013; Di Fabio & Blustein, 2010; Jurišová & Sarmány-Schuller, 2013; Kamhalová et al., 2013; Mann et al., 1997; Mann et al., 1998). Hyper-vigilance refers to the frantic search for solutions and impulsive decision-making by choosing the first solution that comes to mind (Certel et al., 2013; Di Fabio & Blustein, 2010; Jurišová & Sarmány-Schuller, 2013; Kamhalová et al., 2013; Mann et al., 1997; Mann et al., 1998). Better or proper decision-making skills are shown if higher scores are attained on the Vigilance subscale, with low scores being attained on the Buckpassing, Hyper-vigilance and Procrastination subscales. The Cronbach’s alpha coefficients have been identified in various studies and indicate adequate internal consistency for each factor ranging from 0.70–0.81 for Buckpassing, 0.67–0.74 for Hyper-vigilance, 0.70–0.81 for Procrastination and 0.73–0.80 for Vigilance (Bouckenooghe et al., 2007; Mann et al., 1997; Mann et al., 1998). According to Jordaan (2014) and Jordaan et al. (2018), the Cronbach

alpha coefficients for the subscales of the MDMQ range between 0.53 and 0.83, as found in a South African sample of young adult male incarcerated offenders.

3.4.5 Internal consistencies for the subscales of the various measuring instruments

The means, standard deviations, skewness, kurtosis as well as the internal consistencies of the various subscales of the measuring instruments are reported in Table 2 for the total group of participants. Cronbach's alpha coefficient (α) was calculated as an indication of the internal consistency of the subscales.

Table 2

Descriptive statistics and reliability data for the CSI, AQ and MDMQ for the young adult male incarcerated offenders (N = 187)

Measures	N	M	SD	α	Skewness	Kurtosis
<i>CSI</i>						
Social Support	187	26.7807	4.38963	0.848	-0.595	-0.288
Problem-Solving	187	28.8877	4.45566	0.869	-1.339	1.119
Avoidance	187	22.1979	3.81542	0.642	0.093	-0.243
<i>AQ</i>						
Physical Aggression	187	21.8877	6.97640	0.691	0.448	-0.366
Verbal Aggression	187	15.2941	4.61812	0.657	-0.168	-0.699
Anger	187	17.5615	4.94597	0.513	0.355	-0.420
Hostility	187	21.0642	7.79345	0.832	0.149	-0.664
<i>MDMQ</i>						
Vigilance	187	9.9465	2.32271	0.784	-1.363	1.354
Avoidance	187	4.1979	2.86401	0.747	0.687	-0.003
Procrastination	187	3.8984	2.54958	0.691	0.465	-0.355
Hyper-vigilance	187	5.0160	2.26349	0.633	-0.194	-0.116

It is evident from Table 2 that the Cronbach's alpha coefficients for the CSI, AQ and MDMQ scales range between 0.513 and 0.869. Therefore, the majority of these scales display acceptable levels of internal consistency (Vogt, 2005) and were thus included in the subsequent analyses, except for the Anger subscale of the AQ that had an unacceptable level of internal consistency. This subscale has been excluded from further statistical analysis in this study. As part of the descriptive statistics in this Table, the researcher investigated

whether the data is normally distributed by calculating the skewness and kurtosis values of the different subscales. According to Kahane (2008), the cut-off point is $> |2|$ for skewness and > 4 for kurtosis. From Table 2 it is evident that the scores on all the subscales are normally distributed. Therefore, all the remaining subscales will be used in the analyses that will follow, except for the subscale Anger that will be excluded from further statistical analysis.

3.5 Data Gathering

Data was gathered from young adult male incarcerated offenders through the administration of the Biographical Questionnaire, Coping Strategy Indicator (CSI), Aggression Questionnaire (AQ) and The Melbourne Decision-Making Questionnaire (MDMQ). The questionnaires were administered in booklet form and returned to the researcher after completion. The researcher was present during the administration of the questionnaires and available to answer any questions that the research participants might have.

3.6 Research Questions

The goal of this research study was to determine which variable(s) are the best predictors of coping amongst male incarcerated offenders in a private South African maximum-security correctional centre.

The following research questions were explored:

- Can the combination of decision-making, aggression, age and type of crime explain a significant percentage of variance in the coping of young adult male incarcerated maximum-security offenders?

- Do any of the individual predictor variables being studied significantly contribute to the variance of coping amongst young adult male incarcerated maximum-security offenders?

3.7 Statistical Procedure

All the data gathered in this research study was analysed by utilising the Statistical Package for the Social Sciences, SPSS version 25 (IBM Incorporated, 2017). Internal consistency reliabilities (Cronbach alphas) were calculated for the various scales in order to ensure reliability. Stangor (2011, 2015) defines statistics as mathematical methods used for systematically organising and analysing data. He also describes a descriptive statistic as a number that represents the characteristics of the data in the sample. Descriptive statistics was done for this study and utilised by the researcher in an attempt to describe the basic patterns found in the data (Neuman, 2014; Stangor, 2011, 2015). Descriptive statistics also provides a summary of the pattern of scores that were observed on a measured variable (Stangor, 2011, 2015), also known as the distribution of the variable (Stangor, 2011, 2015). Furthermore, hierarchical multiple regression analysis was done in order to identify which variable(s) or set of variables explain the highest percentage of variance of coping amongst young adult male incarcerated offenders. Hostility, Physical Aggression, Verbal Aggression, Buckpassing, Hyper-vigilance, Procrastination, Vigilance, Age and Type of Crime were employed as predictor/independent variables, while Seeking Social Support, Avoidance and Problem-Solving served as the criterion/dependent variables. The analytic strategy was to first determine the combined variance of each set of independent variables and how it can be accounted for by the predictor variables. Thereafter, the unique contribution of each independent variable to the variance in coping was investigated. Hierarchical multiple regression refers to the procedure utilised by the researcher when predictor variables are

added to the regression equation in a predetermined order to predict the outcome variable (Stangor, 2011, 2015). The squared multiple correlation coefficient (R^2) represents the percentage of variance in the dependent variable that is responsible for a specific independent variable. In order to determine whether the contributions made by the specific independent variables to the R^2 -value were statistically significant, the researcher made use of the hierarchical F -test. The advantage of a multiple-regression approach is that it allows the researcher to consider how all the predictor (independent) variables combined, relate to the outcome (dependent) variable (Stangor, 2011, 2015).

