

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

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Submitted in accordance with the requirements for the degree of

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Bloemfontein

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## STUDENT DECLARATION

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I hereby provide permission that this dissertation be submitted for examination – in fulfilment of the requirements for a Master's in Psychology, in the Department of Psychology, Faculty of the Humanities, at the University of the Free State.

I approve the submission for assessment and that the submitted work has not previously, either in part or in its entirety, been submitted to the examiners or moderators.

Kind regards.

Dr. J. Jordaan  
Supervisor



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## CHAPTER ONE

### INTRODUCTION AND ORIENTATION TO THE STUDY

#### 1.1 Introduction

This dissertation commences with a comprehensive overview and orientation to the study. Chapter One focuses specifically on the background from which the research was conceptualised and conducted and initiates a thorough overview which highlights the problem statement of the research. Following this, the rationale and motivation for the research is reconnoitred. The research goals and objectives of the study are then presented, including the research questions. Thereafter the research methodology is briefly introduced and outlined. This is comprised of the research design, research participants and sampling, data collection procedures/measuring instruments, the statistical procedures of the study as well as the ethical considerations of the research. Furthermore, the value of the study is discussed and the key terms that are crucial to the research, clarified. Chapter One concludes with an overview of all the chapters in this dissertation.

#### 1.2 Problem Statement

Currently, there are approximately 5952 offenders incarcerated in two privately-owned, maximum-security correctional centres in South Africa (G4S Care & Justice, 2019; Geo Group, 2019). However, as at 31 March 2018, 164 129 offenders were incarcerated in 235 operationally-active correctional centres countrywide (Department of Correctional Services [DCS], 2018). This figure includes offenders detained in both public and private correctional centres. With such a high rate of individuals currently incarcerated as well as a predicted annual

increase of incarcerated offenders in the coming years (DCS, 2016, 2018), it is vital to investigate the factors that predict correctional adjustment amongst incarcerated offenders in order to be able to support these individuals, regardless of the contraventions that initially placed them there. Offenders incarcerated in private, maximum-security correctional centres face unique, strict and harsh circumstances that differs from incarcerated offenders in public correctional centres (Jordaan, 2014; Loots, 2010; Matshaba, 2007; Sekhonyane, 2003). It is imperative to examine and understand incarcerated individuals' adjustment to the correctional environment (Adams, 1992; Goncalves, 2014; Hsieh, Hamilton, & Zogba, 2016; Nagin, Cullen, & Jonson, 2009). Researching and understanding offender adjustment to maximum-security incarceration will aid in the development of future programmes that will assist offenders with a healthy adjustment to the correctional environment. This will evidently support the expectant rehabilitation and ultimately the re-entry of offenders back into society.

While numerous studies highlight how offenders adjust to incarceration, relatively few studies examine the variables that can be used to predict correctional adjustment amongst male incarcerated offenders (Goncalves, 2014), particularly in South African correctional centres (Hesselink & Grobler, 2015; Hesselink & Booyens, 2014). As a result, variables predicting correctional adjustment are significant to research from both an administrative and management perspective, including the treatment of offenders while they are incarcerated and for subsequent adaption to being back in the community (Goncalves, 2014). Furthermore, a search on EBSCO Host indicated that there has not been any previous research conducted on how male incarcerated offenders adjust to private, maximum-security correctional centres in the South African context. This research therefore specifically focuses on male offenders incarcerated in a private, maximum-security correctional centre in South Africa.

In the context of this research, adjustment to incarceration has been conceptualised as a process through which offenders are expected to successfully adjust to the unique challenges, stresses, frustrations, and deprivations of correctional life (Picken, 2012; Weiten, Dunn, & Hammer, 2018). According to Wright (1991), maladjustment to incarceration occurs when an offender's ability for adaptation is inadequate in meeting the internal and/or environmental demands of incarceration. Most offenders adjust relatively well to correctional life but many do not cope with the challenges of incarceration (Casey, Day, & Reynolds, 2016; Crank, 2010; DeVeaux, 2013; Dye, 2010; Tomar, 2013; Wright, 1985, 1991). Adjustment to the correctional environment can be extremely difficult for the incarcerated offender, as thousands of dysfunctional offenders are forced to intimately cohabitate in degrading surroundings that aggravate pressures, anxieties, fears, and preconceptions (De Viggiani, 2007). Maximum-security correctional centres further exacerbate these tensions as thousands of offenders with long-term, and most often violent convictions, are forced to cohabitate in an austere, routine, harsh, and almost clinical-type environment (Du Preez & Luyt, 2006; Jordaan, 2014; Matshaba, 2007; G4S presentation, 2007). Furthermore, research has found that incarcerated offenders are often exposed to severe forms of bullying, sexual victimisation or forced sex, gang activity, offender-on-offender violence, offender-on correctional staff attacks, exploitation, suicide, and even murder (Buntman, 2005; De Viggiani, 2007; Gear, 2007a, 2007b, 2008; Gear & Ngubeni, 2002; Griffin & Hepburn, 2006; Hesselink-Louw, 2004; Lahm, 2008, 2009; Morash, Jeong, & Zang, 2010; Perez, Gover, Tennyson, & Santos, 2009; Proctor & Pease, 2000). These perverted features of the correctional environment can have an effect on the mental health of incarcerated offenders (Asberg & Renk, 2012; DeVeaux, 2013; Picken, 2012; Tomar, 2013) and contribute to the challenges of adjusting to life in a correctional centre (Jordaan, 2014).

Therefore, a need arose to explore the predictors of adjustment to a correctional environment amongst male incarcerated offenders. The results of the study could be significant to the DCS, in that they may be able to use the results to facilitate the understanding of adjustment within a South African private, maximum-security correctional centre. The results can also be used to encourage further research and assist with the improvement and implementation of correctional programmes that will support offenders with adjusting to the correctional environment. Furthermore, the findings can be used to aid in the process of offender rehabilitation, their transition back into the community, and potentially reduce the likelihood of reoffending upon release.

### **1.3 Background/Motivation for the study**

The unique contextual attributes of the correctional environment and the frustrations, deprivations, and challenges associated with it, impact on adjustment to incarceration (Crank, 2010; DeVeaux, 2013; Santos, 2003, 2006). Peacock and Theron (2007) argued that correctional centres construct a pathological environment that requires that the offender adapt to an unaccustomed set of values, traditions, and social relationships. In a 2010 study, 66.6% of the offenders indicated that they find incarceration particularly challenging (Crank, 2010). Research has shown that offenders who experience the correctional environment as particularly challenging are also more inclined to struggle with adjusting to the correctional environment (Dye, 2010; McNulty & Huey, 2005; Picken, 2012). These offenders could also possibly view incarceration as a deterrent. Wright (1983) emphasised that well-adjusted offenders do not typically experience psychological trauma or illness and are not taken advantage of by other offenders. Well-adjusted offenders typically have few, if any, disciplinary infractions (Dye, 2010; Picken, 2012) and are likely to accept their sentence length (Casey et al., 2016).

Furthermore, well-adjusted offenders also experience some sense of support from the correctional environment (McNulty & Huey, 2005), as well as friends and family members (Woo, Lu, & Stohr, 2016). In contrast, maladjusted offenders are more inclined to experience frequent violent outbursts, aggression, depression, anxiety, emotional withdrawal, and even suicide (Casey et al., 2016; DeVeaux, 2013; Dye, 2010; Tomar, 2013). Some offenders respond to incarceration with aggression, violence, and correctional misconduct by joining gangs, swearing to an 'inmate code', and by banding together in an attempt to revolt against correctional administration (De Viggiani, 2007; Dhami, Ayton, & Loewenstein, 2007; Gear, 2010; MacKenzie & Goodstein, 1986; Rocheleu, 2013). As will be presented in this research, the dysfunctionality of incarcerated offenders' adjustments to the correctional environment, can be viewed as a typical or 'normal' reaction given the pathological correctional context (Gear, 2010; Peacock & Theron, 2007). Given the stringent, harsh nature of the correctional environment, incarcerated offenders' adaptations to a private maximum-security correctional centre may in fact be as expected.

Research has suggested that maladjusted offenders often have a high rate of disciplinary violations whilst incarcerated (Dye, 2010; Logan, 2015), and this has been identified as a predictor of reoffending upon release (Gendreau, Little, & Goggin, 1996). Partaking in correctional programmes as well as the maintenance of connections to family members while incarcerated, however, are correlated with reduced rates of recidivism (Bales & Mears, 2008; Duwe & Clarke, 2011). It is however important to note that there are no official recidivism figures for South Africa (National Institute of Crime Prevention and Reintegration of Offenders [NICRO], 2014). Nonetheless, recidivism in South Africa will likely remain high due to the ineffective nature of the rehabilitation programmes in South African correctional centres (Dissel,

2008; Freeman, 2003). Thus, how individual offenders respond to incarceration is an important precursor for shaping their behaviour while imprisoned, including their response to subsequent rehabilitation and recidivism (Hochstetler & DeLisi, 2005; Hsieh et al., 2016; Nagin et al., 2009). Research has suggested that negative experiences while incarcerated including committing further crimes whilst incarcerated (Nagin et al., 2009; Trulson, DeLisi, & Marquart, 2011; Trulson, DeLisi, Caudill, Belshaw, & Marquart, 2010) and ineffective rehabilitation programmes (Grady, Edwards, & Pettus-Davis, 2015) are significant predictors of reoffending upon release (Hsieh et al., 2016).

Literature suggests that several variables exist which can be used to predict correctional adjustment. Despite these many varied predictors, the pertinent predictors, identified from literature, include offender coping strategies, aggression levels, perceived social support as well as several demographic factors including the offenders' age, offender type classification (first time offender or repeat offender) and sentence length (Chubaty, 2001; Crank, 2010; Dye, 2010; Picken, 2012; Wright, 1985). Coping strategies are particularly vital when adjusting to an unfamiliar, highly-restrictive environment (Carr, 2013). The coping strategies generally identified amongst offenders include avoidance, momentary relief of problems, and aggression (Carr, 2013; Chubaty, 2001; Gullone, Jones, & Cummins, 2000). These maladaptive coping mechanisms could impact upon adjustment to incarceration by putting offenders at a higher risk for mental illness (Chubaty, 2001; Newhard, 2014; Picken, 2012). Not only is aggression a coping mechanism in correctional centres, but research suggests that aggression is also closely linked to correctional maladjustment (Dye, 2010). More aggressive offenders are more likely to be cited for disciplinary violations and also tend to spend more time in solitary confinement (McShane & Williams, 1989; Picken, 2012), which is an indication of correctional

maladjustment (Dye, 2010). A study conducted amongst male incarcerated offenders found that those with higher levels of aggression also reported being more lonely and suicidal than their less aggressive counterparts (Carrizales, 2013). Crank (2010), however, argued that more aggressive and violent offenders may adjust better to correctional centres as they dominate other offenders and may be targeted less frequently than non-violent offenders. Various studies have found that active or expressive support offered to incarcerated offenders by the correctional centre or by significant others lessen criminal involvement and enhances social ties (Cochran & Mears, 2013; Jiang & Winfree, 2006; Siennick, Mears, & Bales, 2013; Woo et al., 2016).

Demographic factors such as offender age, offender type classification, and sentence length can also be used to predict correctional adjustment. Research indicates that older offenders typically have more incarceration experience and have thus developed the necessary strategies to adapt to correctional life (Akerstrom, 1985; Crank, 2010; MacKenzie & Goodstein, 1985; Sapsford, 1978). However, as offender's age, they are in turn at an increased risk of being victimised, which could also impact upon their adjustment to the correctional environment (Cervello, 2015; Kerbs & Jolley, 2007; Wright, 1983). Irrespective of age, offenders with prior incarceration experience, or who are repeat offenders and have been incarcerated before, may also adjust better to correctional life (Akerstrom, 1985; Crank 2010; Shover, 1985). This is due to offenders with prior incarceration experience being less fearful of incarceration (May, Wood, Mooney, & Minor, 2005). Pertaining to the type of offence, research found that offenders sentenced for violent offences are more inclined to have higher correctional infraction rates than non-violent incarcerated offenders (Flanagan, 1983; Logan, 2015). A high rate of infractions whilst incarcerated can be associated with correctional maladjustment (Crank, 2010; Dye, 2010; McShane & Williams, 1989; Picken, 2012; Woo et al., 2016). According to Wolfgang (1961),

offenders incarcerated for murder often have an attitude which favours violation of the law. As a result, these offenders are less adherent to the correctional environment than offenders sentenced for other offences (Warren, 2003; Wolfgang, 1961). In addition, sexual offenders have also been found to have a harder time adjusting to correctional centres due to their increased likelihood of victimisation (Connor & Tewksbury, 2013; Edgar & O'Donnell, 1998).

In general, offenders are expected to adjust to the correctional environment in an effective and healthy manner (Crank, 2010; Picken, 2012). However, incarcerated offenders may experience severe stress due to prevailing personal and/or correctional conditions, which can lead to depression, anxiety, suicidal ideation, social withdrawal, self-mutilation, and hostility (Asberg & Renk, 2012; DeVeaux 2013; Peacock, 2008; Picken, 2012; Santos, 2003, 2006; Tomar, 2013).

#### **1.4 Research Goals**

The primary goal of this research was to determine which variables are the best predictors of correctional adjustment amongst male incarcerated offenders in a private maximum-security correctional centre in South Africa. Furthermore, the subsequent purpose of the research was to determine how male offenders with different coping strategies, aggression levels, perceived social support, ages, offender type classifications, and sentence lengths adjust to incarceration in a private maximum-security correctional centre.

#### **1.5 Research Questions**

For the purpose of this research, the following research questions were investigated:

- Can the combination of coping strategies, aggression levels, perceived social support, age, offender type classification (first time offender or repeat offender), and sentence

length explain a significant percentage of variance in the adjustment of male incarcerated offenders in a private maximum-security correctional centre?

- Do any of the individual predictors significantly contribute to the variance of correctional adjustment in male incarcerated offenders in a private maximum-security correctional centre?

## **1.6 Research Methodology**

### **1.6.1 Research Design**

The research design utilised in this study entailed a quantitative approach and a non-experimental type of research. The main goal was to determine the relationships between variables and therefore a correlational design (Stangor, 2015) was used.

### **1.6.2 Research Participants and Sampling**

In order to answer the primary research questions, a non-probability sampling technique, more specifically, convenience sampling (Maree, 2014) was used and data was collected voluntarily from a sample of 418 male incarcerated offenders (N=418) held in a private maximum-security correctional centre. The correctional centre chosen to obtain data from is the Mangaung Correctional Centre (MCC) located in Mangaung, on the outskirts of Bloemfontein, in the Free State. Prior to data collection, the researcher initially planned and took the necessary steps to make use of a probability sampling technique known as stratified random sampling (Maree, 2014). Stratified random sampling is more scientific in nature as it guarantees that different subcategories or strata of the population are satisfactorily represented in the sample

(Maree, 2014; Stangor, 2015). In order to strengthen the significance of the research, the participants that were to expectantly be included in the sample differed in terms of age, ethnicity, and type of offence, as well as sentence length, and gang affiliation, for example, and were therefore adequately represented in the overall sample group. The rationale behind the use of stratified random sampling was based on the fact that a sampling framework/database at MCC, which extensively records offender details upon intake, would be used to identify several strata. Originally, with the assistance of a third party correctional official, several strata were identified and an Excel spreadsheet was compiled of all the offenders who met the relevant research criteria (i.e. able to read, write, and understand English). All of these were divided into separate strata. The researcher only received an Excel spreadsheet that listed the offenders' correctional numbers. No identifying details and names of participants were provided to the researcher. The researcher used the spreadsheet to randomly select every 4th offender from the list.

Approximately 500 potential participants had been randomly selected to take part in the research. However, before starting with the data collection, the researcher met with the Head of Security at MCC who expressed his extreme concerns regarding security risks and the logistical and operational challenges associated with moving specifically selected offenders to the data collection venue each day. It became apparent that given the correctional centre's strict security procedures and keeping the security of the participants, correctional staff and the researcher in mind, a more suitable, less operationally-taxing sampling method was needed. Thus, the researcher, in consultation with various correctional officials, decided to make use of convenience sampling. In essence, the intention was to utilise a more representative sampling technique. However, this was not possible due to the safety, operational, and administrative challenges associated with such a technique in this particular correctional environment.

By utilising convenience sampling, participants conveniently situated within the Correctional Centre, such as those attending the school, skills developments workshops or social work and psychological services were requested to partake in the research based on their appropriate accessibility and proximity to the researcher. Also identified as accidental sampling, convenience sampling is a type of non-probability or non-random sampling technique where members of the target population that meet specific practical criteria, such as geographical proximity, convenient availability, or the interest to take part are included for the purpose of the study (Etikan, Musa & Alkassim, 2016; Stangor, 2015). Participants of all ages, ethnic groups, types of offences, sentence lengths, and gang affiliation amongst others were included to form part of the sample. Some of the offenders had an education level below Grade six but since they were attending the school programme five days a week and could adequately read, write and understand English, they were able to answer the questionnaires independently and thus they were also included in the sample. Data collection took place with the researcher training groups of correctional officials (e.g. school teachers, skills development officers, social workers and psychologists) employed at the correctional centre on the research. These third party correctional officials assisted with administering the questionnaires to participants so as to collect the required data.

The process of completing the questionnaires took place as follows: The researcher, as instructed by the correctional centre, trained several staff members on the research process. The researcher explained the research in its entirety to several small groups of incarcerated offenders who were already in classrooms at school, attending skill development workshops or social work/ psychological group sessions. Over a period of just over one month from 30 July 2018 – 1 September 2018, the staff members, who had previously been trained on the research, again

explained the research to the participants, requested that they sign the informed consent sheet if they wanted take part in the study and then administered the questionnaires to the offenders on the researcher's behalf. This ultimately lead to a sample size of N=418. Upon completion of the questionnaires, the researcher collected the forms from the correctional centre and processed the data on EvaSys, an automated survey software system (EvaSys, 2019).

### **1.6.3 Data Collection Procedure/Measuring Instruments**

For the purpose of data collection, the participants completed five distinct questionnaires. The questionnaire booklet took between one to two and a half hours to complete depending on the literacy level of the offender. The questionnaires were generated on EvaSys and the following measuring instruments used in order to gather the necessary data (see Appendix A):

- A self-compiled demographic questionnaire which included recurring items found in literature; all relating to offender demographics such as age, offender type classification, and sentence length, for example.
- The *Prison Adjustment Questionnaire* (PAQ; Wright, 1983, 1985) which was utilised to measure the self-perceptions of adjustment to incarceration according to the offenders. The PAQ consists of 30 items focusing on nine distinct problems that offenders may experience while incarcerated. This includes feeling uncomfortable around others; the fear, illness, anger, and injury they experience while incarcerated; sleeping problems; arguments and physical fights they are involved in as well as being taken advantage of by other offenders (Wright, 1983). The internal consistency of the PAQ ranges from adequate to good. The PAQ has three subscales that are categorised under the following dimensions, namely Internal, External and Physical (Wright, 1983). The alpha coefficient for the internal dimension equals 0.67, the external dimension equals 0.74, while the

physical dimension equals 0.50 in a sample of offenders (Wright, 1985). A high score on the PAQ suggests that offenders struggle with adjusting to incarceration. Therefore, lower scores on the PAQ indicate less adjustment issues and better adaption to the correctional environment (Wright, 1983, 1985).

- The *Coping Strategy Indicator* (CSI; Amirkhan, 1990) was utilised to gauge the coping strategies of offenders in adverse circumstances. The CSI has 33 items and three subscales assessing 11 items each. The three subscales are (a) problem solving; (b) seeking social support, and (c) avoidance. The CSI illustrates superior internal consistency, when compared to other coping questionnaires, with alphas ranging from 0.84 to 0.93 and displaying stable scores with test-retest correlations averaging 0.82 across four to eight week periods amongst large and diverse samples (Amirkhan, 1994). Furthermore, higher scores on each subscale suggest a higher tendency to utilise the associated coping strategy (Amirkhan, 1994). In a South African study on a sample of offenders the internal consistency of each factor on this scale ranged between 0.62 – 0.90 (Jordaan, 2014; Jordaan, Beukes, & Esterhuyse, 2018).
- The *Aggression Questionnaire* (AQ; Buss & Perry, 1992) was used in order to measure the aggression levels of the offenders. The AQ measures 29 items of aggression, divided into four subscales namely, (a) physical aggression; (b) verbal aggression; (c) anger, and (d) hostility. All four subscales show internal consistency and stability over time. The test-retest reliability of the AQ was found to be 0.78 in a sample of university students (Samani, 2013). In a study conducted amongst a sample of South African offenders, Jordaan (2014) and Jordaan et al. (2018) found that the internal consistency of each factor on this scale ranged between 0.62 and 0.87. Higher scores indicate that the individual

shows higher levels of that particular type of aggression, while lower scores suggest a lower incidence of the associated aggression. This questionnaire's alpha coefficient is 0.89 (Buss & Perry, 1992).