3.8 Ethical Considerations

Young adult male incarcerated offenders are a vulnerable group of research participants and this study's aim was merely to understand what variables could predict coping in a correctional centre. This study adhered to the rules and regulations of the Code of Conduct constructed by the South African Professional Board of Psychology. Official permission was obtained in order to conduct this research study in a private South African maximum-security correctional centre. The nature and objectives of the research were explained to the participants and informed consent was obtained before the participants were granted permission to partake in this study. Confidentiality and anonymity of the participants were assured during the research process. Voluntary participation was explained to the participants, they could withdraw from the study at any given time during the research process and they did not receive any incentives as motivation to participate in this study. Counselling services was also available to the young incarcerated male offenders who participated, although none of the participants indicated the need for these services.

3.9 Summary

This study aims to determine which variables are the best predictors of coping in young adult male incarcerated offenders in a South African maximum-security correctional centre. A non-experimental correlational research design was used in order to determine which variables predict coping in young adult male incarcerated offenders the best. Adequate internal reliability consistencies were calculated for the subscales of all the measuring instruments, with the exception of one subscale. Hierarchical multiple regression were utilised as the statistical procedure of this study.

Chapter 4

Results

4.1 Introduction

This chapter includes a detailed discussion of the results of the statistical analyses. The chapter starts with a description and discussion of the correlation analysis results. Only correlations with medium to large effect sizes will be discussed. For correlations, Ellis and Steyn (2003) reported that an effect size of 0.1 is small, an effect size of 0.3 is medium and an effect size of 0.5 is large. Furthermore, the hierarchical regression analyses results conducted independently for each of the criterion variables (CSI Social Support, CSI Problem-Solving and CSI Avoidance) will be described and discussed. Only results that are statistically significant and show at least a medium effect size will be discussed in the description of the results. According to Cohen (1992), an effect size of 0.02 is small, an effect size of 0.15 is medium and an effect size of 0.35 is large. Both the 1% and 5%-level of significance were utilised during data analyses.

4.2 Correlation

The Pearson Product Moment correlation coefficients were calculated for the independent (predictor) and dependent (outcome) variables before conducting a regression analyses. With the aim to utilise the Type of Crime variable, the researcher created two categories (Violent crimes coded as 1 versus Non-violent crimes coded as 0) in which the different types of crimes were categorised. Table 3 illustrates the correlation coefficients.

Table 3

Correlations between the CSI subscales and Age, Type of Crime, AQ subscales and MDMQ subscales for young adult male incarcerated offenders (N=187)

Variables	Seeking Social Support	Problem-solving	Avoidance
Age	-0.092	-0.001	-0.054
Type of crime	-0.074	-0.117	-0.022
Physical Aggression	-0.226**	-0.315**	0.204**
Verbal Aggression	-0.071	-0.084	0.266**
Hostility	-0.207**	-0.225**	0.361**
Vigilance	0.530**	0.728**	0.138
Avoidance	-0.115	-0.221**	0.326**
Procrastination	-0.202**	-0.276**	0.271**
Hyper-vigilance	-0.124	-0.192**	0.361**

**p<0.01, *p<0.05

Table 3 illustrates that the Seeking Social Support scale of the CSI displays statistically significant negative correlations with two of the AQ scales, namely Physical Aggression and Hostility. These correlations are statistically significant at the 1% level with small corresponding effect sizes. Thus, the results will not be discussed in further detail. The Seeking Social Support scale displays statistically significant correlations with two scales of the MDMQ, namely Vigilance and Procrastination. These correlations are statistically significant at the 1% level with only a large corresponding effect size (0.530) for Vigilance. The Seeking Social Support scale is positively correlated with the Vigilance scale and this finding seem to suggest that when the young male incarcerated offenders seem to be more vigilant with regards to decision-making that they seem to have better social support.

Table 3 further indicates that the Problem-Solving scale of the CSI displays statistically significant negative correlations with two of the AQ scales, namely Physical Aggression and Hostility. These correlations are statistically significant at the 1% level with only a medium corresponding effect size (0.315) for Physical Aggression. This finding seems to suggest that when their physical aggression levels may decrease that the young adult male incarcerated offenders have healthier problem-solving skills. The Problem-Solving scale displays statistically significant correlations with all the MDMQ scales, namely Vigilance, Avoidance,

Procrastination and Hyper-vigilance. These correlations are statistically significant at the 1% level with only one large corresponding effect size (0.728) for Vigilance. The Problem-Solving scale is positively correlated with the Vigilance scale and this finding suggests that when they appear to be extra vigilant when making decisions that the young adult male incarcerated offenders have healthier problem-solving skills.

Table 3 further illustrates that the Avoidance scale of the CSI is positively correlated with all the scales of the AQ. These correlations are statistically significant at the 1% level with only one medium corresponding effect size (0.361) for Hostility. This finding suggest that when they appear to have reduced levels of hostility that the young adult male incarcerated offender are less focused on avoiding problems. The Avoidance scale of the CSI demonstrates positive correlations with three scales of the MDMQ, namely Avoidance, Procrastination and Hyper-vigilance. These correlations are statistically significant at the 1% level with two medium corresponding effect sizes of 0.326 for Avoidance and 0.361 for Hyper-vigilance. These findings seem to indicate that when young adult male incarcerated offenders are less predisposed to avoid their problems, they appear less convinced (i) to avoid making decisions and (ii) to be hyper-vigilant about making decisions. In the next section the hierarchical regression analysis results will be reported.

4.3 Hierarchical regression analyses

The proportion of the variance in each of the facets of the CSI (Seeking Social Support, Problem-Solving and Avoidance) accounted for by the independent (predictor) variables was investigated. Hierarchical regression analyses were carried out to investigate the contribution of the different sets of variables (biographical, anger and decision-making) to the percentage of variance in coping in conjunction with the contribution of each of the individual variables.

Coping was measured by utilising three different subscales, namely Seeking Social Support, Problem-Solving and Avoidance. Three hierarchical regression analyses were carried out with one of the coping subscales as criterion variable.

The percentage in variance of Seeking Social Support will be discussed next.

4.3.1 Hierarchical regression analysis with Seeking Social Support as criterion variable

The results of the hierarchical regression analysis with Seeking Social Support as the criterion variable are reported in Table 4.

Table 4

Contributions of Age, Type of crime, AQ subscales and MDMQ subscales to R² with Seeking Social Support as Criterion Variable

Variables in equation	R ²	Contribution to R ² : full minus reduced model	F	f ²
1. [Age + TC] + [A1 + A2 + A3] + [D1 + D2 + D3 + D4]	0.347	1-6=0.256	17.348**	0.39
2. [Age + TC] + [A1 + A2 + A3] + D1	0.339	2-6=0.248	67.534**	0.38
3. [Age + TC] + [A1 + A2 + A3] + D2	0.092	3-6=0.001	0.198	-
4. [Age + TC] + [A1 + A2 + A3] + D3	0.099	4-6=0.008	1.598	-
5. [Age + TC] + [A1 + A2 + A3] + D4	0.092	5-6=0.001	0.198	-
6. [Age + TC] + [A1 + A2 + A3]	0.091			
7. [Age + TC] + [D1 + D2 + D3 + D4] + [A1 + A2 + A3]	0.347	7-11=0.018	1.626	-
8. [Age + TC] + [D1 + D2 + D3 + D4] + A1	0.331	8-11=0.002	0.535	-
9. [Age + TC] + [D1 + D2 + D3 + D4] + A2	0.333	9-11=0.004	1.074	-
10. [Age + TC] + [D1 + D2 + D3 + D4] + A3	0.333	10-11=0.004	1.074	-
11. [Age + TC] + [D1 + D2 + D3 + D4]	0.329			
12. [A1 + A2 + A3] + [D1 + D2 + D3 + D4] + [Age + TC]	0.347	12-15=0.041	5.557**	0.06
13. [A1 + A2 + A3] + [D1 + D2 + D3 + D4] + Age	0.328	13-15=0.022	5.827**	0.03
14. [A1 + A2 + A3] + [D1 + D2 + D3 + D4] + TC	0.318	14-15=0.012	3.132**	0.02
15. [A1 + A2 + A3] + [D1 + D2 + D3 + D4]	0.306			

Key: TC = Type of Crime, A1 = Physical Aggression, A2 = Verbal Aggression, A3 = Hostility, D1 = Vigilance,

D2 = Avoidance, D3 = Procrastination, D4 = Hyper-vigilance

**p≤0.01, *p≤0.05

It is clear from Table 4 that the combination of the independent variables is responsible for 34.7% ($F_{9;177} = 10.444$; $p \leq 0.01$) of the variance in the Seeking Social Support scores of the young adult male incarcerated offenders which is at the 1%-level of significance. The MDMQ scales (Vigilance, Avoidance, Procrastination and Hyper-vigilance) as a set of predictors, are responsible for 25.6% of the variance in the Seeking Social Support scores of the young adult male incarcerated offenders. This finding is statistically significant at the 1% level and the large corresponding effect size ($f^2 = 0.39$) suggests that it is of large practical significance. The results from Table 4 further illustrates that only one subscale of the MDMQ (Vigilance) independently made a statistically significant contribution to the explanation of the variance in the young adult male incarcerated offenders' Seeking Social Support. Vigilance respectively accounted for 24.8% ($F_{6;180} = 67.534$; $p \leq 0.01$) of the variance in the participants' Seeking Social Support. The large corresponding effect size ($f^2 = 0.38$) indicates that it is of large practical significance. It is also evident from the relevant correlation coefficients in Table 3 that Vigilance is significantly and positively related to Seeking Social Support amongst the young adult male incarcerated offenders.

Table 4 further indicates that the demographic variables (Age and Type of Crime) as a set of predictors, are responsible for 4.1% of the variance in the Seeking Social Support scores of the young adult male incarcerated offenders. This outcome is statistically significant at the 1% level, however, the corresponding effect size ($f^2 = 0.06$) suggests that it is of little practical significance. Although each individual demographic variable statistically significantly predicted Seeking Social Support, all the effect sizes are small and thus the results will not be discussed in any further detail.

4.3.2 Hierarchical regression analysis with Problem-Solving as criterion variable

The results of the hierarchical regression analysis with Problem-Solving as the criterion variable are reported in Table 5.

Table 5

Contributions of Age, Type of Crime, AQ subscales and MDMQ subscales to R² with Problem-Solving as Criterion Variable

Variables in equation	R ²	Contribution to R ² : full minus reduced model	F	f ²
1. [Age + TC] + [A1 + A2 + A3] + [D1 + D2 + D3 + D4]	0.602	1-6=0.477	53.033**	1.20
2. [Age + TC] + [A1 + A2 + A3] + D1	0.594	2-6=0.469	207.931**	1.16
3. [Age + TC] + [A1 + A2 + A3] + D2	0.144	3-6=0.019	3.995**	0.02
4. [Age + TC] + [A1 + A2 + A3] + D3	0.148	4-6=0.023	4.859**	0.03
5. [Age + TC] + [A1 + A2 + A3] + D4	0.126	5-6=0.001	0.206	-
6. [Age + TC] + [A1 + A2 + A3]	0.125			
7. [Age + TC] + [D1 + D2 + D3 + D4] + [A1 + A2 + A3]	0.602	7-11=0.018	2.668**	0.05
8. [Age + TC] + [D1 + D2 + D3 + D4] + A1	0.586	8-11=0.002	0.865	-
9. [Age + TC] + [D1 + D2 + D3 + D4] + A2	0.593	9-11=0.009	3.958**	0.02
10. [Age + TC] + [D1 + D2 + D3 + D4] + A3	0.584	10-11=0.000	0.000	-
11. [Age + TC] + [D1 + D2 + D3 + D4]	0.584			
12. [A1 + A2 + A3] + [D1 + D2 + D3 + D4] + [Age + TC]	0.602	12-15=0.033	4.892**	0.08
13. [A1 + A2 + A3] + [D1 + D2 + D3 + D4] + Age	0.573	13-15=0.004	1.668	-
14. [A1 + A2 + A3] + [D1 + D2 + D3 + D4] + TC	0.594	14-15=0.025	10.961**	0.06
15. [A1 + A2 + A3] + [D1 + D2 + D3 + D4]	0.569			

Key: TC = Type of Crime, A1 = Physical Aggression, A2 = Verbal Aggression, A3 = Hostility, D1 = Vigilance,

D2 = Avoidance, D3 = Procrastination, D4 = Hyper-vigilance

**p≤0.01, *p≤0.05

Table 5 illustrates that the combination of the independent variables are responsible for 60.2% ($F_{9;177} = 29.754; p \leq 0.01$) of the variance in the Problem-Solving scores of the young adult male incarcerated offenders which is significant at the 1%-level. The MDMQ scales (Vigilance, Avoidance, Procrastination and Hyper-vigilance) as a set of predictors, are responsible for 47.7% of the variance in the Problem-Solving scores of the offenders. This finding is statistically significant at the 1% level and the large corresponding effect size ($f^2 = 1.20$) indicates that it is of large practical significance. The results from Table 5 further

illustrate that three of the subscales of the MDMQ (Vigilance, Avoidance and Procrastination) independently made a statistically significant contribution to the explanation of the variance in the young adult male incarcerated offenders' Problem-Solving. Vigilance, Avoidance and Procrastination respectively accounted for 46.9% ($F_{6,180} = 207.931$; $p \leq 0.01$); 1.9% ($F_{6,180} = 3.995$; $p \leq 0.01$); and 2.3% ($F_{6,180} = 4.859$; $p \leq 0.01$) of the variance in the participants' Problem-Solving. The large corresponding effect size for Vigilance ($f^2 = 1.16$) indicates that it is of large practical significance. The corresponding effect sizes for Avoidance and Procrastination recommend that these findings are of limited practical significance and no further discussion of the findings will follow. It is evident from the relevant correlation coefficients in Table 3 that Problem-Solving is positively related to Vigilance.