- The *Multidimensional Scale of Perceived Social Support* (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) was used to measure the perceived social support of the offenders. The MSPSS measures an individual's perceived social support on three aspects, namely friends, family, and a significant other. The MSPSS has good internal and test-retest reliability and moderate construct validity. Cronbach's coefficient alpha for the measure ranged between 0.81 and 0.90 for the family subscale, between 0.90 and 0.94 for the friends subscale and between 0.83 and 0.98 for the significant other subscale in a sample group of pregnant women, adolescents and paediatric residents (Zimet, Powell, Farley, Werkman, & Berkoff, 1990). In a population of offenders the MSPSS was found to have good internal reliability with Cronbach's alpha reported to be 0.92 for the overall scale, 0.93 for family, 0.90 for friends, and 0.91 for the significant others subscale (Brown & Day, 2008). A higher score on the MSPSS indicates a higher degree of perceived social support (Zimet et al., 1988).

#### **1.6.4 Statistical Procedures**

All data collected from the participants was analysed with the help of the Statistical Package for the Social Sciences; SPSS version 25 (IBM Corporation, 2017). A Cronbach's alpha was calculated to gauge the reliability of the various scales. Descriptive statistics were also completed. In order to predict which variable(s) explain the highest percentage of variance in adjustment, a hierarchical multiple regression analysis was conducted. Petrocelli (2003) stated that multiple regression is used as a strategy to predict a criterion variable with a set of predictor

variables. In this study the criterion variable is adjustment and the predictor variables include coping strategies, aggression levels, perceived social support, age, offender type classification and sentence length. Hierarchical regression is a method for evaluating the effect of a predictor variable after controlling for other variables. This is accomplished by calculating the adjustment in the  $R^2$  at each step of the analysis, thus determining the increase in variance after each variable is entered into the regression equation (Lewis, 2007; Pedhazur, 1997). Therefore, to strengthen the results of the research and to assist in the prediction of adjustment to incarceration in a private, maximum-security correction centre, a stepwise multiple regression was conducted. This entails that a particular order is not selected beforehand but the variables first entered into the analysis are those that produce the biggest increase in the multiple  $R$  (Aiken & West, 1991; Cohen & Cohen, 1983; Stangor, 2015). Therefore, theory is not considered and the statistical package, which is SPSS in this study, ultimately determines the variables that best predict the criterion variables according to the extent to which they increase the multiple  $R$  (Stangor, 2015). Thus, a stepwise multiple regression is a technique of regressing multiple variables while concurrently eliminating the insignificant ones (SPSS Stepwise Linear Regression, 2019).

### **1.6.5 Ethical Considerations**

Incarceration places offenders under certain unique restrictions that may affect their capacity to make truly voluntary and self-imposed decisions regarding whether or not to participate in research (University of Virginia: Human Research Protection Programme, 2017). As a result, offenders are a vulnerable population of research participants who have often been taken advantage of by researchers seeking expedient solutions to complicated research questions (Hornblum, 1997; Mitford, 1974). However, this study's sole purpose was to understand

correctional adjustment within the context of a private maximum-security correctional centre in South Africa. This study has been conducted in accordance with the Code of Conduct of the South African Professional Board of Psychology. Approval to conduct this research was first obtained from the Research Ethics Committee of the Faculty of Humanities at the University of the Free State. As a result, the researcher received an ethics number: UFS-HSD2017/0939 (Appendix C), which granted permission for the research to be conducted. Further approval to conduct this research was obtained from the Department of Correctional Services on 25 June 2018 (see Appendix D). A comprehensive information leaflet detailing the purpose of the research, the potential risks, inconveniences and benefits of participation in the study as well as information regarding feedback was presented to the potential participants in order to allow them to make an informed decision regarding their participation in this study (see Appendix B). All potential participants were thoroughly informed of the possible risks of their participation, both verbally and in writing by the researcher, which included not only emotional/social/psychological distress and/or personal/cultural embarrassment but also the threat of reputational harm due to the strict offender code within correctional centres. As a result, a psychologist and social worker employed by the correctional centre was arranged for participants for debriefing and/or counselling in such cases. Participants were informed ahead of time of the availability of this service. Written informed consent was further obtained from all participants who were willing to take part in this study prior to the commencement of data collection. Participation in this research was completely voluntary and participants could withdraw from the study at any given time without providing a reason. Any and all information collected from participants was kept confidential and complete anonymity was rigorously adhered to as far as reasonably possible throughout the research process. As a result of the

nature of the research, participants will not be connected to the answers they provided as no participant was ever asked to identify themselves through the course of the research.

Furthermore, data has been stored in a private place and on a password protected computer and was handled exclusively by the researcher.

### **1.7 Value of the Study**

The proposed study is valuable in the South African context for several reasons. Firstly, the results of this research will expectantly contribute to the larger collection of South African research which aims to understand correctional populations. In 2019, the Department of Correctional Services (DCS) explicitly noted in their *Research Agenda of the Department of Correctional Services (2019-2023)* the absolute importance of correctional research in providing vital information regarding incarcerated offender populations, their trends as well as planning and identifying risk factors for the main purpose of improving correctional centres. Correctional research is also extremely valuable to society (Department of Correctional Services: Research Agenda of the Department of Correctional Services, 2019). More specifically, and in line with DCS' advocacy on correctional research, this study will optimistically contribute to the incredibly limited body of correctional research on offenders incarcerated in private, maximum security correctional centres in South Africa and beyond. Secondly, this study will help to indicate which variables are the best predictors of correctional adjustment amongst male incarcerated offenders in a private maximum-security correctional centre and can thus be used to inform future research. It could also aid in identifying whether extra resources are needed to assist offenders with adjustment to incarceration. Furthermore, this study can assist with the validation of the measuring instruments used in this study and support the use of these instruments more frequently in the South African correctional context. Lastly, this research can

assist with the future development and implementation of rehabilitation programmes to assist with the treatment and eventually the potential reintegration of offenders back into the community post-release.

## **1.8 Clarification of Terminology**

### **1.8.1 Correctional Adjustment**

Various definitions exist for the term correctional adjustment (Van Tongeren & Klebe, 2010). A general definition of adjustment is it being “the psychological processes through which people cope with the demands and challenges of everyday life (Weiten, Dunn, & Hammer, 2018, p. 9). It is the aptitude of the individual to adapt to the space within which the individual finds himself. This can be rather stressful within the restricted and contained correctional environment. Therefore, correctional adjustment points to the degree to which an incarcerated offender is capable of coping with the unique demands, challenges, frustrations and deprivations of the correctional environment (Picken, 2012; Sykes; 1958; Weiten et al., 2018).

### **1.8.2 Incarceration**

Incarceration, which is synonymous with imprisonment (Bureau of Justice Statistics, 2019), refers to the state of being confined in a correctional centre.

### **1.8.3 Incarcerated Offender(s)**

Incarcerated offender(s) refers to the individual or groups of people who are presently housed in and confined to a correctional centre (Bureau of Justice Statistics, 2019).

### **1.8.4 Correctional Centre**

Correctional Centre is the preferred term for 'prison' in South Africa as per the White Paper on Corrections (2005). A correctional centre is an establishment where incarcerated offenders are held in order to serve their sentences for committing societal transgressions. Correctional centres work with an incarcerated offender by focusing on three distinct areas namely, (a) punishment, (b) deterrence and (c) rehabilitation (Aqbakwuru & Ibe-Godfrey, 2017; Tomar, 2013).

### **1.8.5 Maximum-security correctional centre**

A correctional centre that houses offenders that the justice system has classified as maximum-security offenders and have thus been deemed very dangerous to society, and who in turn serve long correctional sentences (Silverman, 2001).

### **1.8.6 Private correctional centre**

Such a correctional centre refers to an establishment where offenders are detained by an outsourced party that has been contracted by the government to do so. Although private

correctional centres are not owned or run by the government, the centre still needs to comply with the legislation of the Department of Correctional Services (Matshaba, 2007).

### **1.9 Outline of Chapters of the Dissertation**

This dissertation is comprised of five chapters, five appendices and nine tables. Chapter One provides the reader with an introduction and orientation to the study and includes sections pertaining to the problem statement, rationale/background of the study, the research questions as well as the ethical considerations of the research and the value of the study. Chapter Two provides the researcher with an extensive literature review on the existing body of research with regards to correctional adjustment and its related concepts. Chapter Three details the methodological procedures that were followed and implemented in order to obtain the results of the research. Included in this chapter is the research design, the research objectives, the sample, participants, data gathering procedures, measuring instruments as well as the statistical analyses. Chapter Four includes all the research findings of the study, while Chapter Five encompasses a discussion on the results of the study in relation to the literature. Chapter Five also concludes the study, addresses the limitations of the research, and highlights the recommendations for future research.

## CHAPTER TWO

### ADJUSTMENT TO A CORRECTIONAL CENTRE

#### 2.1 Introduction

Chapter Two entails an all-encompassing discussion of the literature and existing body of research related to the topic being explored. The chapter commences with an exploration and discussion of the incarceration experience in order to provide the background on which the research is based. The subject of adjustment to incarceration will be thoroughly examined and the importance of adjustment to incarceration will be explored. Furthermore, the theories relating to correctional adjustment will be reconnoitred briefly, which will be followed by an investigation into the conditions of incarceration in South Africa to further highlight the need for this research. Positive and negative correctional adjustment will also be conceptualised and a discussion of the differences between public correctional centres and private correctional centres included. Following this, an extensive review of the six variables that were used to predict correctional adjustment to incarceration will be provided. These variables include offender coping strategies, aggression levels, perceived social support and also demographic factors such as offender age, offender type classification and sentence length. Several other factors that may further predict adjustment to incarceration will also be highlighted and discussed. These factors include gang affiliation, a history of substance abuse, ethnicity, mental illness as well as type of offence. This chapter will also thoroughly examine adjustment to incarceration and its impact on the mental well-being of incarcerated offenders in accordance with literature. Lastly, adjustment to incarceration and recidivism after release will be discussed before concluding with the literature review section.

## 2.2 The incarceration experience

Incarceration and its unique contextual attributes has become an increasingly pressing societal issue in the 21st century (Delaney, 2019; Lopez, 2019; Tyson, 2017). Each year, millions of individuals pass through the entranceways of correctional centres worldwide to serve their respective sentences for the crimes they have committed (Wagner & Rabuy, 2016; Wagner & Sawyer, 2018). These individuals are by law obligated to give up their right to freedom in exchange for a term in a correctional centre as punishment for some societal transgression. Once incarcerated, they are no longer considered free citizens. These individuals are held within a strict, rigid and structured non-therapeutic environment, which adversely impacts on their mental health (Jordaan, 2014). This strict environment makes the incarceration experience traumatic for many people (DeVeaux, 2013; Picken, 2012; Santos, 2003; Wright, 1983), as they are confronted with the realisation of the loss of freedom, punitive conditions of confinement, adapting to an often new and unfamiliar environment, separation from loved ones as well as experiencing countless fears relating to personal safety and victimisation (Blevins, Listwan, Cullen, & Johnson, 2010; Carr, 2013; Casey et al., 2016; Crank, 2010; Delaney, 2019; De Viggiani, 2007; DeVeaux, 2013). These unique stressors can in some instances lead to a deterioration in the mental health of incarcerated offenders (Asberg & Renk, 2012; DeVeaux, 2013; Newhard, 2014; Picken, 2012), particularly if an individual has difficulty adjusting to the demands and frustrations of the correctional environment.

Gresham Sykes (1958) identified five fundamental social-psychological deprivations experienced by most incarcerated offenders, which he appropriately termed the *Pains of Imprisonment*. These deprivations, which research suggests are still relevant today (Irwin, 2006; Johnson, 2002; Johnson & McGunigall-Smith, 2008; Rocheleau, 2013), includes being deprived of freedom, goods and services, heterosexual relationships, independence and safety. Offenders who experience the identified *pains of imprisonment* as severe are more inclined to

perceive the incarceration experience as particularly difficult and act out with correctional misconduct (Rocheleau, 2013).

Research relating to the incarceration experience has had a long and tumultuous history, often producing complex, juxtaposing findings over several decades (Picken, 2012). As such, studies investigating the impact of incarceration is not definitive, but the findings of several research endeavours point to the potential psychological harm that long-term imprisonment can have on incarcerated offenders (Delaney, 2019). Early research indicated that imprisonment is a cruel and inhumane form of punishment (Bukstel & Kilman, 1980; Wolfgang, 1961; Wright, 1983) with offenders often displaying maladaptive responses, which include emotional disorders, correctional misconduct and suicide attempts (Adams, 1992; Clements, 1979; Cooper, 1974). In his revolutionary book, *The Prison Community*, Donald Clemmer (1940, 1958) argued that the correctional environment is neither normal nor natural and constitutes a degrading human experience (Kling & Clemmer, 1941). Furthermore, some literature emphasised that the lack of privacy, scrutiny by correctional officials and the often constant experience and witnessing of violence in the correctional environment promotes a greater sense of helplessness and dependency amongst incarcerated offenders (Pollock, 2006; Schill & Marcus, 1998).

However, incarceration can in some circumstances, when the needs of offenders are of a high priority, even be constructive and promote well-being (Helliwell, 2011; Kvalvaag, 2016). Bonta and Gendreau's (1990) research could not support the claim that incarceration has a negative impact on offenders. Kvalvaag (2016) reported that research conducted at Bergen University in Norway found that correctional sentences can in fact be effective. The findings indicated that five years after being convicted, previous offenders had a 27% decreased likelihood of committing new crimes; thus indicating that incarceration could be a rather effective deterrent. However, this is context-specific and may not be applicable in the South

African setting. Nevertheless, research has concluded that the most detrimental aspect of the incarceration experience relates to individual factors (Bonta & Gendreau, 1990) such as the loss of freedom and ties to the outside world and not necessarily to the unique conditions of incarceration (Mackenzie & Mitchell, 2005; Yang, Kadouri, Revah-Levy, Mulvey, & Falissard, 2009). Furthermore, a recent policy statement proposed that by identifying each offenders' unique criminogenic needs, building a school district within the correctional environment, prioritising the mental health treatments of offenders and helping offenders maintain family connections while incarcerated, reform and productivity within the correctional environment can be achieved (United States Department of Justice, 2017). The DCS has also explicitly expressed their intentions to continue to prioritise educational programmes and the mental well-being of offenders to ensure that offenders receive appropriate opportunities for rehabilitation while imprisoned (DCS Annual Report, 2016, 2018). The DCS has also acknowledged that continued research with offender populations is needed in order to advise on how to move forward with strategy and evidence-based policies (Department of Correctional Services: Research Agenda of the Department of Correctional Services, 2019).

While extensive research exploring and discussing the incarceration experience exists, experts have often interrogated the validity of research related to the experiences of incarcerated offenders, particularly due to incompetent research endeavours, which includes defective sampling techniques, weak research designs and other methodological problems (Bonta & Gendreau, 1990; DeVeaux, 2013). Therefore, offenders' adjustment to the incarceration experience and the factors that predict correctional adjustment are vital undertakings for future research, particularly in the South African context.

### **2.3 Adjustment to incarceration**

Adjustment to incarceration has become a current and comprehensive topic of discussion in correctional research. Thought-provoking research endeavours reviewing the difficulties

associated with adjusting to a unisexual, highly-restricted environment have contributed to our fascination on this topic (Goncalves, 2014; Wolfgang, 1961). Adjustment is a multidimensional concept that embodies various complex elements (Van Tongeren & Klebe, 2010).

Adjustment can be defined as the “psychological processes through which people manage or cope with the demands or challenges of everyday life” (Weiten et al., 2018, p. 9). Therefore, adjustment to incarceration is a process through which offenders are anticipated to positively adapt to the distinctive challenges, demands, frustrations and deprivations of the correctional environment (Picken, 2012; Sykes; 1958; Weiten et al., 2018). Adjustment to incarceration includes “adaptation to the prison environment, conforming to the dictates of the environment, active participation in programmes within the prison and conscious preparation for a more meaningful life after incarceration” (Animasahun, 2010, p. 122). Van Tongeren and Klebe (2010) defined adjustment to incarceration as the offenders’ ability to successfully transition to the unfamiliar environment, coupled with their orientation toward longstanding rehabilitation. Wright (1983) conceptualised correctional adjustment in terms of the significant emotional and psychological suffering that offenders may experience while incarcerated. Porporino and Zamble (1984) further argued that offender adjustment is conceptualised as a human procedure through which cognition, behaviours and the environments mutually work together to either enrich or aggravate already demanding circumstances.

The process of integration into and adjustment to the correctional environment was termed by Clemmer (1940, 1958) as *Prisonisation*, which is a form of correctional socialisation where offenders “take on in greater or less degree the folkways, mores, customs, and general culture of the penitentiary” (p. 299). However, the term *Prisonisation* was highly criticised for not considering specific offender attributes such as race and gang affiliation (Jacobs, 1974). Goodstein and Wright (1989) also expressed concern regarding the way the concept has been measured.

Though most offenders, including long-term offenders, typically adapt relatively well to correctional life, several do not successfully manage the stressors and challenges associated with the unique environment (Adams, 1992; Crank, 2010; Delaney, 2019; DeVeaux, 2013; Picken, 2012; Lopez, 2019; Wright, 1985). Difficulty adjusting to the correctional environment can be characterised as correctional maladjustment. Maladjustment to incarceration can be viewed in terms of frequent violent outbursts, aggression, depression, anxiety, emotional withdrawal and even suicide (Casey et al., 2016; DeVeaux, 2013; Dye, 2010). The adjustment model advocates that offenders can become respectable citizens and successfully reintegrate with society when they choose to take responsibility for their actions, avoid making excuses for their criminal behaviour, accept help and follow the rules and standards of society, and learn new behaviours and abilities that will assist with developing their full potential (Du Preez, 2003).

Several authors agree that incarceration is a physically, psychologically and emotionally challenging experience for anyone confined to a correctional centre (DeVeaux, 2013; Picken, 2012; Rocheleau, 2013). DeVeaux (2013) maintained that “the experience of being locked in a cage has a psychological effect upon everyone made to endure it, no one leaves unscarred” (p. 257). Research suggests that offenders often experience an initial transition shock upon entering the correctional environment (Smyth, Ivanoff, & Jang, 1994). This further reinforces the assertion that there is a particularly high risk period for committing suicide within the first 24 hours of incarceration (Towl, 2003). The infamous *Stanford Prison Experiment* conducted by the Psychology Department at Stanford University in 1970 supports the idea that incarceration can be difficult to adjust to. In this mock-incarceration experiment, university students were randomly allocated the role of either guard or offender and placed in a correctional-like environment. Several student offenders experienced acute psychosomatic trauma and breakdowns while others were released on the basis of extreme emotional

depression, crying, indignation and acute anxiety after only six days of mock-incarceration (Haney & Zimbardo, 1998).

However, different individual-offender characteristics will influence who adjusts well to the correctional environment and who experiences chronic maladjustment (Hampton, 2012; Rocheleau, 2013). The coping strategies, aggression levels and perceived social support of offenders as well as offender age, offender type classification and sentence length are all examples of unique individual characteristics that can have an impact on how offenders adjust to incarceration.

#### **2.4 The importance of adjustment to incarceration**

Adams (1992) stated that offender adjustment to the correctional environment is important to individuals who believe that correctional centres should perform corrective or rehabilitative functions and that incarcerated offenders should have the best chance of rehabilitation whilst incarcerated. The South African Department of Correctional Services has the responsibility to provide needs-based psychological services to incarcerated offenders by improving offenders' mental health and emotional well-being, which ultimately promotes their rehabilitation and eventual transition back into the public (Dissel, 2008; Herbig & Hesselink, 2012). If an incarcerated offender experiences continuous psychological and emotional anguish due to the incarceration experience, opportunities for rehabilitation facilitated by correctional programmes, psychologists, social workers and religious leaders may be prolonged and in some cases ineffective or futile (Adams, 1992; Dissel, 2008). The issue of adjustment to incarceration is important for several reasons including administrative-managerial and correctional treatment purposes as well as for adaption back into society upon release, and is thus of particular interest for psychologists and correctional managers

(Goncalves, 2014). As a result, researchers and correctional officials who are interested in decreasing the risk of maladjustment to incarceration and reoffending upon release have sought ways to describe, assess, predict and expedite the process of adjustment to incarceration (Jiang & Fisher-Giorlando, 2002).

As highlighted in previous sections, incarceration is a stressful event which requires that the incarcerated individual adapt his behaviour to adjust to the new institutional procedures and norms (Crank, 2010; Peacock & Theron, 2007, Van Tongeren & Klebe, 2010). Incarceration generates a correctional society that necessitates that the incarcerated offender adjust to unfamiliar ethics, customs and new societal dynamics. In order to survive the incarceration climate of deprivation, incarcerated offenders often disengage and mentally detach themselves from their typical outside world in a bid to construct a life within the correctional environment (Peacock & Theron, 2007), which is considered extremely normal and adaptive given the pathological correctional context (Gear, 2010; Peacock & Theron, 2007; Wright, 1983). When an individual is unable to effectively adjust to the correctional environment, he may experience behavioural and psychological challenges which can include correctional misconduct, violence and aggression, withdrawal, anger and hostility as well as anxiety and depression (Cochran & Mears, 2013; Crank, 2010; Dye, 2010; Logan, 2015; Picken, 2012; Rocheleau, 2013; Woo et al., 2016). These adverse reactions to the correctional environment are not conducive to correctional adjustment and rehabilitation whilst incarcerated (Adams, 1992; Crank, 2010; Picken, 2012). Incarcerated offenders who adjust well to the prison environment can immerse themselves in the opportunities to learn a trade or skill that can assist them post-release, receive support from psychological and social work services and also feel relief through religious programmes provided by the correctional centre (Dissel, 2008). When incarcerated offenders are better adjusted to the correctional environment, they are also more likely to be optimistic regarding their transition back into community life post-release (Canda, Java, & Lored-

Abuyo, 2015). Adjustment to the correctional environment is thus important for treatment and rehabilitative purposes (Adams, 1992), reducing emotional outbursts and withdrawals (Picken, 2012), reducing conflict, violent behaviour and infractions whilst incarcerated (Goncalves, 2014), for the shift back into the free world (Canda et al., 2015) and for further predicting recidivism post-release (Crank, 2010; Walters, 2003).

## **2.5 Theories relating to correctional adjustment**

The Importation theory and the Deprivation theory embody two theoretical standpoints on trends of responses to incarceration. These theories aid in explicating how offenders adjust to incarceration and can be measured by the offenders' internal reactions as well as the official actions taken by the correctional centre (Gover, MacKenzie, & Armstrong, 2000, Hampton, 2012; Logan, 2015). These two main theories can be applied to correctional adjustment and are defined and discussed below in sections 2.5.1 and 2.5.2.

### **2.5.1 Importation Theory**

In examining how offenders adjust to incarceration, the Importation theory can be applied to correctional adjustment, emphasising the significance of pre-correctional features, such as an offenders' traits, lifestyles and past experiences (DeLisi, 2003; Hampton, 2012; Irwin, 1970; Irwin & Cressey, 1962). Lahm (2008) stated that offender adjustment to the correctional environment is shaped by an offender's pre-correctional experiences and socialisation. Logan (2015) further highlighted that the importation model views offenders as importing their own subjective circumstances and upbringings into the correctional environment, which can have a discernible effect on how the offender perceives and experiences incarceration. Literature on the importation model directs that several individual differences explain the extent to which offenders are able to adequately adapt to the correctional environment, which includes their age (see Section 2.11.4), ethnicity (see Section 2.12.3), gender, socioeconomic status, social

support (see Section 2.11.3) and criminal history (see Section 2.11.5) (Logan, 2015; Thomas & Foster, 1973). In essence, the Importation theory advocates that the way offenders perceive and adjust to the correctional environment is largely due to the offenders own unique characteristics, past experiences and pre-correctional socialisation (Dhami et al., 2007; Rocheleau, 2013; Thomas & Foster, 1973).

### **2.5.2 Deprivation Theory**

As highlighted in Section 2.1, the *Pains of Imprisonment* (Sykes, 1958) encompass numerous deprivations associated with the correctional environment that can impact how offenders adjust to incarceration. According to Sykes (1958), correctional centres are obstructive organisational structures serving to isolate offenders by depriving them of life's most simple comforts and features, such as liberty, goods and services, heterosexual relationships, autonomy and security. It has further been contended that the *pains of imprisonment* are not unintended by-products of the correctional environment but rather intentional components of what correctional centres are designed to do (Brookes, 2001; Delaney, 2019; DeVeaux, 2013). As a result of being incarcerated, offenders cannot fulfil their basic needs, which inadvertently leads to tension and negative forms of adjusting (Jordaan, 2014). Ellis, Zamble and Porporino (1990) identified reduced independence, separation from loved ones, fears for personal safety, boredom, as well as displeasure with general correctional provision, amongst others, as the main causes of institutional pain and correctional maladjustment. Comparable findings were conveyed by Wright (1989, 1993), who highlighted that the *pains of imprisonment* were most distinct amongst offenders concerned about (a) their personal safety; (b) their absence of privacy; and (c) their deficiency of social support and inability to engage with others. The deprivation theory thus holds that certain institutional characteristics and features can impact on correctional adjustment. Previous studies have indicated that some characteristics of the correctional environment that may exert particularly

notable effects on the correctional adjustment of incarcerated offenders include factors such as correctional overcrowding, the staff-to-offender ratio, racial integration as well as custody level (Logan, 2015).

## **2.6 Incarceration in South Africa**

The conditions of incarceration in South Africa have changed significantly in recent decades. Pre-1994 democracy, human rights violations of offenders were prevalent. Most incarcerated offenders were held in overcrowded cells (an ongoing issue in public correctional centres today), and offenders were oftentimes assaulted by correctional officials. Political offenders were often brutally attacked, even murdered and subjected to gross and degrading human right defilements (Giffard, 1997). However, the democratic elections of 1994 resulted in significant changes to the correctional system including the abolition of racial segregation of offenders as well as the enforcing of correctional supervision (Monographs No 29, 1998).

The quantity of incarcerated offenders detained in South African correctional centres has since steadily increased (Ndebele, 2014). By the end of the 2015/2016 financial year, the DCS had a total offender population of 161 984, with official bed space for only 119 134 offenders (DCS Annual Report, 2016). While at the closing of the 2018 financial year, the DCS had a total offender population of 164 129 with approved space for only 118 723 (DCS Annual Report, 2018). Unlike several decades ago, correctional centres are no longer considered institutions of punishment but rather organisations of rehabilitation (Mkhize, 2003). Whether South African correctional centres are indeed places of rehabilitation and reform is an entirely different discussion. Nevertheless, the DCS (2016, 2018) has clearly indicated their strategic objectives to ensure that the pattern of offending is targeted in correctional centres by providing access to quality correctional programmes and psychological, social as well as

religious services, with the ultimate goal of reducing re-offending and subsequently contributing to a safer South Africa.

Despite government and the judicial system currently recognising the need for correctional centres to be a place of transformation, incarcerated offenders are often faced with unique challenges, especially within the South African context, that can impact on their adjustment to the correctional environment. Notorious issues linked to correctional centres in South Africa include overcrowding, the prevalence of gang activity (see section 2.12.1) as well as constant fears relating to personal safety and sexual victimisation. Maravanyika (2016) opined that South African correctional centres currently have an inadequate ability to securely detain and house the number of offenders in the country. He further stated that the issue of overcrowding in South African correctional centres is not due to sentenced offenders but rather a result of the overflow of awaiting trial detainees. It can thus be argued that the issue of overcrowding in correctional centres is not a result of an out of control crime rate but due to the misplaced accommodation of awaiting trial detainees, a policy inherited from the previous Department of Prisons, pre-1994 (Maravanyika, 2016).

The issue of gang activity is also a serious problem that plagues the South African correctional system (Gear, 2007a, 2007b, 2008, 2010; Gear & Ngubeni, 2002). Dissel (1996) and Gear (2010) argued that many young offenders are obligated and coerced to join gangs to protect themselves and ultimately survive upon arrival in a South African correctional centre. Hesselink and Grobler (2015) warned that the power of gangs should not be underestimated and that gang bosses operating within South African correctional centres often instruct members to injure or murder individuals both inside and outside of correctional centres. Gangs operating inside South African correctional centres resort to violence in an attempt to compete for power and control, to provide and sell illegal substances or items, or basic necessities such as toiletries (Engelbrecht, 2014; Presence, 2013). Furthermore, gangs operating within

correctional centres have a lot of power and control and use violence as a means to an end (Hesselink & Grobler, 2015).

Fears for personal safety is also a serious problem since sexual violence (e.g. male rape), which are often at the hands of gang members, are a common occurrence in South African correctional centres (Buntman, 2005; Mapumulo, 2011). This leads to further hyper-vigilance on the part of the offender, which may impact on his adjustment to incarceration.

## **2.7 Positive and negative adjustment to incarceration**

Earlier research on adjustment to incarceration was largely based on Clemmer's (1940, 1958) notion of *prisonisation*, which refers to the process where offenders take on in greater or less degrees the overarching attitudes, roles, ideals and overall culture of the correctional environment. While there is still a continued interest in *prisonisation* when studying adjustment to incarceration (Reisig & Lee, 2000), contemporary researchers currently examine particular behavioural and social responses to incarceration as well as the psychological and emotive reactions of incarcerated offenders (Dhami et al., 2007). In studying correctional adjustment, researchers need to be able to adequately distinguish between positive and negative adjustment to incarceration as well as the characteristics attached to each. In order to understand the difference between positive and negative correctional adjustment, certain questions should be asked. For example: (a) What is the offenders' sentence length? (b) To what extent does the offender participate in correctional activities and programmes? (c) How does the offender socialise with others in the correctional centre? And (d) interact with correctional officers? (e) Does the offender feel supported and have contact with their family and friends? And (f) adhere to correctional rules? (g) What does the offender think about his confinement? And (h) what is the psychological impact of the incarceration experience on the mental health of the offender? Answers to these questions provide insights regarding how the

offender has experienced/is experiencing adjustment to the correctional environment (Dhami et al., 2007).

Research has shown that offenders entering a correctional centre with a greater number of susceptibilities such as previous child welfare connections, criminal contacts, and volatility in the household, were more inclined to exhibit difficulties with adjustment and psychological well-being (Altinas & Bilici, 2018; Will, Whalen, & Loper, 2014; Wolff & Shi, 2012). In conjunction, institutional exposures such as experiencing conflicts with other offenders, concern about the lack of peer support during harassment or abuse, and perceiving victimisation as inevitable, were significant institutional predictors of poor adjustment even after controlling for pre-existing vulnerability (Cesaroni & Peterson-Badali, 2010). Dhami et al., (2007) found that the amount of time the offender has spent incarcerated and quality of life before incarceration do have a negative effect on adaptations to imprisonment. Incarcerated offenders with a reduced quality of life prior to incarceration were cited with more correctional violations whilst incarcerated. However, those who spent more time incarcerated felt more hopeless and had more disciplinary infractions whilst incarcerated (Dhami et al., 2007).

Wright (1983) emphasised that well-adjusted offenders are not taken advantage of by other offenders and do not typically experience psychological trauma or illness. They will probably have few, if any, disciplinary breaches and it is unlikely that they have spent any time in solitary confinement (Dye, 2010; Picken, 2012). A well-adjusted offender is an individual who is able to adequately make sense of and adjust to the unique difficulties of incarceration (Coe, 1961). This individual may feel some sense of support from the correctional environment (McNulty & Huey, 2005), friends and family members (Cobean & Power, 1978) and would have accepted their sentence length (Casey et al., 2016). Poorly-adjusted offenders however, may have frequent violent outbursts with guards or other offenders, experience anxiety or depression and may perceive correctional life as particularly difficult (Crank, 2010; Dye, 2010;

Rocheleau, 2013). These offenders show strong emotional reactions while incarcerated and often display symptoms of severe emotional withdrawal (Cochran & Mears, 2013; Dye, 2010; Picken, 2012; Logan, 2015; Woo et al., 2016), amongst others.

Coe (1961) identified 19 statistically significant differences between well-adjusted and poorly-adjusted offenders, specifically relating to the United States' correctional context. He found that well-adjusted offenders were older at the time of incarceration, had good employment records, and most often worked as labourers. Their childhood homes were also classified as average or middle class and they had been raised by both parents in economic situations described as marginal or comfortable. On the other hand, the majority of poorly-adjusted offenders had haphazard and unstable employment records, with many being unemployed at the time of incarceration. Furthermore, Coe (1961) found that these individuals were mostly from less privileged households, which was economically marginal or dependent, and the majority raised by single parents. The majority of well-adjusted offenders were classified as 'not single', while the vast majority (approximately 61% of the poorly adjusted group), were characterised as 'single', thus advocating that perceived social support is a robust indicator of correctional adjustment (Woo et al., 2016). In a 1983 research endeavour during the development of the PAQ, Wright found that 84% of offenders in the sample experienced some internal adjustment problems during their incarceration. The mentioned 84% of the offenders in the sample group reported feeling uncomfortable with other offenders or correctional staff, experienced anger and had trouble sleeping. He also found that the sample group less frequently experienced external and physical adjustment problems.

On the basis of correctional officers' evaluation of personality, well-adjusted offenders were rated as having "better" (Coe, 1961, p. 183) personalities than poorly-adjusted offenders. Furthermore, a comparison of characteristics relating to the type of offence indicated that well-adjusted offenders more frequently committed offences that involved violence and emotion

while the poorly-adjusted offenders mostly committed petty offences, such as theft. Thus, well-adjusted offenders received the longest sentences (Coe, 1961). However, with the vast differences in political, familial, socio-economic and correctional systems of the United States and South Africa, it is unlikely that these differences between well-adjusted and poorly-adjusted offenders are applicable to the South African context.

Furthermore, a counter argument for positive correctional adjustment is that offenders who adjust well to the correctional environment may encounter several challenges adjusting to the outside world upon release (Dhami et al., 2007; Monnery, 2016). Furthermore, adjusting positively to the correctional environment may be counterproductive for rehabilitation and recidivism as some offenders may adopt new antisocial tendencies whilst incarcerated and maintain these depraved attitudes upon their release (Mueller-Smith, 2015).

## **2.8 Public Correctional Centres versus Private Correctional Centres**

Privatisation of correctional centres is a contentious matter in every country in which it has been implemented, nevertheless the government has decided to investigate prison privatisation as an option in South Africa (Goyer, 2001; Ntsobi, 2005; Sekhonyane, 2003). In South Africa, the Department of Correctional Services manages 243 correctional centres (of which 235 are operationally active). These centres are managed throughout South Africa by approximately 41 462 staff members. However, eight correctional centres are not fully functional and as such are temporarily closed (DCS Annual Report, 2018). The DCS are responsible for the classification of offenders and this classification determines at which correctional centres the offenders are detained.

There are three ways in which correctional centres in South Africa are classified, namely (a) minimum-security, (b) medium-security and (c) maximum-security (Neser, 1993). Offenders are incarcerated in minimum-, medium- or maximum-security correctional centres as determined by the level of risk that they pose to society, which is measured by the crime(s)

they have committed. Offenders held in minimum-security correctional centres generally pose only a limited threat to society and their movements within the correctional centre are thus only marginally restricted (Matshaba, 2007). Medium-security correctional centres detain offenders who pose a threat to society. These individuals are encouraged to attend correctional programmes and their rights, movements and privileges are moderately restricted and supervised within the correctional centre. Offenders incarcerated in maximum-security correctional centres are considered dangerous to society and are considered a major threat to themselves and others. Maximum-security correctional centres are highly secured and offenders' movements, rights, associations and privileges are strictly controlled and monitored under direct supervision (Matshaba, 2007; Nesor, 1993). Furthermore, these incarcerated offenders are controlled stringently with little or no autonomy and they are counted frequently in order to ensure their presence (Matshaba, 2007).

South Africa currently has two private correctional centres that are in operation. These two centres are both maximum-security correctional centres and only offenders that receive a maximum-security classification are held in one of these two centres (Matshaba, 2007). However, offenders may apply to be transferred to or away from private maximum-security correctional centres; these applications are reviewed and either approved or denied by the Department of Correctional Services (Matshaba, 2007).

A distinction can be made between governmentally operated maximum-security correctional centres and privately owned maximum-security correctional centres in the South African context. Private maximum-security correctional centres are operated by private companies that the government has outsourced to render correctional services on behalf of the government (Du Preez & Luyt, 2006; Hesselink-Louw, 2004; Matshaba, 2007; Seiter, 2008). Correctional centre privatisation does not entail handing over the centre's service to private companies, but rather the Government outsourcing the design, construction, finance and management of a

correctional centre to a third party, contracted company, which in South Africa is for the period of 25 years. However, while the third party consortium handles the day-to-day responsibilities of the correctional centre, the ultimate responsibility for the correctional centre still lies with the Government (Goyer, 2001; Sekhonyane, 2003).

The DCS has made use of two private international based security firms, namely G4S Care and Justice and the GEO Group, in order to safely and securely house approximately 6000 offenders in two private, maximum-security correctional centres around the country. The first correctional centre is Mangaung Correctional Centre (MCC) based in Mangaung, just outside of Bloemfontein in the Free State. This correctional centre is owned and operated by the UK-based company G4S Care and Justice. MCC was the site where this study was conducted. The second centre is Kutama Sinthumule Correctional Centre (KSCC) located in Louis Trichardt, also known as Makhado, in the Limpopo Province, which is owned and operated by the GEO Group, an American-based company. MCC is the second largest private correctional centre in the world, and 81% of its shares are owned by G4S Care and Justice, which is one of the three operating companies of G4S (Hopkins, 2013). Since the inquiry into the feasibility of privately-owned correctional centres in South Africa in the mid-1990's, there has been widespread debate regarding the difference in quality and procedures between public correctional centres and private correctional centres (Du Preez & Luyt, 2006; Ntsohi, 2005). Operations within private maximum-security correctional centres differ from public maximum-security correctional centres. In private maximum-security correctional centres, correctional staff are meticulously trained in a uniform, military-like manner, and there are effective management supervision procedures and better control over correctional services than is often seen in governmental correctional centres (Du Preez & Luyt, 2006). Overcrowding does not occur in these private centres, and the offenders held in these centres follow a structured day

programme that allows them to attend various interventions and developmental programmes and activities (Du Preez, 2003; Du Preez & Luyt, 2006; Matshaba, 2007).

Offenders incarcerated in private maximum-security correctional centres follow an individualised developmental plan that is regularly evaluated in an attempt to constantly ensure that offenders obtain the necessary skills and development that will support their successful reintegration back into society and expectantly contribute to reduced recidivism upon release (Jordaan, 2014). The purpose of these individual developmental plans are to (a) manage the assessment, classification and case planning processes for each offender, (b) incorporate the relevant important security measures into the developmental plan of each offender, (c) plan programmes around each offender's distinct needs, (d) evaluate regularly whether the outcomes of these plans have been achieved, and (e) revise the programme planning if necessary (Du Preez & Luyt, 2006, G4S Presentation, 2007; Jordaan, 2014).

One major criticism against implementing private correctional centres is that decreasing costs will forfeit the overall quality and security of the correctional centre. However, there is significant indication that private correctional centres provide at least the level of service that government-run facilities do (Segal, 2005). Furthermore, it has been contended that public maximum-security correctional centres should follow the approach of private maximum-security correctional centres regarding the development and treatment of offenders (Matshaba, 2007), especially since the quality of care provided by private maximum-security correctional centres is entirely unmatched and unavailable in the public sector (Goyer, 2001; Seiter, 2008).

Segal (2005) found that private correctional centres have performed well in comparison to government-run centres on virtually all measures of quality, such as safety and security, turbulences and conflicts in the centre as well as programmes, amongst others. Moore (1998) argued that privately owned correctional centres spare costs through "new management approaches, new monitoring techniques, and administrative efficiencies (p. 15)."

## **2.9 The site of the study: Mangaung Correctional Centre (MCC)**

Mangaung Correctional Centre (MCC), which is managed by G4S Care and Justice, was the first of two privately-operated correctional centres in South Africa. MCC started operating in 2001, in collaboration with the Government of South Africa. MCC, which is situated in the Mangaung district of the Free State Province, houses a total of 2928 maximum-security offenders whose incarceration conditions and needs are governed by a 25-year contract with the government (G4S Presentation, 2007; Matshaba, 2007). The most vital requirements of the contract are the humane treatment and development of offenders as well as the safeguarding of the community against criminal elements. MCC meets these specific requirements by means of contemporarily designed facilities that are conducive for safe custody but also for the development and the civilised treatment of offenders; modern facility equipment and professional staff in order to ensure the provision of effective incarceration; efficient control measures and development of offenders; well designed and equipped internal healthcare and food preparation facilities with exceptionally trained professional staff to cater for offenders' health care and dietary requirements (G4S Presentation, 2007).