Table 5 further suggests that the AQ scales (Physical Aggression, Verbal Aggression and Hostility) as a set of predictors, are responsible for 1.8% of the variance in the Problem-Solving scores of the young adult male incarcerated offenders. This finding is statistically significant at the 1% level. However, the corresponding effect sizes for the set of variables and individual variables are small and thus these findings will not be discussed in further detail.

In accordance to Table 5, the demographic variables (Age and Type of Crime) as a set of predictors, are responsible for 3.3% of the variance in the Problem-Solving scores of the young adult male incarcerated offenders. This finding is statistically significant at the 1% level. However, the corresponding effect sizes for the set of variables and individual variable (Type of crime) is small and thus no further discussion of these findings will follow.

4.3.3 Hierarchical regression analysis with Avoidance as criterion variable

The results of the hierarchical regression analysis with Avoidance as the criterion variable are discussed in Table 6.

Table 6

Contributions of Age, Type of Crime, AQ subscales and MDMQ subscales to R² with Avoidance as Criterion Variable

Variables in equation	R ²	Contribution to R ² : full minus reduced model	F	f ²
1. [Age + TC] + [A1 + A2 + A3] + [D1 + D2 + D3 + D4]	0.318	1-6=0.182	11.809**	0.27
2. [Age + TC] + [A1 + A2 + A3] + D1	0.203	2-6=0.067	15.132**	0.08
3. [Age + TC] + [A1 + A2 + A3] + D2	0.204	3-6=0.068	15.377**	0.09
4. [Age + TC] + [A1 + A2 + A3] + D3	0.167	4-6=0.031	6.699**	0.04
5. [Age + TC] + [A1 + A2 + A3] + D4	0.186	5-6=0.050	11.057**	0.06
6. [Age + TC] + [A1 + A2 + A3]	0.136			
7. [Age + TC] + [D1 + D2 + D3 + D4] + [A1 + A2 + A3]	0.318	7-11=0.078	6.748**	0.11
8. [Age + TC] + [D1 + D2 + D3 + D4] + A1	0.251	8-11=0.011	2.629*	0.02
9. [Age + TC] + [D1 + D2 + D3 + D4] + A2	0.294	9-11=0.054	13.691**	0.08
10. [Age + TC] + [D1 + D2 + D3 + D4] + A3	0.304	10-11=0.064	16.480**	0.09
11. [Age + TC] + [D1 + D2 + D3 + D4]	0.240			
12. [A1 + A2 + A3] + [D1 + D2 + D3 + D4] + [Age + TC]	0.318	12-15=0.010	1.298	-
13. [A1 + A2 + A3] + [D1 + D2 + D3 + D4] + Age	0.314	13-15=0.006	1.557	-
14. [A1 + A2 + A3] + [D1 + D2 + D3 + D4] + TC	0.310	14-15=0.002	0.516	-
15. [A1 + A2 + A3] + [D1 + D2 + D3 + D4]	0.308			

Key: TC = Type of Crime, A1 = Physical Aggression, A2 = Verbal Aggression, A3 = Hostility, D1 = Vigilance,

D2 = Avoidance, D3 = Procrastination, D4 = Hyper-vigilance

**p≤0.01, *p≤0.05

Table 6 displays that the combination of the independent variables is responsible for 31.8% ($F_{9;177} = 9.153; p \leq 0.01$) of the variance in the Avoidance scores of the young adult male incarcerated offenders which is significant at the 1% level. The MDMQ scales (Vigilance, Avoidance, Procrastination and Hyper-vigilance) as a set of predictors, are responsible for 18.2% of the variance in the Avoidance scores of the young adult male incarcerated offenders. This finding is statistically significant at the 1% level and the medium corresponding effect size ($f^2 = 0.27$) recommends that it is of medium practical

significance. The results from Table 6 further indicate that all the MDMQ subscales (Vigilance, Avoidance, Procrastination and Hyper-vigilance) independently make a statistically significant contribution to the explanation of the variance in the young adult male incarcerated offenders' Avoidance. Contrariwise, the corresponding effect sizes for the individual independent variables are small and therefore these findings will not be discussed in further detail.

Table 6 also illustrates that the AQ scales (Physical Aggression, Verbal Aggression, and Hostility) as a set of predictors, are responsible for 7.8% of the variance in the Avoidance scores of the young adult male incarcerated offenders. This finding is statistically significant at the 1% level and the small corresponding effect size ($f^2 = 0.11$) suggests that it is of little practical significance. All the AQ subscales independently made a statistically significant contribution to the explanation of the variance in the young adult male incarcerated offenders' Avoidance. However, the effect sizes for these individual predictor variables are small and therefore no further discussion of these findings will follow.

4.4 Summary

The results of the statistical analyses were discussed in this chapter. The combination of the predictor variables (Age, Type of Crime, MDMQ scales and AQ scales) significantly predicted all aspects of the CSI (Seeking Social Support, Problem-Solving and Avoidance). Vigilance was the only solitary predictor variable that significantly predicted Seeking Social Support and Problem-Solving with large and medium corresponding effect sizes, respectively. Vigilance positively correlated with both Seeking Social Support and Problem-Solving. In Chapter 5, the results reported in this chapter will be further discussed in the context of the relevant literature.

Chapter 5

Discussion, Conclusions, Limitations and Recommendations

5.1 Introduction

This chapter encompasses a conclusive discussion from the results attained by the research study as well as a discussion of its implications. The results are reported based on a thorough exploration of and connection with the literature review from Chapter 2. This research study aimed to investigate which predictor variable(s) or a combination of predictor variables (Aggression, Decision-making, Type of Offence and Age) best predicted coping amongst young adult male incarcerated offenders in a South African maximum-security correctional centre. Attention was given to the reliability of the various measuring instruments that were utilised in order to measure the various variables. These discussions will be followed by the conclusion, limitations of the study and recommendations for future research.

5.2 Discussion of the Results

The next sections include detailed discussions of the measuring instruments and results of the research study by comparing it to existing literature.