MCC focuses on the improvement and empowerment of offenders in order for them to become responsible members of society upon their release. This is achieved through a variety of development, empowerment and therapeutic interventions. Offenders at MCC can invest in themselves, as they have access to vast educational, vocational, psychological, social and religious opportunities that they can participate in. The Structured Day Programme is followed from Monday to Sunday, and it involves all the general routines that take place within the centre and in the various units. The Structured Day Programme is planned to accommodate movement management of offenders as well as space management. It is compiled around eight key components, namely, work, education, vocational training, physical education, counselling, domestic activities, lifestyle options and quiet times. Extensive vocational training courses are

presented in support of the Correctional Services' White Paper (2005) in an attempt to improve the industrious capacity of offenders in a variety of suitable developmental activities and skills. These courses include basic computer and business skills, office machine operators, candle making, garment making, horticulture, leatherwork, woodwork as well as upholstery and entrepreneurial skills (G4S Presentation, 2007).

Offenders also have access to social workers, social auxiliary workers, religious services, leisure activities, such as the MCC choral choir, as well as library services. The environment is rigid, routine, austere, strict and highly-controlled, especially in comparison with public correctional centres in South Africa. Offenders thus need to adjust to this highly-structured environment in order to really benefit from the exceptional opportunities provided by the correctional centre (G4S Presentation, 2007).

## **2.10 Adjustment to private maximum-security correctional centres in South Africa**

Very few South African studies have explored offender adjustment to a private, maximum-security correctional centre. Therefore, this research is unique to the South African context, particularly as it attempts to understand the factors that predict correctional adjustment in a private maximum-security correctional environment. After sentencing, the offender will be categorised as a minimum, medium or maximum-security offender. This categorisation is determined by the threat that the offender poses to correctional staff, other offenders, themselves as well as the community and is gauged by considering the crime(s) that has been committed (Matshaba, 2007). After being admitted to a public correctional centre by order of the court, an offender may be transferred to a private maximum-security correctional centre; ending up in one of the two private correctional centres after being classified as a maximum-security risk. In addition, private correctional centres do not admit offenders directly from the

courts. Therefore, once an offender arrives at the private correctional centre, certain steps concerning case management have already been completed, with the most important being the risk assessment and security classification of the offender (Du Preez & Luyt, 2006). Based on this security classification, the offender will be detained in a minimum, medium or maximum-security correctional centre. The offenders detained in maximum-security correctional centres require more precise control and management in an attempt to prevent violent behaviour and curb opportunities for escape (Silverman, 2001). A maximum-security correctional centre is purposefully designed, controlled, and operated to detain the most dangerous offenders for an extended period of time. These centres have particularly secure boundaries, barred cells, and high staff to offender ratios. Furthermore, there is stringent control over the movements of offenders and visitors (Clear & Cole, 2000; Schmalleger & Smykla, 2005).

In South Africa, the vast majority of incarcerated offenders in correctional centres are from highly unstructured, poverty-stricken and often chaotic environments. Many of the offenders grew up without a father figure and lacked an appropriate role-model in their lives (Statistics South Africa, 2013). It is therefore undoubtedly a challenge for the offender to swiftly adjust to a new, unfamiliar, strictly controlled and highly structured environment. South African correctional centres have been labelled as breeding grounds for criminals due to the inhumane conditions and violence that is often rife in these centres (Flanden-Thomas, Giffard & Nair, 2002). Therefore, over the last decade, it has become more and more difficult to adjust and endure confinement to a correctional centre (Singh, 2006).

### **2.11 Variables that can be used to predict adjustment to incarceration**

There are several fundamental variables that can be used to predict adjustment to incarceration. Some of these variables consist of the inherent traits and characteristics of the individual offender whilst others are demographic features that relate to the offender's unique criminal history. The six key variables that were used to predict correctional adjustment in this

research study include coping strategies, aggression levels, perceived social support, age, offender type classification and sentence length. These six predictor variables will be discussed in sections 2.11.1- 2.11.6.

### **2.11.1 Coping Strategies**

Coping strategies are particularly vital when adjusting to an unfamiliar, highly-restrictive environment (Carr, 2013; Crank, 2010; Gullone et al., 2000; Picken, 2012). The coping strategies employed by incarcerated offenders' accounts for significant variance in psychological distress amongst different offenders despite being held in the same environment (Chahal, Rana, & Singh, 2016). Coping strategies are thus key when exploring adjustment. Amirkhan (1990) stated that there was no general consensus regarding the basic dimensions that define coping, although he referred to it as "human dealings with stress" (pp.1066-1067). According to Weiten et al. (2018), coping strategies refer to the exertions made by an individual to "master, reduce or tolerate the demands created by stress" (p. 95). Coping further refers to the intentional efforts engaged in by an individual to minimise the physical, psychological, or social harm of an event or situation (Carrol, 2013). The incarceration experience is stressful (Crank, 2010; DeVeaux, 2013; Woo et al., 2016) and the efforts offenders exert in an attempt to manage and control the stress thereof greatly impacts on how they adjust to the correctional environment. The coping strategies employed by offenders while incarcerated can either aid or hinder their adjustment to the correctional environment (Newhard, 2014). Previous research found that there is a strong association between coping strategies and correctional adjustment (Crank, 2010; Picken 2012; Rocheleau, 2013) and that offender coping strategies can be used as predictors to envisage who adjusts well to the correctional environment and who does not (Newhard, 2014).

Coping strategies continually develop through the course of an individual's lifespan (Lazarus, 1996). Weiten et al. (2018) argued that it is most effective to employ a variety of coping techniques when handling a stressful circumstance. With this coping flexibility in mind, employing varied coping responses that is circumstance-specific has been linked to positive mental outcomes (Liao, 2014), such as increased resilience (Galatzer-Levy, Burton, & Bonanno, 2012) as well as a reduction in depression, anxiety and overall distress (Kato, 2012). Individuals often develop their respective coping strategies through familial role modelling, peer interactions as well as trial and error (Moos & Holahan, 2003). However, individuals who have been exposed to and influenced by repeated, ineffective coping responses may develop negative self-soothing strategies as a form of coping (Newhard, 2014). Zamble and Porporino (1988) argued that ineffectual coping strategies are precursors to criminal behaviour, which rarely improve over time. Incarcerated offenders often make pronounced efforts to address and cope with the stressors and challenges that they experience in the correctional environment on a daily basis. The problem however, is that offenders have generally been found to use maladaptive styles of coping that are neither healthy nor adequate for dealing with stress. Coping strategies characteristically recognised amongst incarcerated offenders include avoidance, denial, temporary relief of problems, externalisation and aggressive behaviour (Carr, 2013; Chahal et al., 2016; Chubaty, 2001). Gullone et al. (2000) reported that incarcerated offenders' ideal methods of coping were keeping to themselves and resolving their problems on their own. These coping responses tend to be futile and mostly only worsened already stressful circumstances (Chubaty, 2001). In addition, Zamble and Porporino (1988) found that the correctional experience also compounds already ineffective coping strategies and further influences the development of maladaptive coping responses.

Agbakwuru and Awujo (2016) established that amongst a sample of incarcerated offenders in a Nigerian correctional centre, the involvement in religious activities was a strategy often

used by offenders to cope with the challenges of incarceration. Rooting oneself in religious activity grants the offender refuge from the chaotic correctional life and assists him in choosing prosocial behaviours rather than maladaptive strategies. In the same study, it was also found that involvement in vocational and educational programmes within the correctional centre was also a strategy used by offenders for coping with incarceration as these activities kept offenders busy and alleviated stress induced by idleness (Agbakwuru & Awujo, 2016).

Endler and Parker (1990a, 1990b) stated that coping is multi-dimensional and identified three overarching types of coping responses that can be used in the correctional context, namely problem-focused coping, emotion-focused coping and avoidance coping. These coping responses are consistent with those proposed by others. Lazarus and Folkman (1984) highlighted that different coping responses are not characteristically right or wrong but should rather be viewed in context. For example, in a situation where the outcome cannot be changed, emotion-focused coping or avoidance coping may be effective. However, in a situation that requires problem-solving and avoidance responses are continuously used, issues of adjustment and psychological deterioration may occur (Chahal et al., 2016; Newhard, 2014).

### **2.11.1.1 Problem-focused Coping**

Carroll (2013) explained problem-focused coping as a specific type of coping intended for resolving the demanding situation or event or altering the source of the stress. Problem-focused coping typically involves efforts to change the problem causing the stress and characteristically includes elements, such as generating options to solve the problem, evaluating the pros and cons of different options and applying steps to solve the problem (Baker & Berenbaum, 2007; Lazarus & Folkman, 1984). In problem-focused coping an individual aims to cope and reduce stress by confronting the problem directly (Ebata & Moos,

1991). While problem-focused coping is often considered a healthy and effective form of coping in the real world when coping is practical and stressors are modifiable (Carver, 2011), it has been found to be ineffective and oftentimes frustrating within the correctional context (Chahal et al., 2016; Picken, 2012; Van Herreveld, Van der Pligt, Claassen, & Van Dijk, 2007).

This is the case due to problem-focused coping typically involving attempts to remove the source of stress or removing oneself from the stress-inducing situation (Carroll, 2013), which is an obvious impossibility for incarcerated offenders. Offenders cannot undo the crime(s) that sent them to the correctional centre or remove themselves from the correctional centres they have been confined to (Picken, 2012). Constant rumination concerning fixing the problem will be neither practical nor healthy for an incarcerated offender and could lead to an increased risk of depressive symptoms as chronic, maladaptive rumination has been found to be a substantial predictor of depression (Michalak, Hölz, & Teismann, 2011). As a result, Van Herreveld et al. (2007) specified that emotion-focused coping tends to be more effective amongst incarcerated offenders and has a constructive effect on mental health. However, problem-focused coping is not completely ineffective in the correctional environment. Offenders can also use problem-focused coping as a way to seek information and assistance in dealing with stressful situations within the correctional environment from correctional officials and social support services, such as psychologists, social and auxiliary workers and religious leaders (Van Herreveld et al., 2007).

#### **2.11.1.2 Emotion-focused Coping**

In emotion-focused coping, an individual does not directly focus on the stressor but instead tries to normalise the emotions induced by the stressful event or situation (Ebata & Moos, 1991; Holahan & Moos, 1987). Emotion-focused coping embodies self-oriented efforts of self-preoccupation and fantasising, all with the aim of reducing stress (Lopez & Snyder, 2011).

This particular type of coping may involve the use of behavioural and/or cognitive strategies, which may include receiving emotional support from friends and family as well as positive reframing (Baker & Berenbaum, 2007; Völlink, Bolman, Eppingbroek, & Dehue, 2013). An individual may use active or avoidant emotion-focused coping. Active emotion-focused coping is generally considered to be adaptive (Ryan, 2013) and includes focusing on redefining a situation by concentrating on its more optimistic aspects (Völlink et al., 2013). While avoidant emotion-focused coping, such as self-distraction is considered maladaptive (Ryan, 2013), as an individual tends to withdraw and tries to avoid the stressor as a means of coping (Holahan & Moos, 1987; Lazarus & Folkman, 1984).

Van Herreveld et al. (2007) indicated that emotion-focused coping may be the best coping response while incarcerated. Research has shown that this type of coping is more effective than problem-focused coping, especially when an individual's control of the negative outcome is low, as in the correctional environment, for example (Chahal et al., 2016). Emotion-focused coping has thus been viewed to have a helpful impact on psychological well-being, cognitive functioning as well as on overall health (Baum & Singer, 1987). Contrariwise, Agbakwuru and Awujo (2016) found that while emotion-focused coping is a form of coping used by incarcerated offenders in a Nigerian correctional centre, this form of coping does not offer offenders any meaningful assistance in terms of coping with the correctional environment.

### **2.11.1.3 Avoidance Coping**

Avoidance coping, also appropriately referred to as 'escape' coping, is a type of coping that is employed when an individual initiates cognitive and behavioural efforts for the purpose of denying, minimising, or ultimately avoiding dealing directly with stressful situations (Cronkite & Moos, 1995; Newhard, 2014; Penley, Tomaka, & Wiebe, 2002). Avoidance coping includes mental efforts to avoid thinking about a problem and behavioural efforts to avoid stressful situations (Mohino, Kirchner, & Forns, 2004). Previous studies have indicated that avoidance

coping responses are closely linked to distress, depression as well as personality characteristics and negative outcomes (Abbott, 2003; Moos & Holahan, 2003; Stowell, Kiecolt-Glaser, & Glaser, 2001). A study conducted in 2013 found that repeated reliance on avoidant coping mechanisms, such as denying or minimising negative emotions, was significantly correlated with increased bouts of stress and lower life satisfaction (Ryan, 2013). Avoidant coping responses reduce stress and prevent anxiety from becoming crippling but also generate a broad range of stressors (Holahan, Moos, Holahan, Brenner, & Schutte, 2005).

The coping responses typically identified amongst incarcerated offenders include cognitive avoidance, emotional reactivity, keeping to oneself and dealing with problems on their own (Carr, 2013; Gullone et al., 2000; Newhard, 2014; Zamble & Porporino, 1990). Chahal et al. (2016) found that avoidance coping in the form of denial and externalisation was the most common form of coping amongst mentally healthy, male offenders. The findings of this study showed that male offenders are more likely to ignore stressful situations or minimise its seriousness and blamed other people for their behaviour whilst incarcerated (Chahal et al., 2016). Avoidance coping may be normal and in some circumstances useful in the correctional environment, especially regarding the challenging correctional context (Lazarus & Folkman, 1984). Previous research has also suggested that avoidance coping is common practice amongst incarcerated offenders (Carr, 2013; Picken, 2012; Van Herreveld et al., 2007) and this provides an important point for further exploration as the most robust and constant connections between coping methods and emotional anguish include avoidance coping (Holahan, Moos, & Bonin, 1999).

### **2.11.2 Aggression**

Aggression has been described as any behaviour that is intended to harm another person who does not want to be harmed. There are three important factors of aggression, namely aggression is a behaviour that can be seen, it is intentional and the victim wants to avoid the

harm (Baumeister & Bushman, 2016). Aggression can be direct or indirect, physical or verbal and can arise even when there is a lack of physiological arousal (Baumeister & Bushman, 2016; Kassinove, 1995). According to Buss and Perry (1992), it is important to address anger, as it is a prelude to aggression, and can be physical and/or verbal and it also entails a noxious stimuli that is directed at another person. Anger is often considered the foremost predictor of aggressive behaviour though it is not necessary for anger to be present in order for aggressive behaviours to occur (Baumeister & Bushman, 2016; Cornell, Peterson, & Richards, 1999). Aggression in correctional centres may manifest in actions such as disturbances, active resistance, attacks on others or threats of attack on others, destruction of property, theft, escape and/or possession of a weapon, amongst others (Arbach-Lucioni, Martinez-García, & Andrés-Pueyo, 2012). Maladjustment to the correctional environment has been found to be characterised by aggression, anger, violence and hostility (Dye, 2010). Researchers have found that aggression in correctional centres is strongly linked with correctional maladjustment (Chubaty, 2001; Dye, 2010). More aggressive offenders have higher rates of disciplinary infractions and spent more time in solitary confinement (McShane & Williams, 1989; Picken, 2012), which is indicative of correctional maladjustment (Dye, 2010). Furthermore, significant symptoms of correctional maladjustment namely, loneliness, depression and anxiety, also increase the risk of aggressive behaviours (Carrizales, 2013).

The correctional environment, which offenders often perceive as frustrating, lonely and boring (Clements, 1979) can lead offenders to act out aggressively in order to relieve built up tension. Freud's *Catharsis*, a process in which expelling anger will generate a helpful and satisfying enhancement in one's mood, may explain why offenders act out aggressively whilst incarcerated (Ramirez, Millana, Toldos-Romero, Bonniot-Cabanac, & Cabanac, 2009). Offenders may be aggressive in the hope that it will help them relieve stress (Bushman, Baumeister, & Phillips, 2001).

Research at HM Prison Grendon, an unconventional therapeutic-type correctional centre located in Buckinghamshire, England (Shine, 2001), found that large community sessions twice weekly and small group meetings once a week where offenders are given the opportunity to talk and vent about the everyday challenges of incarceration and propose effective ways of dealing with them (Brookes, 2010), discourages and relieves aggression, violence and hostility (Picken, 2012). Research has indicated that offenders who commit and remain in therapy at Grendon for a minimum of 18 months show the greatest improvement (Shine, 2001). Therefore, this advocates that therapeutic communities within the correctional environment can reduce aggression (Pike, 2014) and may further aid adjustment to incarceration.

### **2.11.3 Perceived social support**

Perceived and actual social support whilst incarcerated is becoming an increasingly thought-provoking topic of debate amongst experts as it is considered a key tool in crime reduction (Huebner, 2003; Wooldredge, Griffin, & Pratt, 2001). The concept of social support in the correctional environment is also important when attempting to understand adjustment to incarceration (Asberg, Bowers, Renk, & McKinney, 2008; Asberg & Renk, 2012; Liu & Chui, 2013). Social support can be vital in curbing aggression amongst incarcerated offenders and it can be a powerful predictor of correctional adjustment (Woo et al., 2016). According to Zimet et al. (1988), it is difficult to define social support, although they stated that it entails a relationship transaction between two or more people and that it may be particularly effective as a shield during stressful circumstances (Zimet et al., 1988). Other researchers however, have argued that social support is not always supportive (Hobbs, 2000; Pagel, Erdly, & Becker, 1987) and that it depends on how the offender perceives the support, albeit negative (Larson & Lee, 1996; McColl, Lei & Skinner, 1995; Wilcox & Vernberg, 1985). Thus, even though the offender might receive support, it may not be perceived as particularly supportive. However, research has indicated that social support provided to offenders by the correctional centre or by

significant others lessens criminal involvement while incarcerated and enhances social ties (Cochran & Mears, 2013; Siennick et al., 2013, Woo et al., 2016). Social support whilst incarcerated is also vital as it assists offenders to satisfy their basic needs and position themselves with a measure of security within the correctional environment (Liu & Chui, 2013).

Positive correctional adjustment has often been viewed in terms of few disciplinary infractions and rare incidences of correctional misconduct (Woo et al., 2016). Researchers have therefore focused on the effects of perceived social support on the occurrence of correctional misconduct and argued that offenders who perceive an adequate amount of support from friends and family as well as the correctional centre are less likely to be aggressive and show signs of correctional misconduct (Liu & Chui, 2013; Woo et al., 2016).

Cullen (1994) found that support from loved ones during imprisonment reduced negative emotions, such as hostility, and projected a more optimistic disposition at the time of release. In contrast, research has also suggested that offenders who rely solely on outside social support, such as friends and family, experienced poorer adjustment to the correctional environment (Lindquist, 2000). Thus, social support provided by the correctional centre to incarcerated offenders in terms of various rehabilitative programmes, support groups, access to in-house social support services such as correctional psychologists and social workers as well as religious activity is also a vital component of perceived social support and can reduce the extent of correctional misconduct and poor correctional adjustment (Woo et al., 2016).

Carr (2013) found that social support networks and peer groups within the correctional centre are important factors in buffering the stressors of incarceration. In a study conducted by Agbakwuru and Awujo (2016), it was found that by adopting a 'surrogate family' (p.156-157) made up of individuals within the correctional centre, individual needs for love and belonging were satisfied and it further assisted offenders with their adjustment to and coping with the correctional environment. Research conducted by Asberg and Renk (2012) among a

population of incarcerated offenders further found that insufficient social support is linked to greater indicators of depression as well as feelings of hopelessness and lower self-esteem. Furthermore, lower levels of perceived social support was also found to be a significant predictor of depression and anxiety. This correlates with previous research which found significant relationships between poor psychological well-being and perceived social support (Thoits, 1986, 1995). It can therefore be argued that if the correctional centre provides adequate support and offenders choose to participate in programmes, religious activities and vocational training or if offenders receive some support from family and friends, they should perceive some degree of social support. In turn, research suggests that offenders will be less likely act out with aggression during incarceration which ultimately leads to better adjustment to the correctional environment (Woo et al., 2016).

#### **2.11.4 Age**

The juxtaposing correlation between age and the commission of crime has been explicitly documented in literature (Greenberg, 1985; Hirschi & Gottfredson, 1983; Nagin, Farrington, & Moffitt, 1995) and several quantitative and qualitative research studies have identified a strong relationship between age and correctional adjustment (Adams, 1992; Crank, 2010; MacKenzie, 1987; Wolfgang, 1961). In previous studies, age is confirmed to be the strongest predictor of correctional misconduct (Adams, 1992; Hanks, 1940; Jensen, 1977; Schnur 1949; Zink, 1958), and correctional misconduct has further been found to be strongly linked to correctional maladjustment (Rocheleau, 2013; Woo et al., 2016).

Research has indicated that younger offenders display consistently higher infraction rates and are more disruptive within the correctional environment than older offenders (Adams, 1992; Crank, 2010; MacKenzie, 1987). MacKenzie (1987) further found that offender-on-offender conflicts and offender-on-guard conflicts peaked in the early 20s but thereafter

declined with age. It has been argued that younger offenders do not have the capacity to adequately manage the deficits of the correctional environment, which may ultimately result in adjustment difficulty and evidently to an increase in misconduct (Toch & Adams, 2002; Valentine, 2012). In addition, in his research, Driscoll (1952) stated that "observations carried out indicated that offenders rated as more maladjusted were significantly younger" (p. 41). Thus it can be argued, that the younger the offenders are, the more inclined they are to experience maladjustment to the correctional environment.

However, some research suggests that as offender's age, they are at an increased risk of victimisation, which could then also impact upon their adjustment to the correctional environment (Cervello, 2015; Wright, 1983). In a 2007 study, Kerbs and Jolley determined that mature male offenders (older than the age of 50), were more vulnerable to varying forms of victimisation. The findings indicated that older offenders were more inclined to be victimised by younger offenders, especially through psychological, property, physical, and sexual violence. In contrast, Pare and Logan (2011) highlighted that older offenders were less inclined to report and experience both petty and more severe forms of victimisation than younger offenders. Regardless, research has shown that older offenders typically have more incarceration experience and thus have less difficulty coping with and adjusting to the correctional environment (Crank, 2010). This could be due to older offenders having developed and learned systems that assist with managing the physical and psychological pains of imprisonment (Shover, 1985). Logan (2015) argued that due to more life experiences, older offenders have thus had more time to develop the required social and mental abilities necessary to cope with the challenges inherent to incarceration. It has also been found that older offenders have learnt to keep to themselves and avoid potential conflict and danger whilst incarcerated, which assists with the adjustment process (Akerstrom, 1985; Shover, 1985). As

one participant in a qualitative study conducted by Shover (1985) highlighted: older offenders tend to develop a “third eye for danger” (p. 123).

### **2.11.5 Offender type classification (First Time vs Repeat Offender)**

Previous research on correctional adjustment indicated that offenders who have prior incarceration experience have, as a result of previous imprisonment, learnt certain techniques to cope with and adjust to the correctional environment (Crank, 2010; DeVeaux, 2013; Picken, 2012; Santos, 2003, 2006). Coping techniques are vital in mastering adjustment (Weiten et al., 2018) and logic dictates that the more experience an individual has with incarceration, the better adjusted they will be (Wolfgang, 1961). It can thus be argued that offenders who have prior incarceration experience adjust better to correctional life than less experienced offenders (Akerstrom, 1985; Crank 2010; Shover, 1985). Wolfgang (1961) confirmed that prior incarceration experience, which includes acclimating oneself to the routine of eating, working, sleeping, and associating with other offenders assists one’s adjustment to a similar subsequent experience. The findings of his study indicated that 11 out of 13 men with prior incarceration experience formed part of the adjusted group and only two were in the maladjusted group. In addition, analysis of the age variable indicated no significant differences in having previous incarceration experience as it is often assumed that older offenders adjust better due to having spent more time incarcerated. However, the absence of this significant association is essential as it highlights that, irrespective of an intervening age variable, the relationship between prior incarceration experience and correctional adjustment remains significant on its own (Wolfgang, 1961).

Other studies confirmed these findings and found that incarcerated offenders who had previously been imprisoned are more prepared to be sentenced to correctional centres than

offenders without such experience (May et al., 2005; Williams, May, & Wood, 2008; Wood & May, 2003). Also, most offenders are fearful of and anxious about being incarcerated before experiencing it (Akerstrom, 1985; May, Wood, & Eades, 2008). As incarceration becomes more familiar, experienced offenders are less fearful of the experience (May et al., 2008), which aids in their adjustment. Therefore, offenders that have previously been exposed to similar norms and ways of life may adjust to their new environment better than those who have never been incarcerated before (Crank, 2010; Picken, 2012). This was reinforced by a previous incarcerated offender, Michael Santos, who, in his biography stated that after serving approximately five years, offenders grow accustomed to the correctional environment (Santos, 2003). McClelland and Alpert (1985) further supported these claims in their study and found that offenders with multiple previous convictions saw incarceration as “relatively trivial” (p. 317). It has been contended that the extent to which offenders successfully adjust to the correctional environment is a reflection of their previous experiences with incarceration (DeLisi, 2003; Kerley, Copes, Tewksbury, & Dabney, 2010; Trulson, 2007). Therefore, past antisocial behaviour within the correctional environment predicts similar future behaviour (Adams, 1992). The experiences of prior incarceration prepare offenders for incarceration by familiarising them with correctional life (Adams, 1992). Research thus suggests that as offenders experience imprisonment, they learn certain coping techniques that assist them with adjusting to the environment in future. On the other hand, according to research conducted by Zamble and Porporino (1988), the coping strategies of offenders with prior correctional experiences was less effective than that of other offenders. These contrasting conclusions emphasise the need for further research in order to determine whether prior incarceration experience is a strong predictor of correctional adjustment, particularly in the South African context.

### 2.11.6 Sentence Length

While some research has suggested that most offenders experience the same challenges and frustrations whilst incarcerated regardless of sentence length (Wolfgang, 1961), other research found a link between correctional adjustment and the length of sentence of the incarcerated offender (Adams, 1992; Logan, 2015; Thompson & Loper, 2005; Van Tongeren & Klebe, 2010; Zamble, 1992a). Flanagan (1980b) investigated how trends of misbehaviour differ by length of sentence. He determined that the institutional misconduct rate of short-term incarcerated offenders is twice that of offenders serving longer sentences. Similarly, offenders who have high rates of misbehaviour and disciplinary infractions over most of their correctional terms are typically serving shorter sentences (Toch & Adams, 1989). Santos (2003), an ex-incarcerated-offender, stated that after serving approximately five years in a correctional centre, offenders grow accustomed to the correctional environment. Furthermore, in the beginning offenders struggle to adjust to the correctional environment and thus have several disciplinary infractions. After a period of time, however, they no longer experience the correctional centre as punishment but it rather becomes a normal way of life. Santos (2003) summarised it as follows: “[L]ife becomes normal and predictable, although within a restricted, harsh and sometimes inhumane closed society” (p. 216). According to Agbakwuru and Ibe-Godrey (2017), sentence length significantly influenced how an incarcerated offender copes with and ultimately adjusts to incarceration. It was found that offenders who have spent more than five years incarcerated cope significantly better with incarceration than those who have spent less than five years imprisoned. Furthermore, studies that explored how offenders adjust to the correctional environment have revealed, that over a period of time, offenders report a decline in their feelings of hopelessness, have lower correctional misconduct rates, submerge themselves more entirely in the daily life of the correctional environment, learn to mask their

vulnerabilities better and become more committed to work and other correctional activities (Smith, Goggin, & Gendreau, 2002; Toch & Adams, 1989; Wright, 1991; Zamble, 1992b).

Offenders who are unfamiliar with incarceration, and who expect to serve long sentences experience the most stress, while those with long sentences who have already served a lengthy portion of their sentence experience less stress (MacKenzie & Goodstein, 1985). Furthermore, Casey et al. (2016) found that offenders who had been imprisoned for more than six months regarded incarceration as significantly more tolerable and positive than those who had only been imprisoned for less than six months. This suggests that offenders who have spent some period of time incarcerated have learnt to cope with and adapt to the correctional environment (Picken, 2012).

However, Adams (1992) asserted that the element of time can exacerbate common offender issues and impact on the psychological health and overall adjustment of offenders. Offenders with long sentences, for example 10 years or more, have certain unique fears and challenges that are associated with an extended sentence length. Unlike short-term incarcerated offenders, offenders serving longer sentences frequently fear that connections in the outside world will be permanently lost. In addition, offenders incarcerated for longer sentences are typically older than other incarcerated offenders, which poses a challenge in terms of finding confidantes with similar interests within the correctional environment (Adams, 1992). Zamble (1992b) also found that long-term offenders perceive casual interactions with other offenders along with involvement in the correctional community as a factor that increases their chances of disciplinary problems, thus these longer term offenders tend to avoid these connections and isolate themselves from others (Zamble 1992b). This may impact upon their adjustment to the correctional environment. Therefore, there is juxtaposing, conflicting findings regarding sentence length and adjustment to the correctional environment.

## **2.12 Other variables that can predict adjustment to incarceration**

Besides the six fundamental variables discussed in section 2.11.1- 2.11.6 that can be used to predict adjustment to incarceration, there are also several other factors that can be used (see recommendations for future research). As the sections that follow will indicate, these factors can and have been used as predictors of correctional adjustment in several other studies and sources of literature. Thus, in order to comprehensively discuss the factors that predict adjustment to incarceration, a thorough literature study of these factors was undertaken. Other variables that can predict adjustment to incarceration, while not specifically investigated in this study include, gang affiliation, a history of drug and alcohol abuse, ethnicity, mental illness and prior incarceration experience. To manage the extent of the study, all the variables included in the literature review section could not be investigated and thus literature was consulted in order to select the six predictors analysed in this study (as discussed above in section 2.11.1-2.11.6). The variables included in section 2.12.1- 2.12.5 are acknowledged as potential predictors of correctional adjustment based on previous literature. Further investigation is needed to determine their predictive capacity in a sample of male incarcerated offenders, in private, maximum-security correctional centres.

### **2.12.1 Gang Affiliation**

Gang affiliation is associated with several problematic outcomes within the correctional environment (Motz, Labrecque, & Smith, 2017). Involvement in a gang whilst incarcerated has been found to be linked to a higher likelihood of violent correctional misconduct (Griffin & Hepburn, 2006; Pyrooz, Turanovic, Decker, & Wu, 2016), increased smuggling and distribution of contraband within the correctional environment (Fischer, 2001; Fleisher & Decker, 2001; Hesselink & Grobler, 2015), amplified unwillingness to comply with rehabilitation programmes and has also been linked to the increase of riots (Useem & Reisig, 1999). As some of these aspects, including violence, resistance to correctional programmes

and disruptive behaviour have been linked to correctional adjustment, gang affiliation can undoubtedly be considered as a predictor of correctional adjustment. The question arises: Do gang affiliated offenders adjust better or worse to the correctional environment?

Conditions in correctional centres including issues of overcapacity, tediousness and lack of individual autonomy provide first-rate opportunities for the establishment of gangs, and while affiliation is allegedly voluntary, the majority of young incarcerated offenders are often obligated to become members of a gang for their own safety and survival as well as the fulfilment of basic needs (Gear, 2002; Peacock & Theron, 2007). In the South African correctional system, the 'numbers' gangs (the 26's, 27's and 28's) are most prominent. These gangs have the most power and are notorious for ruling with extreme violence (Caracciolo, 2015; Hesselink & Grobler, 2015; Parker Lewis, 2006). Parker Lewis (2006) highlighted that the 26-gang frequently includes counterfeiters and scammers, the 27's are known for the '*Manskap*' of blood' (p. 1) and they appear to consist of violent offenders and murderers, while the 28-gang is largely comprised of sex offenders. Identifications of and involvement in a gang is often represented through tattoos on the offenders.

Incarcerated offenders join gangs in an attempt to survive in a correctional centre and cope with the challenges associated with imprisonment (Hesselink & Grobler, 2015; Peacock & Theron, 2007). Most often incarcerated offenders are not protected by correctional officials from other gang members and are therefore forced to join the gang for protection and safety (Caracciolo, 2015; Engelbrecht, 2014; Gear, 2002). Offenders also tend to join gangs due to feelings of isolation or they have limited or no family contact and joining a gang becomes a substitute family for the incarcerated offender (Caracciolo, 2015).

As a result, gang-affiliated offenders adjust better to the correctional environment than non-gang-affiliated offenders since research suggests that gang membership is compensated with peer support, power, personal safety, access to contraband and certain privileges such as having

a lower ranked gang member clean your cell or clothes (Carracciolo, 2015; Hesselink & Grobler, 2015; Kalnich & Stojkovic, 1985; Peacock & Theron, 2007; Ralph, 1997; Scott, 2001), which has the potential to improve the overall incarceration experience.

### **2.12.2 History of drug and alcohol abuse**

While drug and alcohol abuse has been linked to criminal behaviour (Deitch, Koutsenok & Ruiz, 2000; Gottfredson, Kearley, & Bushway, 2008; Stephen & Dudafa, 2016), few research endeavours have explored the effects of a history of drug and alcohol abuse on the adjustment to incarceration. A hypothesis may be that offenders who have a history of drug and/or alcohol abuse may have experienced greater difficulty in adjusting to the correctional environment than offenders who do not have a history of drug and/or alcohol abuse. Research has revealed that a history of substance abuse is more prevalent amongst offenders than the general population (Fazel, Bains, & Doll, 2006; Sacks et al., 2009). Teplin (1994) found that 29% of incarcerated offenders had a current substance use disorder and 61% of incarcerated offenders had a substance use disorder over the period of their adolescent and adult lifetime. Furthermore, research conducted by the Bureau of Justice Statistics (Mumola & Karberg, 2006) indicated that nearly half of the incarcerated offenders met the benchmarks for drug abuse or dependence.

The continuous use and abuse of drugs and/or alcohol is well known as a coping mechanism (Sinha, 2008; Wills & Shiffman, 1985) and Adams (1992) found that two-thirds of incarcerated offenders reported using drugs and alcohol as a form of coping while in the community. Individuals misuse these substances as a way to numb negative feelings or memories and manage day-to-day living. Criminals often use substances before the committal of a crime, such as house breaking, in order to eradicate fear and calm their nerves (Rafaiee, Olyae, & Sargolzaiee, 2013). In communities, drugs and alcohol are often easily accessible. However,

once the individual is incarcerated, particularly in a correctional centre where drugs are strictly monitored, the drug(s) is no longer simply available. Substance dependent offenders may thus experience painful withdrawals and alarming behavioural outbursts due to the lack of the substance (Mumola & Karberg, 2006). This can impact on how the offender adjusts to the correctional environment.

In addition, research suggests that substance abuse illnesses often occur synonymously with other mental health challenges including depression and anxiety (Cote & Hodgins, 1990; James & Glaze, 2006; Sacks et al., 2009). Lurigio and Swartz (2000) further found that mental illnesses are common amongst offenders in substance abuse programmes (approximately 50-75%). This comorbid combination could have a greater impact on how offenders adapt to the correctional environment.

### **2.12.3 Ethnicity/Race**

Literature detailing the impact of ethnicity on correctional adjustment has been predominantly qualitative (Chowdhury, 2015). However, several quantitative research endeavours have explored the role played by ethnicity in the adjustment of offenders to incarceration (Steffensmeier & Demuth, 2006). Prevailing research has suggested that the ethnicity or race of the offender is a significant predictor of adjustment to the correctional environment. It is often thought that this significant correlation is an extension of the ethnicity-crime relationship, which occurs outside correctional centres (Carroll, 1974; DeLisi, Berg, & Hochstetler, 2004; Harer & Steffensmeier, 1996). Furthermore, existing literature has often presupposed that underprivileged groups are more irrepressible and adaptive to incarceration due to their experiences in crime ridden communities and impoverished environments, which inadvertently prepares these individuals for incarceration and the pains, frustrations and deprivations associated with it (Logan, 2015; Wacquant, 2001; Wright, 1989). In South Africa

these disadvantaged communities tend to house mostly individuals of an African ethnicity (Fieldworker, 2014; Statistics South Africa, 2013). Wright (1989) stated that life in a disadvantaged community evidently prepares the offender for the hostile social environment of the unpredictable correctional environment. These disadvantaged communities are often characterised by poverty, unemployment, food insecurity, the overarching prospect of victimisation and legal pessimism (Anderson, 1999) and require residents to be tough and cunning (Logan, 2015). Individuals from these communities who end up incarcerated may import this *code of the street* (Anderson, 1999) in order to maintain one's reputation or credibility. Logan (2015) further emphasised that offenders who obey to *the code* may display higher levels of violence, hostility, and defiance toward correctional staff, as well as other offenders, in order to project a powerful correctional identity. According to Wooldredge (1994), non-white offenders were considerably more dangerous than White offenders. Similarly, Harer and Steffensmeir (1996) used data from 58 correctional centres to examine racial differences in both violent and non-violent offences for Black and White offenders. Controlling for a host of individual, correctional centre, and community background variables, their results indicated an importation effect. Specifically, clear of relevant control variables, Black offenders had higher violent misconduct and somewhat lower alcohol/drug misconduct rates, compared to White offenders.

Racial differences amongst offenders were also observed with respect to the mental health of incarcerated offenders. Wooldredge (1999), for instance, explored the mental health of male incarcerated offenders and found that, compared to other groups, White offenders experienced more depression, anxiety, and stress; all of which have been linked to maladaptive coping responses outside of correctional centres, including alcohol and drug use (Grant et al., 2004). However, Wright (1989) found that, with the exception of self-inflicted injury, Black and White incarcerated offenders experienced incarceration similarly. Wright (1989) further

argued that racial differences are not universal, and the practice of suggesting that Black offenders adjust in a particular way and White offenders another, leads to incorrect assumptions regarding trends of correctional adjustment. Due to the variations in the findings highlighted above, the role of ethnicity in correctional adjustment is a necessary point for future research, particularly in the South African context.

#### **2.12.4 Mental Illness**

Mental illness has been found to be a significant indicator of adverse circumstances both inside and outside a correctional environment (Blitz, Wolff, & Shi, 2008). As a result, there has been a lot of debate regarding the pervasiveness of mental illness in the correctional environment (Logan, 2015; Meath, 2016) and research generally maintains that mental illness is more widespread in correctional centres than in the broader population (Prins, 2014). A 2010 survey indicated that more offenders with mental health issues were being housed in correctional centres than in appropriate psychiatric centres (Torrey, Kennard, Eslinger, Lamb, & Pavle, 2010). In the United States, statistics indicate that the prevalence of serious mental illness amongst incarcerated offenders is between 15-20%, with some states asserting that at least 50% of incarcerated offenders have substantial mental health needs (Ditton 1999; Lamb & Weinberger, 1998; Torrey et al., 2010). A 2017 review of Californian correctional centres found that 30% of incarcerated offenders were currently receiving treatment for a severe mental disorder, thus presenting an increase of 150% since 2000 (Stanford Justice Advocacy Project, 2017). Research conducted by Fazel and Danesh (2002) found that incarcerated offenders were seven times more likely than individuals in the general population to have a psychotic disorder or major depression. This could be due to difficult life circumstances as well as emotional, physical and/or sexual trauma or abuse as a child, which is also a strong predictor of future mental illness (Wolff & Shi, 2012). Way, Sawyer, Lilly, Moffit and Stapholz (2008) found that over a one month period, 6% of the newly incarcerated offenders

entering correctional centres were diagnosed with a serious mental illness. These offenders had a history of multiple suicide attempts and admissions in psychiatric institutions. Thus, several studies suggest that mentally ill offenders have more difficulty adjusting to incarceration than other offender populations (Cooley, 1993; Diamond, Wang, Holzer, Thomas & Anger Crusier, 2001; Wolff, Blitz, & Shi, 2007). Offenders suffering from severe mental disorders including major depressive disorder, anxiety, personality disorders such as antisocial personality disorder, post-traumatic stress disorder and panic disorder, for example, may have particular difficulty in adjusting to the correctional environment (Logan, 2015; Pare & Logan, 2011; Meath, 2016). Correctional staff may unknowingly interpret symptoms of mental illness as misbehaviour (Houser, Belenko, & Brennan, 2012), which further influences how the incarcerated offender adjusts to the correctional environment, especially in the early stages of incarceration (Toman, 2017). Mental illness whilst incarcerated is challenging for the affected offender. Research found that male offenders with mental disorders were approximately 60% more likely to be victimised over a six-month period, compared to offenders without these disorders (Blitz et al., 2008). Offenders with mental illnesses were also found to be extorted by other offenders for their medications (Galaneck, 2012) and fall victim to sexual assault and violence (Blitz et al., 2008; Wolff et al., 2007). Some mentally ill offenders seem weak and, as such, are stigmatised and labelled by other offenders as a suitable target to establish power and status, or to experience excitement from the victimisation of another while not jeopardising their own safety (Felson, 2002). However, offenders with mental disorders may engage in violent, impulsive behaviour by lashing out at other offenders and correctional officials and may behave in ways that deviate from correctional norms and elicit negative reactions from the correctional community (Bottoms, 1999; Cooley, 1993; Irwin & Cressey, 1962; Silver, 2002). Pare and Logan (2011) acknowledged this as they stated that offenders with certain mental disorders are associated with more provocative behaviours and this increases the likelihood of

experiencing institutional pains. For example, offenders with personality disorders are more likely to be victimised whilst incarcerated because they initiate physical violence and attack other offenders.