5.2.1 Discussion of measuring instruments

Various measuring instruments were used to collect the necessary data. The measuring instruments that were utilised, included the Coping Strategy Indicator (CSI), the Aggression Questionnaire (AQ), the Melbourne Decision-Making Questionnaire (MDMQ) as well as a Biographical Questionnaire. Table 2 (p. 78) revealed the Cronbach's α coefficients for the

various measuring instruments. It is evident from Table 2 that the Cronbach's alpha coefficients for the CSI, AQ and MDMQ scales ranged between 0.513 and 0.869. Most of these scales displayed acceptable levels of internal consistency (Vogt, 2005) and were included in the analyses, with the exception of the Anger subscale of the AQ that had an unacceptable level of internal consistency and it was therefore excluded from the statistical analysis.

With regards to the Coping Strategy Indicator (CSI), the Cronbach's alpha coefficients revealed adequate internal reliability consistencies for all the subscales with internal consistencies ranging from 0.848 for Social Support, 0.869 for Problem-Solving and 0.642 for Avoidance. These findings are consistent with the results of Jordaan (2014) and Jordaan et al. (2018), which indicated alphas ranging from 0.68–0.90 for Problem-Solving, 0.72–0.86 for Seeking Social Support and 0.62–0.72 for Avoidance. These findings also resemble the findings of previous research studies (Desmond et al., 2006; Soderstrom et al., 2001; Sullivan et al., 2010).

In the Aggression Questionnaire (AQ) administered in this study, the internal consistency reliability of each factor were calculated as 0.691 for Physical Aggression, 0.657 for Verbal Aggression, 0.513 for Anger and 0.832 for Hostility. These findings are consistent with alpha coefficients generated by other research studies (Buss & Perry, 1992; Jordaan, 2014; Jordaan et al., 2018; Loots, 2010; Moller & Deci, 2010; Ongen, 2010; Palmer & Thakordas, 2005; Samani, 2013; Scarpa, Hurley, Shumate, & Haden, 2006).

The Melbourne Decision-Making Questionnaire (MDMQ) has internal reliability consistencies ranging from 0.784 for Vigilance, 0.747 for Avoidance, 0.691 for Procrastination and 0.633 for Hyper-vigilance. These results are consistent with alpha coefficients generated by past researchers (Bouffard, 2015; Clarke & Felson, 1993; Cornish

& Clarke, 1987; Jordaan, 2014; Jordaan et al., 2018; McEwen, 2002; Pratt & Cullen, 2005; Thomas & Wilson, 2004; Wilson, 2004b; Wilson, Friedman, & Lindy, 2001; Wilson & Thomas, 2004).

5.2.2 Correlation between Seeking Social Support and Vigilance

This study revealed a statistically and practically significant positive correlation between the Seeking Social Support (CSI subscale) and Vigilance (MDMQ) subscale. This finding indicates that when the Vigilance of the young adult male incarcerated offenders increases, their Social support also increases. Therefore, if young adult male incarcerated offenders have higher levels of vigilance when they make decisions, they tend to receive higher levels of social support from family, fellow incarcerated males and social workers, for example, as a means to cope within the correctional environment. This finding is consistent with previous literature that proposes that perceived social support impacts individuals' decision-making and choice of coping strategy, which can either decrease or increase the impact of social support on their emotional well-being. According to Mann et al. (1988), individuals who receive vigilant decision-making training is more likely to show higher self-esteem when making decisions and their negative coping styles evidently decrease. An individual utilising vigilance in decision-making is viewed as knowledgeable regarding which route to follow, thus also resulting in a positive self-esteem (Josephs et al., 1992). The more individuals are faced with cognitively complex judgement tasks where they do not receive adequate guidance or support, the more inclined the individual will be to rely on inappropriate cues or predetermined biases and the lower the chances of making appropriate decisions (Payne et al., 1993). Gullone et al. (2000) stated that incarcerated offenders who served a longer sentence displayed a greater dependence on routine and a decreased capability to make decisions independently.

5.2.3 Correlation between Problem-Solving and Physical Aggression

In this study, a statistically and practically significant negative correlation was found between Problem-Solving (CSI subscale) and Physical Aggression (AQ subscale). This finding indicates that when young adult male incarcerated offenders' physical aggression decreases, their problem-solving capabilities increase. Thus, when young adult male incarcerated offender's physical aggression decreases, they are more prone to utilise positive problem-solving as a means of coping in the correctional environment. This finding is consistent with previous literature that states that traditionally, aggressive characteristics and coping styles of individuals differ and are associated with criminal behaviour (Downey et al., 2010; Ermer et al., 2012; Ireland et al., 2006; Suris et al., 2004; Vaughn & Howard, 2005). Young adult male incarcerated offenders' experience of anger has been shown to decrease the influence of costs on decisions (Bouffard, 2015) and therefore led to an increase in aggressive behaviours by means of numerous psychophysiological mechanisms (Novaco, 2011). Bouffard (2015) proposes that many negative emotions, such as aggression, leads to more cautious decision-making and poorer coping abilities amongst young adult male incarcerated offenders. Due to the lack of social control and the availability of coping mechanisms during incarceration, vulnerable incarcerated offenders utilise aggressive behaviours and self-injury to reinforce control over their own lives (Doty et al., 2012). Loewenstein and Lerner (2003) argued that various earlier studies conducted on the impact of emotional valence (e.g., anger), found that the experience of negative emotions in general, predisposed more vigilant deliberations and ineffective coping. Aggression amongst young adult male incarcerated offenders leads to fast, experiential decision-making and risk seeking behaviour, which can be detrimental to their coping abilities (Bouffard, 2015). At extreme levels of anger, young adult male incarcerated offenders may not care about the potential effects and consequences of their offences and evidently act in an aggressive manner (Bouffard, 2015). Anger and

aggression influence the likelihood of offending by altering the perceptions of young adult male incarcerated offenders and the potential costs of crime. Even modest levels of aggression minimise the cost perceptions of young adult male incarcerated offenders (Bouffard, 2015). Anger also reduces young adult male incarcerated offenders' ability to pay attention to the consequences of their offences and is directly linked to misconduct (Bouffard, 2015).

5.2.4 Correlation between Problem-Solving and Vigilance

This study revealed a positive statistically and practically significant correlation between Problem-Solving (CSI subscale) and Vigilance (MDMQ subscale). This finding indicates that when young adult male incarcerated offenders' Vigilance increases, their Problem-Solving capabilities also increases. Thus, when the young adult male incarcerated offenders' vigilance increases when making decisions, they tend to utilise better problem-solving skills in order to cope within the correctional environment. In accordance to previous literature, an individual utilising vigilance when making decisions is viewed as knowledgeable regarding which route to follow, resulting in a positive self-esteem (Josephs et al., 1992). Enhanced problem-solving skills amongst young adult male incarcerated offenders can positively impact their ability to think rationally, control their impulses, solve their problems and interact with each other in a positive manner (Coylewright, 2004). When young adult male incarcerated offenders make better decisions, it can have a positive impact on their interaction with other offenders and staff during their incarceration period (Loewenstein & Lerner, 2003).