Interestingly, research has shown that offenders with mental illnesses receive sentences that are 12% longer than other offenders convicted of the same crime(s) but without mental health diagnoses. It has also been found that offenders sentenced to life terms are more likely to be mentally ill (Stanford Justice Advocacy Project, 2017). This increased risk of various forms of harassment and discrimination, long correctional sentences and in some cases a tendency towards violence coupled with the experience of serious mental distress could impact upon how mentally ill offenders adjust to incarceration (Logan, 2015; Meath, 2016). This is another important point for future research.

#### **2.12.5 Type of offence**

Research has indicated that the type of offence committed by offenders can either aid or hinder their adjustment to the correctional environment (Petersilia & Deschenes, 1994a, 1994b; Spelman, 1995) and is closely linked to how the offender adjusts to incarceration (Warren, 2003). Hesselink and Booyens (2014), drawing from Herbig and Hesselink (2012), stated that the DCS in South Africa employs criminologists to thoroughly assess offence-specific details of each unique offender in order to determine and compile the unique offenders' sentence plans and rehabilitation. This integral part of the offenders' intake process can either assist the offender with adjusting to the correctional environment or hinder their adjustment if certain vital offence-specific information is not considered (Hesselink & Booyens, 2014).

Research found that offenders sentenced for violent offences more often have higher misconduct rates whilst incarcerated than nonviolent offenders (Adams, 1983; Flanagan 1983;

Griffin & Hepburn, 2006; Logan, 2015; Toch & Adams 1989a). A high rate of infractions whilst incarcerated is associated with correctional maladjustment (Crank, 2010; Dye, 2010; McShane & Williams, 1989; Picken, 2012; Woo et al., 2016). Wolfgang (1961) stated that offenders incarcerated for murder often have an attitude which favours violation of the law. These offenders do not adhere to societal rules, values and the wrongs of human conduct and are therefore unlikely to adhere to the rules of the correctional environment, which evidently hinders their adjustment to incarceration. This however, is not the case for murderers sentenced for crimes that lack substantial premeditation. These offenders tend to show better adjustment to the correctional environment (Wolfgang 1961), which could be attributed to their offences often being contextually influenced and the offender not seeing violence as an appropriate resolution to resolving problems.

In addition, research suggests that offenders serving time for sex-related offences are often highly stigmatised, ostracised and victimised within the correctional environment (Connor & Tewksbury, 2013; Edgar & O'Donnell, 1998; Ireland, 2002; Leddy & O'Connell, 2002; Wolfgang, 1961). Sex offenders, especially child molesters, are frequently assaulted sexually, physically and emotionally whilst incarcerated typically because their offence is regarded as inexcusable by other offenders or because they often display physical and emotional weakness (Adams, 1992). While being vulnerable to violence and sexual assaults, these offenders also tend to be social outcasts who are regarded as inferior and not worthy of being a part of the offender community (Connor & Tewksbury, 2013). Furthermore, Wolfgang (1961) added that these types of offenders have a particularly challenging time adjusting to the correctional environment. Overall, sexual offenders tend to have one of the lowest recidivism rates of any offender type outside of correctional centres and do not appear to reoffend as frequently as other types of offenders (Sample & Bray, 2006), which indicates that incarceration may be an adequate punishment and deterrent for these types of offenders.

However, research pertaining to the adjustment of offenders sentenced for drug-related crimes, suggests that these offenders are amongst the worst adjusted offenders as a result of their addictions. If they are not interested in self-improvement, drug-addicted offenders often refuse treatment, become uncompliant and go back to their addictive habits upon release (Dempsey, 2015). However, Loper (2002) found that offenders sentenced for drug possession reported greater levels of institutional satisfaction and experienced better adjustment to the correctional environment than the general population of offenders. Furthermore, economic offenders or white-collar criminals have been found to adjust similarly to offenders serving time for other offences (Stadler, Benson, & Cullen, 2013). Research found that white-collar criminals may however experience less adjustment issues as they are (a) more likely to report making friends while incarcerated; (b) less likely to report general difficulties whilst incarcerated; (c) less likely to report a need for safety and (d) less likely to report problems with other offenders (Stadler et al., 2013). These findings correlate with the findings of Benson and Cullen (1988), which showed that there were no significant differences between economic offenders and other types of offenders with respect to sleeping difficulties, concerns for personal safety and problems with cell mates. When compared to other incarcerated offenders, economic offenders were less likely to experience general correctional difficulties and had less difficulty making friends while incarcerated (Benson & Cullen, 1988; Stadler et al., 2013). In terms of psychological adjustment to incarceration, Logan (2015) found that economic offenders, similar to other offenders, also (a) showed signs of negative affect; (b) obtained treatment for mental health disorders or were admitted to a mental health hospital while incarcerated; or (c) showed signs of mental health disorders. He also found that economic offenders experienced no more adjustment issues when compared to other types of offenders.

It is important to note however that type of offence is not an accurate indicator of correctional adjustment (Adams, 1992) due to it being seemingly more closely connected to certain behaviours common amongst offenders who commit certain crimes and not with the type of offence committed itself. As a result, this variable is an important endeavour for future research (Adams, 1992).

### **2.13 Adjustment to incarceration and mental health**

Numerous researchers have explored the factors that either aid or hinder offender adjustment to correctional life. This study has been undertaken in order to potentially contribute to maximising positive correctional adjustment and to advocate that incarcerated offenders receive the necessary support services to ensure that incarceration is a holistically humane and rehabilitative experience for the offender (Adams, 1992; Wolfgang, 1961). As a result, adjustment to the correctional environment has been the subject of close review amongst scholars in recent decades. In order for the incarceration experience to be a deterring and productive experience, offenders need to adjust to this often new, unusual and restrictive environment (Carr, 2013; Dye, 2010; Picken, 2012). Furthermore, offenders need to form part of the correctional community and become accustomed to the mundane daily routine of incarceration (Wolfgang, 1961). As highlighted in earlier sections, the *pains of imprisonment* are vast and well documented in literature. Incarcerated offenders may experience several overarching challenges and frustrations whilst incarcerated, which include being isolated from loved ones, loss of freedom, fears over deterioration or failing connections to the outside world, dealing with other offenders, boredom, witnessing violence, lack of adequate stimulation, loss of privacy and the almost constant fear of victimisation (Adams, 1992; Casey et al., 2016; DeVeaux, 2013; Santos, 2003, 2006). These unique demands, challenges, frustrations and

deprivations can impact upon the mental health of the incarcerated offender, especially if the individual experiences maladjustment to the correctional environment (Picken, 2012).

There have been juxtaposing findings regarding the psychological impact of incarceration (Crank, 2010; Picken, 2012). Sykes (1958) argued that the unique contextual attributes of the correctional environment “appear as a serious attack on the personality, as a threat to the life goals of the individual, to his defensive system, to his self-esteem and to his feelings of security” (p. 286). Several authors agree with this statement and concluded that incarceration, due to its inherently pathological context, has a negative psychological impact on incarcerated offenders with effects, including depression, anxiety, paranoia, emotional withdrawal, feelings of worthlessness and self-destruction, suicidal thoughts or attempts, correctional misconduct as well as apathy and increased hostility (Adams, 1992; Bolton, Smith, Heskin, & Bannister, 1976; Clements, 1979; Cooper, 1974; Delaney, 2019; DeVeaux, 2013; Kaeble, Glaze, Tsoutis, & Minton, 2015; Lopez, 2019; Peacock & Theron, 2007; Santos, 2006; Walker, 1983; Wildeman & Muller, 2012). If an offender does not adjust well to the correctional environment, these psychological symptoms may be further compounded and put them at an increased risk of mental health issues.

Other researchers however, have found that incarceration is not as psychologically detrimental as one would expect (Bonta & Gendreau, 1990; Mackenzie & Mitchell, 2005; Yang et al., 2009). While the correctional environment does restrict offenders, Zamble and Porporino (1990) argued that it provided few contingencies that lead to significant behavioural changes. It can thus be contended that unique offender characteristics contribute more to who adjusts well to the correctional environment and who does not.

Offenders experiencing chronic stress, unhappiness, hypervigilance, contempt, hostility and rumination due to maladjustment are more inclined to experience psychological distress compared to offenders who adjust well to the environment and do not experience these

negative symptoms. The psychological well-being of the offender is vital whilst incarcerated (Adams, 1992) and Wooldredge (1999) conceptualised offender well-being as reflecting the offenders perceptions of depression, anger, insecurity, low self-esteem and loneliness that is felt whilst incarcerated.

Overall, offenders are expected to adjust to the correctional environment in an effective and healthy manner (Crank, 2010) otherwise, they are at risk of psychological deterioration (Picken, 2012). This may include an increased risk of depression, anxiety, suicidal ideation and hostility (Asberg & Renk, 2012; DeVeaux 2013; Picken, 2012).

#### **2.14 Adjustment to incarceration and recidivism after release**

Although the impact of incarceration varies from one offender to another and the effects are frequently reversible, adjustment to incarceration is often a challenging process, which involves several post-release consequences (Goncalves, 2014; Haney, 2003). The way in which the individual offender responds to incarceration is an important predecessor for shaping his behaviour while incarcerated and for succeeding recidivism (Hochstetler & DeLisi, 2005; Hsieh et al., 2016; Nagin et al., 2009). Research found that adverse experiences whilst incarcerated, such as institutional misconduct (Nagin et al., 2009; Trulson et al., 2010; Trulson et al., 2011) and ineffective correctional rehabilitation programmes (Grady et al., 2015), are significant predictors of reoffending upon release (Hsieh et al., 2016).

Crank (2010) suggests that incarcerated offenders who do not perceive incarceration as a strong deterrent to crime may be more inclined to engage in criminal activity post-release. This is due to the fact that some offenders do not perceive the incarceration experience as particularly difficult. It has been inferred that offenders who do not adequately adjust to the correctional environment will experience difficulties when released (Crank, 2010). However,

Mueller-Smith (2015) found that for each additional year that an incarcerated offender was imprisoned, the probability of facing new charges post-release increased by 5.6 percentage points per quarter. This finding suggests that the more offenders become institutionalised and adjust to incarceration, the more likely they are to commit crimes again if and when released. Goodstein (1979) emphasised this and stated that offenders who adapt better to correctional life have more difficulty reintegrating back into the community. The study also found that incarcerated offenders who appeared to adjust well to correctional life experienced the most difficulty in the transition from the correctional environment back to general society (Goodstein, 1979). It further appears that those who did not report that they were adequately adjusted to incarceration, made the most seamless transition from incarceration to society.

Furthermore, Goodstein (1979) asserted that since institutionalised offenders were well adjusted to correctional life, which involves procedures and customs, this group of offenders are often deficient of the flexibility to adjust to the world outside of the correctional environment. This claim was further supported by Monnery (2016) who argued that offenders who adjust well to the correctional environment may encounter several challenges adjusting to the outside world post-release. It has been argued that unruly incarcerated offenders experienced a better transition back to general society, as they were able to maintain their autonomy and decision-making skills during their sentence (Goodstein, 1979; Monnery, 2016).

Mears, Cochran, Bales and Bhati (2016) emphasised that lengthier sentences allow for greater acclimation and adjustment to the correctional culture and thus a greater likelihood of reoffending post-release. This finding supports the belief that correctional centres are schools of crime. It has been argued that offenders who have served a longer amount of time, becoming more *prisonised* (Clemmer, 1958) in the process, have had their tendencies toward criminality strengthened and are therefore more likely to recidivate (Dennison, 2013; Mears et al., 2016; Mueller-Smith, 2015). Therefore, imprisonment does not contribute to a reduction in

recidivism (Dennison, 2013; Gendreau, Goggin, & Cullen, 1999; Giffard & Muntingh, 2006) but rather reduces crime by means of deterrence and incapacitation (Barbarino & Mastrobuoni, 2007). Prompt identification of incarcerated offenders who are at risk for disruptive behaviours whilst incarcerated assists correctional administration in classifying such offenders to appropriate security levels, directing high-risk offenders to suitable treatment programmes, such as anger management, and allocating mental health care resources more efficiently (Goncalves, 2014). Over time, this may contribute to lower recidivism rates since both correctional misconduct and mental health issues are associated with an increased risk of recidivism (Baillargeon, Binswanger, Penn, Williams, & Murray, 2009; Cochran, Mears, Bales, & Stewart, 2012; Goncalves, 2014; Trulson et al., 2011). These juxtaposing arguments reverberate the statement by Gendreau et al. (1999) that further research is required in order to comprehend the intricate inner workings of incarceration and how this in turn relates to recidivism. Therefore, it is crucial for future research to scrutinize the effects of the correctional environment and more importantly the relationship between adjustment to incarceration and recidivism after release.

## **2.15 Conclusion**

This literature review section included a detailed and all-encompassing discussion of the research related to adjustment to incarceration. The researcher drew from varying sources in an attempt to ensure that an objective, unbiased representation of the existing research relating to the topic under investigation was presented. This literature review furthermore highlighted certain gaps in pre-existing research. This chapter provided the reader with the overarching context on which the research is based. Chapter Three entails a discussion on the methodological aspects implemented in order to obtain the results of the study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Chapter Three provides an all-encompassing discussion of the research design and methodology which directed this study. The chapter commences with an overview of the research design and approach of the study. Information regarding the research sample is comprehensively discussed, including the data collection procedures that were utilised to gather the data. The five measuring instruments are explored and the statistical procedures that took place in this study are also examined. Furthermore, the frequency distribution of the participants' demographics are discussed, including the means, standard deviations, skewness, kurtosis as well as the internal consistencies for the subscales of the various measuring instruments. Chapter Three concludes with a reiteration of the ethical considerations of the study.

#### **3.2 Aim of this study**

The principal aim of the research, as mentioned in Chapter One, was to determine which variable(s) are the best predictors of correctional adjustment amongst male incarcerated offenders in a private maximum-security correctional centre in South Africa. In this study, correctional adjustment is the dependent (criterion) variable, while the offenders' coping strategies, aggression levels and perceived social support as well as their age, offender type classification and sentence length are the independent (predictor) variables.

### 3.3 Research design and approach

A research design refers to the overarching strategy or plan for collecting evidence used to answer specific research questions (Vogt, Gardner, & Haeffele, 2012). In this study, a quantitative, non-experimental type of research was used. The primary goal was to determine the relationships between variables and as a result a correlational design (Stangor, 2015) was utilised. Quantitative research is an empirical approach using numerical and quantifiable data (Clark-Carter, 2009; Ernst, 2003) and can be divided into experimental and non-experimental types of research (Belli, 2009; Clark-Carter, 2009). Quantitative research entails the researcher(s) selecting a topic of interest and then deriving a research hypothesis from a statement of theory (Bryman & Bell, 2011; Goodwin, 2009). A research design is established in order to measure the identified variables (Bryman & Bell, 2011) before conclusions are drawn based on observation or experimentation (Barkway, 2009; Belli, 2009).

As a non-experimental type of research was utilised in this study, the research involved studying specific variables without manipulation from the researcher (Belli, 2009). Through non-experimental research, several variables including an offender's coping strategies, aggression levels and perceived social support as well as an offender's age, offender type classification and sentence length were examined and used to predict adjustment to the correctional environment. For clarity, a variable is any characteristic, which has the potential to differ amongst people, and may assume many different values (Belli, 2009; Mooney, Knox, & Schacht, 2013). Correlational research designs attempt to determine whether there is a correlation between measured quantitative variables (Stangor, 2015), which in this case included adjustment and the offender's coping strategies, aggression levels and perceived social support as well as the offender's age, offender type classification and sentence length.

### 3.4 Research Sample

Certified approval was attained in order to conduct this research in a private maximum-security correctional centre and N=418 incarcerated offenders between the ages of 21 and 58 voluntarily took part in the research. The research sample consisted of these individuals. A population refers to any group of people who share common characteristics, for example, geographical location, age, gender or being incarcerated (Maree, 2014; Nicholas, 2009). A sample however, refers to a small section of people, representative of this population, who would produce results that can be generalised to the population (Maree, 2014). In this case, the study was conducted amongst a sample of incarcerated offenders in a private maximum-security correctional centre, who are expectantly representative of the larger population of offenders incarcerated in private maximum-security correctional centres in South Africa. For research purposes, two main methods of sampling, namely, probability and non-probability sampling exist. Initially, it was decided that a probability sampling technique, known as stratified random sampling, would be used to identify the sample. This would ensure that different subgroups of participants (i.e. participants of different ages, type of offences, sentence lengths, ethnicities etc.) would be adequately represented in the sample group and thus the sample would be more representative. Unfortunately, due to the stringent nature of the correctional environment and the security risks as well as the operational challenges that this sampling technique would pose in the correctional centre, it was not possible to make use of stratified random sampling. A stratified random sampling technique would ultimately require too much of an administrative and operational challenge for correctional officials by selecting and moving/removing specific offenders from their daily activities or units to the data collection venue and would also pose a too high security risk (i.e. having several offenders from different units in one small space at the same time). It could also impact on the general flow and symbiosis amongst offenders in the correctional centre, especially given the stern

offender *code*. Thus, it was decided that a non-probability sampling technique, known as convenience sampling (Maree, 2014) would be used as it posed the least risk to the participants, correctional officials and the researcher. Convenience sampling was also the most suitable technique as advised by the correctional centre. Subsequently, data was collected voluntarily from a sample of approximately 418 male offenders (N=418). Using convenience sampling, participants were invited to participate in the study based on their convenient accessibility and proximity to the researcher. Convenience sampling is a type of non-probability or non-random sampling technique where members of the target population that meet certain practical criteria, such as convenient accessibility, geographical proximity, availability at a given time, or the willingness to participate in the study are included in the sample (Etikan et al., 2016; Stangor, 2015). Participants of all ages, ethnic groups, types of offences, sentence lengths, education level, psychiatric history, gang affiliation, programme completion or otherwise were included as part of the sample. Participants who could not read, write or understand English were excluded from the sample. See section 3.7 for more information on the frequency distribution of the sample.

### **3.5 Data Collection Procedures**

For the purpose of this research, data was collected voluntarily from N= 418 incarcerated offenders at Mangaung Correctional Centre in Mangaung, Free State, South Africa. Following the recommendations of the DCS in conjunction with MCC, data collection took place from 30 July 2018 to 1 September 2018. Correctional officials employed at the correctional centre played an essential role in assisting with the data collection. The researcher, along with the Director of Inmate Care and Empowerment at MCC, outlined the process to collect the necessary data over this one month period. It was decided that infiltrating specific and carefully selected ‘pockets’ within the correctional centre would be the most efficient way to collect the data while still ensuring the safety of the researcher, correctional staff and

participants. The researcher began the data collection procedure by visiting the school in the correctional centre where approximately 300 offenders receive schooling or further education on a weekly basis. The researcher trained eight teachers and the principal employed at the school on the research. The researcher also engaged with each classroom of incarcerated offenders and invited them to form part of the research sample. In total N=140 offenders from the school were literate, could adequately understand English and chose to take part in the study. All participants were well-versed on their rights as research participants, both verbally and in writing (see Appendix B) and that their participation in the research would not influence their sentence and parole outcomes in any way. Participants were also informed that they would not receive any benefits or privileges of any kind for their participation in the study. Once the necessary data had been obtained from the willing participants of the school, the researcher approached the skills development coordinator and a further N=60 incarcerated offenders chose to participate in the study. Social workers and psychologists who held weekly therapeutic sessions with offenders also assisted with the data collection. In total N= 218 participants were recruited through these sessions. In summary, data collection took place after officials employed at the correctional centre had been trained by the researcher, with each staff member playing a key role in the data collection process.