5.2.5 Correlation between Avoidance and Hostility

This study found that there is a positive statistically and practically significant correlation between the Avoidance (CSI subscale) and Hostility (MDMQ subscales). This finding indicates that when young adult male incarcerated offenders' Hostility decreases, their Avoidance also decreases. Therefore, when young adult male incarcerated offenders' levels of hostility decrease when they need to make decisions, they tend to make less use of avoidance as a coping strategy in the correctional environment. Previous literature is consistent with this finding. Sim (1990) stated that violence is the main element in obtaining a social life in a correctional environment, with physical fights, victimisation and bullying being the norm and being institutionalised and participating in symbolic rituals are characteristic of the hostile correctional environment (Camp et al., 2003; De Vigianni, 2007; Trulson, 2007). Sim (1994) also argued that incarceration is effectively 'double punishment' since it deprives young adult male incarcerated offenders of their liberty and causes significant physical and psychological distress (De Vigianni, 2007). Utilising Avoidance in an attempt to cope includes cognitive and behavioural strategies that tries to escape, avoid or deny stressors (Herman-Stahl et al., 1995). Individuals that struggle with anxiety while faced with a stressor tend to avoid and escape as a means of coping (Jin et al., 2007, 2008). In general, young adult male incarcerated offenders lack mature coping skills and are viewed as ineffectual individuals who express maladaptive coping mechanisms, such as aggressive behaviour, hostility and denial that usually increases their problems (Soderstrom et al., 2001).

5.2.6 Correlation between Avoidance (Coping) and Avoidance (Decision-making)

In this study, a positive statistically and practically significant correlation has been found between Avoidance (CSI subscale) and Avoidance (MDMQ subscale). This finding is an indication that when young adult male incarcerated offenders are less inclined to avoid

making decisions, they utilise less avoidance as a means of coping in the correctional environment. This finding is consistent with other recent studies that indicate that solving problems inadequately through emotion-focused coping and avoidance-coping is associated with a criminal lifestyle in general and it is also linked to recidivism in sexual offenders (Hanson et al., 2007). Individuals who utilise emotion-focused coping rely more on avoidance-coping when they experience stressful encounters and negative affect (Baker & Berenbaum, 2007; Eaton & Bradley, 2008). Therefore, avoidance-coping has been viewed to impair an individual's ability to adjust when they experience stress (Jordan et al., 2002; Lazarus & Folkman, 1984; Skinner et al., 2003; Staw et al., 1981). In general, avoidance-coping is linked to negative adjustment outcomes (Carver & Scheier, 1994; Stanton et al., 2000). Avoidance-coping is also characterised by an individual's behavioural and cognitive attempts to stop them from thinking about a stressful event or stressor (Carver et al., 1989) and it entails avoiding a stressful encounter by participating in a task that is not related to the stressor (Clark et al., 1999; Endler & Parker, 1990, 1999; Fledderus et al., 2010). Utilising avoidance to cope includes cognitive and behavioural strategies that attempt to escape, avoid or deny stressors (Herman-Stahl et al., 1995). Individuals that struggles with anxiety while faced with a stressor, tend to avoid and escape as a means of coping (Jin et al., 2007, 2008). Self-blame has been classified as a type of avoidant coping strategy (Schwartz et al., 2008) and has been strongly linked to psychological distress (David et al., 2006; Shaw, Han, Hawkins, McTavish, & Gustafson, 2008).

5.2.7 Correlation between Avoidance and Hyper-vigilance

This study revealed a positive statistically and practically significant correlation between Avoidance (CSI subscale) and Hyper-vigilance (MDMQ subscale). This finding is an indication that when Hyper-vigilance decreases, Avoidance decreases too. Therefore, when

young adult male incarcerated offenders are less inclined to use hyper-vigilance when making decisions, they will utilise less avoidance as a means of coping in the correctional environment. In accordance to this finding, utilising hyper-vigilance as a coping strategy is embodied by a desperate, partial exploration of information. When utilising hyper-vigilance as a coping strategy, the consequences of the decision are not carefully considered and could lead to poor decision-making. Hyper-vigilance is defined as an increased state of vigilance and awareness that may be caused by fear and anxiety, as well as certain mental health conditions. People experiencing hypervigilance typically exhibit symptoms as an attempt to avoid danger (Colman, 2006). Janis and Mann (1977) describe hyper-vigilance as a panic-like state where the individual who is making the decision is rapidly thinking about the unpleasant alternatives. As a result of this rapid decision-making, individuals that is susceptible to hyper-vigilance struggle to distinguish between option information. Hyper-vigilance is also viewed as a maladaptive coping style, as it does not result in optimal outcomes for the individual (Creyer & Kozup, 2003).

5.3 Results of the Hierarchical regression analyses

Below follows a discussion of each statistical and practical significant predictor of coping.

5.3.1 Hierarchical regression analysis with Seeking Social Support as criterion variable

This study revealed that a combination of all the independent (predictor) variables statistically and practically significantly accounted for 34.7% of the variance of the Social Support scores of the young adult male incarcerated offenders. This indicates that the combination of Type of Crime, Age, Physical Aggression, Verbal Aggression, Hostility, Vigilance, Avoidance, Procrastination and Hyper-vigilance predict Seeking Social Support

amongst young adult male incarcerated offenders. It was further discovered that Vigilance (MDMQ subscale) is the only independent (predictor) variable that had a statistically and practically significant influence on the explanation of the variance in the young adult male incarcerated offenders' social support. Seeking social support is seen as a "buffering effect" as it serves as a protective function when individuals experience intense degrees of stress (Cohen & Mckay, 1984) and social support delivers positive changes in individuals' lives (Bozo et al., 2009). It also improves emotional well-being (Dunkel-Schetter, 1984; Holland & Holahan, 2003). Various potential manners exist on how social support can impact a victim's coping strategies (e.g. individuals who consist of a strong social support system may be more inclined to utilise it to help them in applying adaptive coping strategies) (Kim et al., 2010; Lazarus, 1993; Lazarus & Folkman, 1984; Littleton & Breitkopf, 2006; Silver & Wortman, 1980). Perceived social support impacts the decision-making of individuals, including their choice of coping strategy, which can either decrease or increase the impact of social support on their emotional well-being. According to O'Brien and DeLongis (1997), adequate social support improves emotional well-being by motivating individuals to utilise positive reassessment of their physical health (Holohan et al., 1995; Thoits, 1986). Social support influences young adult male incarcerated offenders' behaviours in multiple ways and it acts as a facilitator of self-control amongst offenders (Jiang et al., 2002; Pratt & Godsey, 2003). Consistent social support decreases offender rule violations, strengthens family ties and reduces young adult male incarcerated offenders' stress and pains of incarceration, thus leading to mediation of rule violations and increased positive behaviour in a correctional centre (Jiang et al., 2002).