### **3.6 Measuring Instruments**

Each participant received five separate questionnaires (in book-format) to complete (see Appendix A). The questionnaires took between one and two and a half hours to complete depending on the participants' literacy levels. The questionnaires were generated on EvaSys, an automated survey software, which syndicates all aspects of the evaluation process from crafting the questionnaires and mass control of survey procedures to electronic data collection and reporting in one software suite (EvaSys, 2018). The instruments used to gather the necessary data included:

- A Self-Compiled Demographic Questionnaire
- The Prison Adjustment Questionnaire (PAQ)
- The Coping Strategy Indicator (CSI)
- The Aggression Questionnaire (AQ)
- The Multidimensional Scale of Perceived Social Support (MSPSS)

### **3.6.1. Self-Compiled Demographic Questionnaire**

Each participant completed a self-compiled demographic questionnaire, which included items frequently found in literature relating to offender demographics, such as age, type of offence, sentence length and offender type. The demographic questionnaire also included questions pertaining to gang affiliation and drug and alcohol abuse with questions such as “*In the year before you went to prison, did you have a problem with drugs/alcohol?*” and “*Are you currently in a gang in prison?*”

### **3.6.2. The Prison Adjustment Questionnaire**

*The Prison Adjustment Questionnaire* (PAQ; Wright, 1983, 1985) is a self-report questionnaire which was used to measure the self-perceptions of adjustment to incarceration according to the offenders. The PAQ consists of 30 items focusing on nine distinct problems that offenders may experience while incarcerated. This includes the uncomfortableness offenders feel around others; the fear, illness, anger and injury that offenders experience while incarcerated; trouble sleeping; arguments and physical fights they are involved in as well as being taken advantage of by other offenders (Wright, 1983). The PAQ was designed by Wright (1983) in order to assess comparative adjustment of incarcerated offenders within the correctional environment in contrast to the community, while also assessing discomfort with incarceration across several dimensions (Warren, 2003). The PAQ has three subscales that are

categorised together under the following dimensions, namely: Internal, External and Physical (Wright, 1983, 1985). The Internal dimension includes questions regarding uncomfortableness around other offenders and uncomfortableness around staff as well as anger and trouble sleeping, the External dimension includes questions regarding heated arguments with other offenders and correctional officials as well as frequency of fights, while the Physical dimension details questions regarding being injured; being sick; fear of being attacked; and fear of being taken advantage of (Carr, 2013; Cook, 2018; Warren, 2003; Wright 1983, 1985). The internal consistency of the PAQ ranges from adequate to good. The alpha coefficient for the internal dimension equals 0.67, the external dimension equals 0.74, while the physical dimension equals 0.50 in a sample of offenders (Wright, 1985). Recently, the PAQ has been used more frequently on samples of female incarcerated offenders. Four cross-sectional studies (Thompson & Loper, 2005; Van Tongeren & Klebe, 2010; Warren, 2003; Warren, Hurt, Loper, & Chauhan, 2004) used the PAQ, although it was exclusively used on female incarcerated offenders. Within these four studies the PAQ was given a two-factor solution, (Conflict and Distress) instead of the previously reported three-factor model, (Internal, External and Physical), as proposed by Wright (1985). This is evidently due to the differences between the female and male offender experiences preceding and during incarceration (Carr, 2013; Warren, 2003). Thus, the three-factor model used in this study has not been replicated on a sample of male incarcerated offenders in the last decade at least. In the last two decades, the PAQ has only been used on female incarcerated offenders and the new two-factor model structure was utilised in each of these studies. Using the three-factor model, a high score on the PAQ suggests that offenders have a harder time adjusting to incarceration. Therefore, lower scores on the PAQ suggest less adjustment issues and better adaption to the correctional environment. In essence, optimal adjusters obtain a lower score on the PAQ (Wright, 1983, 1985).

### 3.6.3 The Coping Strategy Indicator

The *Coping Strategy Indicator* (CSI; Amirkhan, 1990) was used to measure the coping strategies of offenders in adverse circumstances. The CSI has 33 items and three subscales, which assess 11 items each. The three subscales are (a) problem solving (e.g., “*Brainstormed all possible solutions before deciding what to do*”); (b) seeking social support (e.g., “*Confided fears and worries to a friend or a relative*”) and (c) avoidance (e.g., “*Slept more than usual*”). The items of the CSI are scaled on a three-point Likert-type scale, namely 1 (“*not at all*”), 2 (“*a little*”), and 3 (“*a lot*”) (Amirkhan, 1990, 1994; Joseph & Kuo, 2009; Kirchner, Forns, Munoz, & Pereda, 2008). The 11 items in the problem-solving subscale measure the individual’s ability to manipulate his surroundings. The seeking social support subscale consists of 11 items and measures how much an individual seeks help from others. The 11 items in the avoidance subscale indicate whether an individual is inclined to avoid situations as part of his coping strategy. High scores on the problem-solving and seeking social support subscales, and low scores on the avoidance subscale indicates better and more effective coping strategies in adverse circumstances. The CSI has proven to be psychometrically superior to other coping questionnaires, showing internal consistency with alphas ranging from 0.84 to 0.93 and yielding stable scores with test-retest correlations that average 0.82 across four to eight week spans amongst a large and variegated community sample (Amirkhan, 1994). Furthermore, higher scores on each subscale suggest a higher tendency to utilise the associated coping strategy (Amirkhan, 1994). In a South African study on a sample of offenders the internal consistency of each factor on this scale was identified as ranging between 0.62 and 0.90 (Jordaan, 2014; Jordaan et al., 2018).

### 3.6.4 The Aggression Questionnaire

The *Aggression Questionnaire* (AQ; Buss & Perry, 1992) was used to measure the offenders' aggression levels. The AQ measures 29 items of aggression, which is divided into four subscales namely, (a) physical aggression (*nine items*; e.g., “*If I have to resort to violence to protect my rights, I will*”); (b) verbal aggression (*five items*; e.g., “*I tell my friends openly when I do not agree with them*”); (c) anger (*seven items*; e.g., “*Some of my friends think I am a hothead*”, and (d) hostility (*eight items*; e.g., “*I wonder why sometimes I feel so bitter about things*”). Each item on the AQ is rated on a five-point Likert-type scale, where 1 signifies that the statement is “*extremely uncharacteristic of me*” and 5 signifies that the statement is “*extremely characteristic of me*”. Higher scores on each factor represent higher levels of aggression (Buss & Perry, 1992). The AQ has mostly been used in studies with university students or high school students as research samples (Herzog, Hughes, & Jordan, 2010; Hornsveld, Muris, Kraaimaat, & Meesters, 2009; Vigil-Colet, Lorenzo-Seva, Codorniu-Raga, & Morales, 2005). Palmer and Thakordas (2005) and Loza and Loza-Fanous (1999a, 1999b), however, utilised the AQ on a sample of incarcerated young adult male offenders, and Diamond, Wang and Buffington-Vollum (2005) administered the questionnaire to mentally ill male offenders, while Loots (2010) and Jordaan (2014) administered the questionnaire on male maximum-security offenders in a South African correctional centre.

All four subscales showed internal consistency and stability over time. The test-retest reliability of the AQ was found to be 0.78 in a sample of university students (Samani, 2013). In a sample of South African male maximum-security offenders, Jordaan (2014) and Jordaan et al. (2018) identified that the internal consistency of each factor on this scale ranged between 0.62 and 0.87. The AQ's alpha coefficient has been identified as 0.89 (Buss & Perry, 1992).

### 3.6.5 The Multidimensional Scale of Perceived Social Support

The *Multidimensional Scale of Perceived Social Support* (MSPSS; Zimet et al., 1988) was used to measure the perceived social support of the offenders. The MSPSS measures an individual's perceived social support on three aspects namely friends (4 items e.g., “I have friends with whom I can share my joys and sorrows”), family (4 items e.g., “My family really tries to help me”) and a significant other (4 items e.g., “There is a special person who is around when I am in need”). The 12 items on the MSPSS are measured on a seven-point Likert-type scale where 1 is “very strongly disagree” and 7 is “very strongly agree”. The three subscales are scored by determining the mean scale score of the three subscales respectively. Any mean scale score ranging from 1 to 2.9 could be considered low support; a score of 3 to 5 could be considered moderate support; and a score from 5.1 to 7 could be considered high support (Zimet et al., 1988). The MSPSS has good internal and test-retest reliability and moderate construct validity. Cronbach's alpha coefficient for the measure ranged between 0.81 and 0.90 for the family subscale, between 0.90 and 0.94 for the friends subscale and between 0.83 and 0.98 for the significant other subscale in a sample group of pregnant women, adolescents and paediatric residents (Zimet et al., 1990). In a population of offenders the MSPSS was found to have good internal reliability with Cronbach's alpha reported to be 0.92 for the overall scale, 0.93 for family, 0.90 for friends and 0.91 for the significant others subscale (Brown & Day, 2008). A higher score on the MSPSS indicates a higher degree of perceived social support (Zimet et al., 1988). A search on EBSCO Host did not deliver any results indicating that the MSPSS has previously been used on a South African sample of maximum-security offenders in a private correctional centre.

### 3.7 Statistical Procedures

All data collected from the participants was analysed with the help of the statistical package for the social sciences; SPSS version 25 (IBM Corporation, 2017). A Cronbach's alpha coefficient was calculated in order to establish the reliability of the various scales. In this study, the Cronbach's alpha coefficient for the PAQ, CSI, MSPSS and AQ ranged from 0.619 to 0.864, thus displaying acceptable levels of internal consistency (Vogt, 2005). Descriptive statistics were also completed and are discussed in Section 3.8. Initially, in order to predict which variable(s) explain the highest percentage in variance of adjustment, a hierarchical multiple regression analysis was conducted. Petrocelli (2003) stated that multiple regression is used as a strategy to predict a criterion variable (e.g. case adjustment), with a set of predictor variables (e.g. coping strategies, aggression, perceived social support, age, offender type classification and sentence length). Hierarchical regression is a technique for analysing the effect of a predictor variable after controlling for other variables. This is attained by calculating the change in the adjusted  $R^2$  at each step of the analysis, thus accounting for the increment in variance after each variable is entered into the regression model (Lewis, 2007; Pedhazur, 1997). Once the results of the hierarchical multiple regression had been analysed, a decision was taken to further perform a stepwise regression, with the assistance of a forward selection procedure. A stepwise regression refers to a regression analysis in which no specific order for the variables is selected before entering them into the regression model (Aiken & West, 1991; Cohen & Cohen, 1983; Lewis, 2007; Stangor, 2015). Stepwise multiple linear regression has proved to be a useful computational technique in data analysis problems (Breaux, 1967; SPSS Stepwise Linear Regression, 2019). Stepwise methods are used in research in order to evaluate the order of importance of variables and to select useful subsets of variables (Huberty, 1989; Thompson, 1995). In a forward selection, stepwise regression of the predictor variables, the predictor variable that correlates the highest with the criterion variable,

will be the first to be placed into the regression model. This only occurs if the corresponding *F*-value has been found to be significant on either the 1% or the 5% levels of significance. Following this, the predictor with the second highest correlation is added to the regression equation. This process is repeated until none of the remaining predictor variables reflect a significant contribution to the prediction model (George, 2009). There are however, limitations to using a stepwise regression (Lewis, 2007; Thompson, 1995). An essential challenge with stepwise regression, is that some real descriptive variables that have a causal impact on the dependent variable may appear to not be statistically significant, while nuisance variables may be unpredictably significant. Due to this, the model may fit the data well in the sample, but ultimately does not fit well out-of-sample (Lewis, 2007). In this study, a stepwise regression analysis was computed in which adjustment was the criterion variable and various demographics (e.g. age, offender type classification, sentence length and the various subscales of the Coping Strategy Indicator, Multidimensional Scale of Perceived Social Support and the Aggression Questionnaire) were the predictor variables.

### **3.8 Participants**

A total of N=418 maximum-security incarcerated offenders participated in the study. The frequencies for the research sample, as illustrated in Table 1, are calculated with regards to the participants' ethnicity, home language, marital status, employment status, education level, previous psychiatric history, offender type classification, type of crime, sentence length, sentence served, substance abuse and gang affiliation.

Table 1

*Frequency distribution of participants according to demographic variables*

<b>Demographic variable</b>	<b>N</b>	<b>%</b>
<i>Ethnicity</i>		
Black	346	82.8
White	11	2.6
Coloured	58	13.9
Indian	2	0.5
Other	1	0.2
<i>Home language</i>		
Sesotho	179	42.8
Setswana	42	10.0
IsiXhosa	53	12.7
IsiZulu	45	10.8
IsiNdebele	1	0.2
Tswana	5	1.2
Afrikaans	61	14.6
English	14	3.3
Other	18	4.3
<i>Marital status</i>		
Not married and not in a relationship	238	56.9
Married	38	9.1
Common law marriage/living together	21	5.0
In a serious relationship	92	22.0
Divorced	10	2.4
Separated but not divorced	12	2.9
Widower	7	1.7
<i>Employment status at time of arrest/incarceration</i>		
Employed (full-time)	160	38.3
Employed (part-time)	80	19.1
Unemployed	178	42.6
<i>Education level</i>		
Grade 6 or below	73	17.5
Grade 7 – Grade 11	208	49.8

Grade 12	112	26.8
Post-school certificate	9	2.2
Diploma	10	2.4
Degree	6	1.4
<hr/>		
<i>Previous psychiatric history</i>		
Diagnosed previously	56	13.4
Never diagnosed before	362	86.8
<hr/>		
<i>Offender type</i>		
First time offender	227	54.3
Repeat offender	191	45.7
<hr/>		
<i>Type of crime</i>		
Homicide (e.g. murder, attempted murder)	79	18.9
Sexual offences (e.g. rape, sexual assault, indecent assault)	129	30.9
Economic offences (e.g. theft, fraud, forgery, extortion)	6	1.4
Housebreaking and robbery	47	11.2
Assault and grievous bodily harm	5	1.2
Weapon related offences (e.g. possession of a weapon)	7	1.7
Other	3	0.7
More than one offence indicated	142	34.0
<hr/>		
<i>Sentence length</i>		
10 years	3	0.7
11 years	0	0.0
12 years	5	1.2
13 years	2	0.5
14 years	2	0.5
15 years	74	17.7
16 years	8	1.9
17 years	4	1.0
18 years	21	5.0
19 years	3	0.7
20 years	60	14.4
21 years	1	0.2
22 years	13	3.1
23 years	5	1.2
24 years	1	0.2

25 years	34	8.1
More than 25 years	182	43.5
<hr/>		
<i>Part of sentence served</i>		
Less than 6 months	13	3.1
Between 6 months and 12 months	22	5.3
Between 13 months and 5 years	253	60.5
Between 6 and 10 years	119	28.5
Between 11 and 15 years	10	2.4
More than 15 years	1	0.2
<hr/>		
<i>Any substance abuse before incarceration</i>		
Yes	204	48.8
No	214	51.2
<hr/>		
<i>Gang affiliation</i>		
26 gang	234	56.0
27 gang	9	2.2
28 gang	29	6.9
Airforce	38	9.1
Big five	2	0.5
Other	3	0.7
Not applicable	103	24.6
<hr/>		

The age variable was omitted from Table 1, as the data of the age of the participants was continuous in nature. The average age of the participants was 33.73 years (SD = 6.42231). According to Table 1, in terms of the ethnicity/race variable, 82.8% (n=346) of the sample consisted of participants who identify as “Black”, followed by 13.9% (n=58) of participants who identify as “Coloured”. Participants who identified as “White” consisted of 2.6% (n=11) of the sample, while less than 1% of the sample group of participants identified as either “Indian” or “other”.

Regarding *home language*, almost half of the sample (42.8%/ n=179) selected their mother-tongue as Sesotho, while 14.6% (n=61), of the sample selected their home language as

Afrikaans. This was followed by 12.7% (n=53) who indicated that isiXhosa was their home language.

More than half of the participants (56.9%/ n=238) selected their *marital status* as *not married and not in a relationship*. Thus indicating that more than half of the incarcerated offenders included in the sample lack direct social support from a significant other. A total of 22% (n=92) of the incarcerated offenders in the sample are in a serious relationship, while only 9.1% (n=38) are legally married. Only 5% (n=21) of the participants indicated that they were in a common law marriage, 2.9% (n=12) were separated but not divorced, 2.4% (n=10) were divorced, and 1.7% of the sample (n=7) indicated that they are widowed.

With reference to the participants' employment status at the time of arrest/incarceration for the crime(s) they are currently serving time in the correctional centre for, the results showed that 42.6% (n=178) of the sample were unemployed at the time of arrest/incarceration, 38.3% (n=160) were employed full-time and 19.1% (n=80) employed part-time.

The majority of individuals in the sample group (49.8%/ n=208) had an *education level* between Grade 7 and Grade 11, followed by 26.8% (n=112) of the participants who had completed matric (Grade 12). A total of 17.5% (n=73) of the sample had an education level below Grade 6, while 6% of participants (n=25 together) had either a post-school certificate (2.2%), a diploma (2.4%) or a degree (1.4%).

Regarding the psychiatric history of the offenders in the sample, overall, 86.8% (n=362) of incarcerated offenders in the sample had not been previously diagnosed with a psychiatric disorder. However, 13.4% (n=56) of the sample group had been diagnosed with a psychiatric disorder before. Participants were not asked to elaborate on the type of diagnosis, as this was not aligned with the main aim of the study and would not impact on the overall results.

With regards to the *offender type* classification, the majority of offenders in the sample (54.3%/ n=227) indicated that they were first time offenders (incarcerated for the first time)

and had no prior incarceration experience. In contrast, 45.7% (n=191) of the sample group were repeat offenders and had been incarcerated either once, twice or three or more times before their current sentence.

The data regarding the *type of crime* that the participants were incarcerated for, shows that 34% (n=142) of the sample group were currently incarcerated for more than one offence, typically a sexual and murderous offence combined or a murderous and/or sexual offence coupled with a weapons, assault or housebreaking offence. Crimes of a sexual nature, including rape, sexual assault and indecent assault, was also prevalent in 30.9% (n=129) of the sample being incarcerated for sexual types of offences only. Murderous offences including murder and attempted murder consisted of 18.9% (n=79) of offenders' *type of crime* classification. Housebreaking and robbery accounted for 11.2% (n=47) of types of crimes, while less than 5% of offences was made up by economic, weapons and assault-type offences alone. Other types of crimes were only accounted for by 0.7% of the sample and included crimes such as bank or cash-in-transit heists.

With regards to *sentence length*, the range of the length of sentence was between 10 years and more than 25 years or effective life sentence. Owing to the nature of the environment and given that the correctional centre only houses maximum-security offenders it accounts for the fact that 43.5% (n=182) of the sample group are serving more than 25 years or life sentences. A total of 17.7% (n=74) of the participants are serving 15 year sentences, followed by 14.4% (n=60) of offenders serving 20 years. Only 8.1% of the sample (n=34) are serving 25 year sentences.

In terms of the *part of sentence served*, the majority of the sample group (60.5%/ n=253) have served between 13 months and 5 years. Therefore, it is likely that they are already familiar with and have adjusted to the correctional environment. Those that served between 6 and 10 years of their current sentences account for 28.5% (n=119) while 5.3% (n=22) have

served between 6 and 12 months of their sentence. Only 3.1% (n=13) of the sample group have served less than 6 months of their sentence and are still in the process of adjusting to the correctional environment. A mere 2.4% (n=10) of the sample have served between 11 and 15 years, with only 0.2% (n=1) of the sample having served more than 15 years of their current sentence.

When asked about *substance abuse* before their incarceration, 51.2% (n=214) of the participants answered that they did not have a problem with drugs and/or alcohol before their incarceration. The remaining 48.8% (n=204) reported that drugs and/or alcohol had been problematic for them before their incarceration.

In terms of those participants who are gang affiliated, 56% (n=234) of them indicated that they are 26 gang members. A total of 24.6% (n=103) indicated they were not gang affiliated while 9.1% (n=38) of the sample reported that they are part of the Airforce gang. Only 6.9% (n=29) of the participants indicated that they are 28 gang members, with 2.2% (n=9) being 27 gang members, 0.5% (n=2) Big Five gang members and 0.7% (n=3) of the sample being affiliated with other gangs.

### **3.9 Means, standard deviations, skewness, kurtosis and internal consistencies of the subscales for 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 illustrated in Table 2 for the total group of participants. Cronbach's alpha coefficient ( $\alpha$ ) was calculated as an indication of the internal consistency of the subscales.

Table 2

*Descriptive statistics and reliability coefficients for the PAQ, MSPSS, AQ and CSI subscales*

Measures	N	M	SD	$\alpha$	Skewness	Kurtosis
<i>PAQ</i>						
Internal adjustment	418	17.52	5.17	0.727	0.234	-0.669
External adjustment	418	17.17	4.46	0.757	-0.619	-0.427
Physical adjustment	418	24.08	6.23	0.713	-0.262	-0.500
<i>MSPSS</i>						
Friends	418	11.57	5.53	0.826	0.000	-0.103
Family	418	20.55	7.02	0.864	-0.900	-0.221
Significant other	418	19.03	7.02	0.841	-0.512	-0.743
<i>AQ</i>						
Physical aggression	418	22.34	6.72	0.700	0.153	-0.333
Verbal aggression	418	14.97	4.66	0.633	-0.142	-0.646
Anger	418	18.72	5.59	0.619	0.017	-0.316
Hostility	418	21.77	7.44	0.802	0.106	-0.585
<i>CSI</i>						
Social support	418	19.09	5.07	0.847	0.565	-0.132
Problem-solving	418	15.78	4.02	0.800	1.296	2.090
Avoidance	418	19.45	3.63	0.634	0.409	0.368

It is evident from Table 2 that the Cronbach's  $\alpha$  coefficients for the PAQ, MSPSS, AQ and CSI subscales range from 0.619 to 0.864. These scales therefore display acceptable levels of internal consistency (Vogt, 2005) and were all included in the subsequent analyses. 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 for skewness is  $> | 2 |$  and kurtosis  $> 4$ . From Table 2, it is evident that the scores on all the subscales are within these cut-off points and thus do not deviate substantially from normal.