5.3.2 Hierarchical regression analysis with Problem-Solving as criterion variable

The results in this research study showed that a combination of all the independent (predictor) variables statistically and practically significantly accounted for 60.2% of the variance of Problem-Solving of the young adult male incarcerated offenders. This indicates that the combination of Type of Crime, Age, Physical Aggression, Verbal Aggression, Hostility, Vigilance, Avoidance, Procrastination and Hyper-vigilance predict Problem-Solving amongst young adult male incarcerated offenders. It is also clear that Vigilance (MDMQ subscale) is the only independent (predictor) variable that has a statistically and practically significant influence in the explanation of the variance in the young adult male incarcerated offenders' problem-solving. Enhanced problem-solving skills amongst young adult male incarcerated offenders can positively impact their ability to think rationally, it can control their impulses, solve their problems and enable them to interact with each other in a positive manner (Coylewright, 2004). Cautious decision-making skills caused by negative emotions, such as anger and fear, may lead to misconduct in correctional centres amongst young male incarcerated offenders (Bouffard, 2008). When young adult male incarcerated offenders make better decisions, it can positively impact their interaction with other offenders and staff during their incarceration period (Loewenstein & Lerner, 2003).

5.3.3 Hierarchical regression analysis with Avoidance as criterion variable

In this study it was also discovered that only the combination of all the independent (predictor) variables statistically and practically significantly accounted for 31.8% of the variance of Avoidance amongst the young adult male incarcerated offenders. This finding indicates that the combination of Type of Crime, Age, Physical Aggression, Verbal Aggression, Hostility, Vigilance, Avoidance, Procrastination and Hyper-vigilance predict Avoidance amongst young adult male incarcerated offenders. None of the independent

(predictor) variables on their own predicted Avoidance amongst the young adult male incarcerated offenders.

5.4 Limitations

After the completion of this study, the following limitations became clear (see discussion below).

Generalisation of the results is a limitation, as this study only applies to young adult male incarcerated offenders (aged between 22 and 25 years) situated in one private South-African maximum-security correctional centre. For this reason, the results can only be generalised to young adult male incarcerated offenders in private maximum-security correctional centres and not to similar offenders found in public South African correctional centres. There is only limited research available focusing on the South African context and the need to improve the coping skills of young male incarcerated offenders, which attempts to enable them to cope effectively in correctional centres. The measuring instruments utilised in the research study were based on self-report measures that the young adult male incarcerated offenders could have mastered in such a way that it represented them as better individuals than what they really were. The transparency of self-report assessment measuring methods is a concern because participants can easily determine the true intent of these instruments. For measure validity purposes, it is required from the participants to report their experiences as accurately and honestly as possible. This can also be problematic in a correctional setting where the young adult male incarcerated offenders are encouraged to distort their answers as they are viewed as deceptive individuals who will represent themselves better than what they truly are (Foley, Hartman, Dunn, Smith, & Goldberg, 2002; Hare 1991, 2011; Seager, 2005). In this research study, the assessment data were directly used to establish coping skills with regards to aggression, decision-making, age and type of crime. Therefore, the possibility does exist

that the young adult male incarcerated offenders completed the self-report measures with the purpose of portraying themselves in socially desirable ways.

Another limitation pertaining to the Coping Strategy Indicator (CSI) included it not inherently measuring the emotion-focused coping of the participants. This is a limitation as previous research has argued that emotion-focused coping is the most ideal and effective form of coping amongst incarcerated offenders. This study however could not verify this with a group of maximum-security offenders in a private correctional centre as the measuring instrument did not account for this.

5.5 Recommendations

The recommendations discussed in this section are made in accordance to the limitations that were identified after the research study were completed.

In order to ensure generalisability, it is recommended that the study is replicated and applied to a broader age range of adult male incarcerated offenders in more than one maximum-security correctional centre in South Africa and to focus on larger samples of young adult male incarcerated offenders. Another recommendation entails replicating this study and applying it to both private maximum-security correctional centre offenders as well as public correctional centres offenders in an attempt to determine the differences in coping between these two sets of incarcerated offenders. Furthermore, to ensure that the measuring instruments are valid, it is recommended that objective measures, including self-reporting measures, should be implemented in order to obtain more valid data. It is further recommended that the coping skills of young adult male incarcerated offenders, or incarcerated offenders in general, should be studied and improved to enable them to effectively deal with the challenges and obstacles encountered in a correctional environment.

Also, different variables should be applied, as some of the current variables did not deliver practically significant results and also to determine if they predict coping in a more practically significant manner. In addition, this study should also be replicated and applied to both female and male offenders in order to compare the differences in coping styles between the genders.

Furthermore, it is recommended that researchers make use of an instrument that measures emotion-focused coping in order to validate or debunk previous research which highlights that this form of coping is most ideal amongst incarcerated offender populations.

5.6 Summary

A discussion of the measuring instruments was reported where Cronbach alpha coefficients for the Coping Strategy Indicator (CSI), the Aggression Questionnaire (AQ) and the Melbourne Decision-Making Questionnaire (MDMQ) revealed scales ranging from 0.513–0.869. Therefore, most of these scales displayed acceptable levels of internal consistency reliability, except for the Anger subscale of the AQ. Statistically and practically positive correlations were reported between Seeking Social Support (CSI subscale) and Vigilance (MDMQ subscale), Problem-Solving (CSI subscale) and Vigilance (MDMQ subscale), Avoidance (CSI subscale) and Hostility (MDMQ subscale), Avoidance (CSI subscale) and Avoidance (MDMQ subscale) and Avoidance (CSI subscale) and Hyper-vigilance (MDMQ subscale). A correlation between Problem-Solving and Physical Aggression were reported and a statistically and practically significant negative correlation was found between Problem-Solving (CSI subscale) and Physical Aggression (AQ subscale). A hierarchical regression analyses with Seeking Social Support, Problem-Solving and Avoidance as criterion variables were reported and it revealed that a combination of all the

independent predictor variables accounted for the variance of the above mentioned criterion variables' scores of the young adult male incarcerated offenders. However, Vigilance (MDMQ subscale) was the only independent (predictor) variable that had a statistically and practically significant influence on the explanation of the variance in the young adult male incarcerated offenders' Social Support and Problem-Solving. This finding implies that young adult offenders that are more vigilant regarding decision-making, are more inclined to solve problems better and to make use of social support in order to cope better. Furthermore, a discussion on the limitations of the study and recommendations for future research have also been included.

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Appendix A: The Coping Strategy Indicator (CSI)

Please rate each statement with how it reflects to you dealing with stressful events, using the scale below to make your choice.

1 Not at all

2 A little

3 A lot

No	Statement	Not at all	A little	A lot
01.	Described your feelings to a friend	1	2	3
02.	Rearranged things so your problem could be solved	1	2	3
03.	Thought of many ideas before deciding what to do	1	2	3
04.	Tried to distract yourself from the problem	1	2	3
05.	Accepted sympathy and understanding from someone	1	2	3
06.	Did all you could to keep others from seeing how bad things really were	1	2	3
07.	Talked to people about the situation because talking about it made you feel better	1	2	3
08.	Set some goals for yourself to deal with the situation	1	2	3
09.	Weighed up your options carefully	1	2	3
10.	Daydreamed about better times	1	2	3
11.	Tried different ways to solve the problem until you found one that worked	1	2	3
12.	Talked about fears and worries to a relative or friend	1	2	3
13.	Spent more time than usual alone	1	2	3
14.	Told people about the situation because talking about it helped you come up with solutions	1	2	3
15.	Thought about what needs to be done to straighten things up	1	2	3
16.	Turned your full attention to solving the problem	1	2	3
17.	Formed a plan in your mind	1	2	3

18.	Watched television more than usual	1	2	3
19.	Went to someone friend or professional to help you feel better	1	2	3
20.	Stood firm and fought for what you wanted in the situation	1	2	3
21.	Avoided being with people in general	1	2	3
22.	Buried yourself in a hobby or sports activity to avoid the problem	1	2	3
23.	Went to a friend to help you feel better about the problem	1	2	3
24.	Went to a friend for advice about how to change the situation	1	2	3
25.	Accepted sympathy and understanding from friends who had the same problem	1	2	3
26.	Slept more than usual	1	2	3
27.	Fantasized about how things could have been different	1	2	3
28.	Identified with characters in movies or novels	1	2	3
29.	Tried to solve the problem	1	2	3
30.	Wished that people would just leave you alone	1	2	3
31.	Accepted help from a friend or relative	1	2	3
32.	Sought reassurance from those who know you best	1	2	3
33.	Tried to carefully plan a course of action rather than acting on impulse	1	2	3

Appendix B: The Aggression Questionnaire (AQ)

By using the 5 point scale on the right, indicate how uncharacteristic or characteristic each of the following statements is in describing you.

1 = extremely uncharacteristic of me

2 = somewhat uncharacteristic of me

3 = neither uncharacteristic or characteristic of me

4 = somewhat characteristic of me

5 = extremely characteristic of me

1. Some of my friends think I am a hothead	1	2	3	4	5
2. If I have to resort to violence to protect my rights, I will	1	2	3	4	5
3. When people are especially nice to me, I wonder what they want	1	2	3	4	5
4. I tell my friends openly when I disagree with them	1	2	3	4	5
5. I have become so mad that I have broken things	1	2	3	4	5
6. I can't help getting into arguments when people disagree with me	1	2	3	4	5
7. I wonder why sometimes I feel so bitter about things	1	2	3	4	5
8. Once in a while, I can't control the urge to strike another person	1	2	3	4	5
*9. I am an even-tempered person	1	2	3	4	5
10. I am suspicious of overly friendly strangers	1	2	3	4	5
11. I have threatened people I know	1	2	3	4	5
12. I flare up quickly but get over it quickly	1	2	3	4	5
13. Given enough provocation, I may hit another person	1	2	3	4	5
14. When people annoy me, I may tell them what I think of them	1	2	3	4	5
15. I am sometimes eaten up with jealousy	1	2	3	4	5
*16. I can think of no good reason for ever hitting a person	1	2	3	4	5
17. At times I feel I have gotten a raw deal out of life	1	2	3	4	5
18. I have trouble controlling my temper	1	2	3	4	5
19. When frustrated, I let my irritation show	1	2	3	4	5
20. I sometimes feel that people are laughing at me behind my back	1	2	3	4	5
21. I often find myself disagreeing with people	1	2	3	4	5
22. If somebody hits me, I hit back	1	2	3	4	5
23. I sometimes feel like a powder keg ready to explode	1	2	3	4	5
24. Other people always seem to get the breaks	1	2	3	4	5
25. There are people who pushed me so far that we came to blows	1	2	3	4	5
26. I know that "friends" talk about me behind my back	1	2	3	4	5
27. My friends say that I'm somewhat argumentative	1	2	3	4	5
28. Sometimes I fly off the handle for no good reason	1	2	3	4	5
29. I get into fights a little more than the average person	1	2	3	4	5

Appendix C: The Melbourne Decision-Making Questionnaire (MDMQ)

Please rate each statement with how it reflects to how you generally approach decision-making, using the scale below to make your choice.

0 Not true for me

1 Sometimes true

2 True for me

No	Statement	Not true for me	Sometimes true	True for me
01.	I like to consider all of the alternatives	0	1	2
02.	I try to find out the disadvantages of all alternatives	0	1	2
03.	I consider how best to carry out a decision	0	1	2
04.	When making decisions I like to collect a lot of information	0	1	2
05.	I try to be clear about my objectives before choosing	0	1	2
06.	I take a lot of care before choosing	0	1	2
07.	I avoid making decisions	0	1	2
08.	I do not make decisions unless I really have to	0	1	2
09.	I prefer to leave decisions to others	0	1	2
10.	I do not like to take responsibility for making decisions	0	1	2
11.	If a decision can be made by me or another person I let the other person make it	0	1	2
12.	I prefer that people who are better informed decide for me	0	1	2
13.	I waste a lot of time on trivial matters before getting to the final decision	0	1	2
14.	Even after I have made a decision I delay acting upon it	0	1	2
15.	When I have to make a decision I wait a long time before starting to think about it	0	1	2
16.	I delay making decisions until it is too late	0	1	2
17.	I put off making decisions	0	1	2

18.	Whenever I face a difficult decision I feel pessimistic about finding a good solution	0	1	2
19.	I feel as if I am under tremendous time pressure when making decisions	0	1	2
20.	The possibility that some small thing might go wrong causes me to swing abruptly in my preference	0	1	2
21.	I cannot think straight if I have to make a decision in a hurry	0	1	2
22.	After a decision is made I spend a lot of time convincing myself it was correct	0	1	2

Appendix D: TurnItIn Report

Full thesis 2

ORIGINALITY REPORT

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