### **3.10 Ethical Considerations**

Official permission from the Department of Psychology, as well as the Research Ethics Committee of the Faculty of Humanities at the University of the Free State and the Department of Correctional Services was obtained in order to conduct this research at a private maximum-security correctional centre located in South Africa. All participants were thoroughly informed of their rights as research participants by means of a comprehensive information sheet and face-to-face information sessions with the researcher in the presence of staff employed at the correctional centre. Those willing to participate in the study all signed an informed consent form (see Appendix B). The participants were assured of their anonymity and confidentiality at all times and as far as realistically possible. The participants were informed of the voluntary nature of the study and that they were under no obligation to complete the questionnaires if they did not want to. Numbers were assigned to each questionnaire after completion in order to ensure participants' anonymity, thus making sure that it would be impossible to decode the identity of the offender. The researcher promised no incentives to the participants and they were fully informed and aware that no special benefits or privileges would be received and that their parole outcomes would not be influenced in any way through their choice to participate in the study. An experienced psychologist and social worker employed by the correctional centre was also available to assist with debriefing and provided counselling and social assistance to offenders who experienced any distress as a result of their participation in the study. However, no participants involved in the study decided to make use of this service.

### **3.11 Conclusion**

Chapter Three entailed a thorough discussion on the research methodology that guided the research process in order to produce the results of the research that will be discussed in Chapter

Four. The aim of this study was to determine which variables are the best predictors of correctional adjustment amongst male incarcerated offenders in a private maximum-security correctional centre in South Africa. A comprehensive overview of the whole research process was presented and discussed and provided the reader with an explanation of each of the aspects that directed the study. In addition, the chapter included a discussion regarding the participants that formed part of the sample group, including the means, standard deviations, skewness, kurtosis and internal consistencies of the subscales in each of the various measuring instruments. The results of the statistical analysis are reported in Chapter Four.

## CHAPTER FOUR

### RESULTS

#### 4.1 Introduction

A discussion on the results of the statistical analyses are reported in this chapter. Firstly, the results of the correlation analysis will be reported and discussed, followed by the results of the hierarchical regression analyses conducted independently for each of the criterion variables (PAQ Internal Adjustment, PAQ External Adjustment and PAQ Physical Adjustment). However, only correlations with medium to large effect sizes will be discussed. For correlations, Steyn (2005) 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. Pertaining to the hierarchical regression analysis, only the results that are statistically significant, indicating at least a medium effect size, will be discussed in the reporting 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 used in the analyses of the data.

#### 4.2 Correlation

Prior to conducting the regression analyses, the Pearson Product Moment correlation coefficients were calculated for the independent (predictor) and dependent (criterion) variables. Point biserial correlations were used to test any relationships between dichotomous and continuous variables (e.g., internal adjustment and offender type) while Phi correlation coefficients were calculated for instances involving two dichotomous variables (e.g., offender type). The correlation coefficients are illustrated in Table 3.

Table 3

*Correlations between the PAQ dimensions and Age, Offender type, Sentence length, CSI subscales, MSPSS subscales and AQ subscales (N=418)*

	Age	OT	SL	IA	EA	PA	P	SS	A	F1	F2	SO	PHA	VA	AN	H
Age	1	0.020	0.035	0.003	0.120*	-0.052	0.010	-0.006	0.149**	-0.026	0.024	0.043	0.022	-0.011	-0.060	-0.021
OT		1	0.038	-0.034	-0.091	0.032	0.048	0.103*	-0.029	-0.101*	-0.115*	-0.059	0.224**	0.053	0.135**	0.050
SL			1	-0.082	-0.035	-0.066	-0.027	0.018	-0.089	-0.034	-0.038	-0.034	0.000	0.053	-0.027	0.016
IA				1	0.410**	0.529**	-0.134**	-0.148**	0.214**	0.251**	0.140**	0.160**	-0.123*	0.074	-0.168**	-0.164**
EA					1	0.545**	-0.179**	-0.128**	0.166**	0.194**	0.190**	0.186**	-0.197**	0.045	-0.239**	-0.086
PA						1	-0.127**	-0.123*	0.152**	0.239**	0.122*	0.112*	-0.082	0.010	-0.130**	-0.127**
P							1	0.463**	0.239**	-0.092	-0.174**	-0.148**	0.173**	-0.046	0.134**	0.121**
SS								1	0.048	-0.293**	-0.162**	-0.208**	0.083	-0.024	0.107*	0.199**
A									1	0.120*	0.041	0.097*	-0.110*	-0.024	-0.114*	-0.130**
F1										1	0.415**	0.445**	-0.033	0.036	-0.85	-0.151**
F2											1	0.721**	-0.088	0.134**	-0.075	-0.024
SO												1	-0.122*	0.127**	-0.058	-0.083
PHA													1	0.291**	0.562**	0.424**
VA														1	0.454**	0.418**
AN															1	0.590**
H																1

Key: OT = Offender Type, SL = Sentence Length, IA = Internal Adjustment, EA = External Adjustment, PA = Physical Adjustment, P = Problem Solving, SS = Seeking Social Support, A = Avoidance, F1 = Friends, F2 = Family, SO = Significant Other, PHA = Physical Aggression, VA = Verbal Aggression, AN = Anger, H = Hostility

\*\*p<0.01, \*p<0.05

Table 3 indicates that the Internal Adjustment scale of the PAQ demonstrates statistically significant correlations with all the CSI scales, namely Problem-solving, Seeking Social Support and Avoidance. These correlations are statistically significant at the 1% level with small corresponding effect sizes and will thus not be discussed in further detail. The Internal Adjustment scale demonstrates positive correlations with all the MSPSS scales, namely Friends, Family and Significant Other. These correlations are statistically significant at the 1% level with small corresponding effect sizes. These results will therefore also not be discussed in further detail. The Internal Adjustment scale only demonstrates statistically significant negative correlations with the Physical Aggression, Anger and Hostility scales of the AQ. The Internal Adjustment scale was statistically significantly correlated with the Physical Aggression scale on the 5% level, while it was statistically significantly correlated with the Anger and Hostility scales on the 1% level with small corresponding effect sizes. These findings do not necessitate further discussion.

According to Table 3, the External Adjustment scale of the PAQ demonstrates statistically significant correlations with all the CSI scales. These correlations are statistically significant at the 1% level with small corresponding effect sizes, which will not be discussed in further detail. The External Adjustment scale demonstrates positive correlations with all the MSPSS scales, namely Friends, Family and Significant Other. These correlations are statistically significant at the 1% level with small corresponding effect sizes. These findings will therefore also not be discussed in more detail. The External Adjustment scale further demonstrates negative correlations with the Physical Aggression and Anger scales of the AQ. These correlations are statistically significant at the 1% level with small corresponding effect sizes and will therefore not result in any further discussions. The External Adjustment scale also demonstrates a positive correlation with Age and this correlation is statistically significant at the 5% level with small corresponding effect size (0.120). This finding will not be discussed in further detail.

Table 3 further indicates that the Physical Adjustment scale of the PAQ is negatively correlated with the Problem-solving and Seeking Social Support scales of the CSI, while it is positively correlated with the Avoidance scale. These correlations are statistically significant at the 1% level with small corresponding effect sizes. These findings will also not be discussed in further detail. The Physical Adjustment scale demonstrates positive correlations with all the MSPSS scales, namely Friends, Family and Significant Other. These correlations are statistically significant at the 1% level with small corresponding effect sizes. No further discussion is needed with regards to these findings. The Physical Adjustment scale further demonstrates negative correlations with the Anger and Hostility scales of the AQ. These correlations are statistically significant at the 1% level with small corresponding effect sizes and will not be discussed in further detail. The results of the hierarchical regression analysis will be discussed in the next section.

### **4.3 Hierarchical regression analyses**

This study also included an investigation pertaining to the proportion of the variance in each of the aspects of the PAQ (Internal Adjustment, External Adjustment and Physical Adjustment), as accounted for by the independent (predictor) variables. Hierarchical regression analyses were conducted in order to examine the contribution of the different sets of variables (demographic variables – age, offender type classification, sentence length – coping skills, aggression levels and perceived social support) to the percentage of variance in Adjustment as well as the contribution of each of the individual independent variables. Adjustment was measured using three different subscales, namely Internal Adjustment, External Adjustment and Physical Adjustment. Three hierarchical regression analyses were conducted with one of the

Adjustment subscales as criterion variable. Firstly, the percentage in variance of Internal Adjustment explained by these independent variables will be discussed.

#### **4.3.1 Hierarchical regression analysis with Internal Adjustment as criterion variable**

The results of the hierarchical regression analysis with Internal Adjustment as the criterion variable are set out in Table 4.

Table 4

*Contributions of Age, Offender type, Sentence length, the MSPSS scales, Aggression scales and CSI scales to R<sup>2</sup> with Internal Adjustment as Criterion Variable*

<i>Variables in equation</i>	<i>R<sup>2</sup></i>	<i>Contribution to R<sup>2</sup>: full minus reduced model</i>	<i>F</i>	<i>f<sup>2</sup></i>
1. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3]	0.162	1-5=0.029	4.660**	0.04
2. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4] + M1	0.162	2-5=0.029	14.050**	0.04
3. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4] + M2	0.137	3-5=0.004	1.882	0.01
4. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4] + M3	0.138	4-5=0.005	2.355	0.01
5. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4]	0.133			
6. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + [A1 + A2 + A3 + A4]	0.162	6-11=0.033	3.977**	0.04
7. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + A1	0.133	7-11=0.004	1.878	-
8. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + A2	0.133	8-11=0.004	1.878	-
9. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + A3	0.141	9-11=0.012	5.686*	0.01
10. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + A4	0.136	10-11=0.007	3.298	0.01
11. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3]	0.129			
12. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3]	0.162	12-16=0.038	6.107**	0.05
13. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + C1	0.129	13-16=0.005	2.331	0.01
14. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + C2	0.126	14-16=0.002	0.929	-

15. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + C3	0.148	15-16=0.024	11.437**	0.03
16. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3]	0.124			
17. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3] + [Age + OC + SL]	0.162	17-21=0.006	0.964	-
18. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3] + Age	0.156	18-21=0.000	0.000	-
19. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3] + OT	0.156	19-21=0.000	0.000	-
20. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3] + SL	0.161	20-21=0.005	2.420	0.01
21. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3]	0.156			

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Key: OT = Offender type, SL = Sentence length, C1 = Problem-solving, C2 = Social support, C3 = Avoidance, A1 = Physical aggression, A2 = Verbal aggression, A3 = Anger,

A4 = Hostility, M1 = Friends, M2 = Family, M3 = Significant other

\*\* $p \leq 0.01$

It is evident from Table 4 that the combination of the independent variables contributes to 16.2% ( $F_{13;404} = 5.999$ ;  $p \leq 0.01$ ) of the variance in the Internal Adjustment scores of the sample. The MSPSS scales (Friends, Family and Significant Other) as a set of predictors, are responsible for 2.9% of the variance in the Internal Adjustment scores of the offenders. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.04$ ) suggests that it is of little practical significance. Although the Friends subscale of the MSPSS subscale contributes statistically significantly to the variance of the Internal Adjustment scores, the corresponding effect size is small, and thus the results will not be discussed in any further detail.

Table 4 further indicates that the AQ scales (Physical Aggression, Verbal Aggression, Anger and Hostility) as a set of predictors, account for 3.3% of the variance in the Internal Adjustment scores of the offenders. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.04$ ) suggests that it is of little practical significance. While Anger contributes statistically significantly to the variance of the Internal Adjustment scores, the corresponding effect size is small, and no discussion of the results will follow.

In Table 4, the CSI scales (Problem Solving, Seeking Social Support and Avoidance) as a set of predictors, account for 3.8% of the variance in the Internal Adjustment scores of the offenders. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.05$ ) indicates that it is of little practical significance. Though Avoidance contributes statistically significantly to the variance of the Internal Adjustment scores, the corresponding effect size is small, and the results will not be discussed in any further detail.

Regarding the demographic variables only Sentence Length independently makes a statistically significant contribution to the explanation of the variance in the offenders' Internal Adjustment. The corresponding effect size indicates that this finding is of limited practical significance and will thus also not be discussed in any further detail.

### **4.3.2 Hierarchical regression analysis with External Adjustment as criterion variable**

The results of the hierarchical regression analysis with External Adjustment as the criterion variable are reported in Table 5.

Table 5

*Contributions of Age, Offender type, Sentence length, the MSPSS scales, Aggression scales and CSI scales to R<sup>2</sup> with External Adjustment as Criterion Variable*

<i>Variables in equation</i>	<i>R<sup>2</sup></i>	<i>Contribution to R<sup>2</sup>: full minus reduced model</i>	<i>F</i>	<i>f<sup>2</sup></i>
1. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3]	0.175	1-5=0.023	3.754*	0.03
2. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4] + M1	0.172	2-5=0.020	9.807**	0.02
3. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4] + M2	0.163	3-5=0.011	5.338*	0.01
4. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4] + M3	0.163	4-5=0.011	5.338*	0.01
5. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4]	0.152			
6. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + [A1 + A2 + A3 + A4]	0.175	6-11=0.053	6.553**	0.06
7. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + A1	0.138	7-11=0.016	7.555**	0.02
8. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + A2	0.122	8-11=0.000	0.000	-
9. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + A3	0.150	9-11=0.028	13.407**	0.03
10. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + A4	0.122	10-11=0.000	0.000	-
11. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3]	0.122			
12. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3]	0.175	12-16=0.029	4.734**	0.04
13. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + C1	0.157	13-16=0.011	5.298*	0.01
14. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + C2	0.148	14-16=0.002	0.953	-

15. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + C3	0.155	15-16=0.009	4.324*	0.01
16. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3]	0.146			
17. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3] + [Age + OC + SL]	0.175	17-21=0.010	1.632	-
18. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3] + Age	0.173	18-21=0.008	3.928*	0.01
19. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3] + OT	0.165	19-21=0.000	0.000	-
20. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3] + SL	0.166	20-21=0.001	0.487	-
21. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3]	0.165			

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Key: OT = Offender type, SL = Sentence length, C1 = Problem-solving, C2 = Social support, C3 = Avoidance, A1 = Physical aggression, A2 = Verbal aggression, A3 = Anger, A4 = Hostility, M1 = Friends, M2 = Family, M3 = Significant other

\*\* $p \leq 0.01$

Table 5 illustrates that the combination of the independent variables accounts for 17.5% ( $F_{13;404} = 6.577; p \leq 0.05$ ) of the variance in the External Adjustment scores of the sample. The MSPSS scales (Friends, Family and Significant Other) as a set of predictors, are responsible for 2.3% of the variance in the External Adjustment scores of the offenders. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.03$ ) indicates that it is of little practical significance. Although each MSPSS subscale contributes statistically significantly to the variance of the External Adjustment scores, all the effect sizes are small, and thus the results will not be discussed in any further detail.

Table 5 further indicates that the AQ scales (Physical Aggression, Verbal Aggression, Anger and Hostility) as a set of predictors, account for 5.3% of the variance in the External Adjustment scores of the offenders. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.06$ ) specifies that it is of little practical significance. Despite Physical Aggression and Anger contributing statistically significantly to the variance of the External Adjustment scores, all the effect sizes are small, and the results will therefore not be discussed in any further detail.

According to Table 5, the CSI scales (Problem-solving, Seeking Social Support and Avoidance) as a set of predictors, account for 2.9% of the variance in the External Adjustment scores of the offenders. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.04$ ) indicates that it is of little practical significance. Although Problem-solving and Avoidance contribute statistically significantly to the variance of the External Adjustment scores, all the effect sizes are small, and therefore the results will not be discussed in any further detail.

Regarding the demographic variables, only Age independently made a statistically significant contribution to the explanation of the variance in the offenders' External

Adjustment. The corresponding effect size suggests that this finding is of limited practical significance and will thus not be discussed in any further detail.

#### **4.3.3 Hierarchical regression analysis with Physical Adjustment as criterion variable**

The results of the hierarchical regression analysis with Physical Adjustment as the criterion variable are reported in Table 6.

Table 6

*Contributions of Age, Offender type, Sentence length, the MSPSS scales, Aggression scales and CSI scales to R<sup>2</sup> with Physical Adjustment as Criterion Variable*

<i>Variables in equation</i>	<i>R<sup>2</sup></i>	<i>Contribution to R<sup>2</sup>: full minus reduced model</i>	<i>F</i>	<i>f<sup>2</sup></i>
1. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3]	0.116	1-5=0.035	5.332**	0.04
2. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4] + M1	0.115	2-5=0.034	15.598**	0.04
3. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4] + M2	0.086	3-5=0.005	2.221	0.01
4. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4] + M3	0.084	4-5=0.003	1.330	-
5. [Age + OT + SL] + [C1 + C2 + C3] + [A1 + A2 + A3 + A4]	0.081			
6. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + [A1 + A2 + A3 + A4]	0.116	6-11=0.011	1.257	-
7. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + A1	0.108	7-11=0.003	1.366	-
8. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + A2	0.105	8-11=0.000	0.000	-
9. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + A3	0.113	9-11=0.008	3.662	0.01
10. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3] + A4	0.109	10-11=0.004	1.823	-
11. [Age + OT + SL] + [C1 + C2 + C3] + [M1 + M2 + M3]	0.105			
12. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3]	0.116	12-16=0.028	4.266**	0.03
13. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + C1	0.095	13-16=0.007	3.140	0.01
14. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + C2	0.090	14-16=0.002	0.829	-

15. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + C3	0.101	15-16=0.013	5.871*	0.02
16. [Age + OT + SL] + [A1 + A2 + A3 + A4] + [M1 + M2 + M3]	0.088			
17. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3] + [Age + OC + SL]	0.116	17-21=0.014	2.133	0.02
18. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3] + Age	0.107	18-21=0.005	2.273	0.01
19. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3] + OT	0.107	19-21=0.005	2.273	0.01
20. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3] + SL	0.105	20-21=0.003	1.361	0.00
21. [A1 + A2 + A3 + A4] + [M1 + M2 + M3] + [C1 + C2 + C3]	0.102			

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Key: OT = Offender type, SL = Sentence length, C1 = Problem-solving, C2 = Social support, C3 = Avoidance, A1 = Physical aggression, A2 = Verbal aggression, A3 = Anger,

A4 = Hostility, M1 = Friends, M2 = Family, M3 = Significant other

\*\* $p \leq 0.01$ , \* $p \leq 0.05$

Table 6 illustrates that the combination of the independent variables amounts to 11.6% ( $F_{13;404} = 4.073; p \leq 0.01$ ) of the variance in the Physical Adjustment scores of the sample. The MSPSS scales (Friends, Family and Significant Other) as a set of predictors, accounts for 3.5% of the variance in the Physical Adjustment scores of the offenders. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.04$ ) indicates that it is of little practical significance. Although Friends contributes statistically significantly to the variance of the Physical Adjustment scores, the corresponding effect size is small, and thus the results will not be discussed in any further detail.

Furthermore, Table 6 shows that the AQ scales (Physical Aggression, Verbal Aggression, Anger and Hostility) as a set of predictors, account for 1.1% of the variance in the Physical Adjustment scores of the offenders. This finding is not statistically significant and the corresponding effect size ( $f^2 = 0.00$ ) suggests that it is of little practical significance. None of the AQ scales contribute statistically significantly to the variance of the Physical Adjustment scores.

According to Table 6, the CSI scales (Problem-solving, Seeking Social Support and Avoidance) as a set of predictors, account for 2.8% of the variance in the Physical Adjustment scores of the offenders. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.03$ ) indicates that it is of little practical significance. Although Avoidance contributes statistically significantly to the variance of the Physical Adjustment scores, the corresponding effect size is small. No further discussion on these results are necessary.

According to Table 6, the demographic variables (Age, Offender Type Classification and Sentence Length) as a set of predictors, account for 1.4% of the variance in the Physical Adjustment scores of the offenders. This finding is not statistically significant.

Due to the fact that the hierarchical regression analyses did not deliver any practically significant results for any of the independent variables, a decision was made to conduct a stepwise regression analyses in order to determine:

- Which one of these 13 independent variables explained the most variance of each of the criterion variables;
- Whether this independent variable explained a significant percentage of variance of the criterion variable;
- If any of the remaining independent variables also explained a significant percentage of the variance of the criterion variable;
- If more than one independent variable was added to the regression equation and whether the combined set of independent variables explained a significant percentage of the variance.

In order to interpret the statistical results in terms of effect sizes, Steyn (2005) recommended that the following guidelines be used to interpret the proportional variance explained by the different independent variables:  $\rho^2 = 0.01$  (small);  $\rho^2 = 0,1$  (medium) and  $\rho^2 = 0.25$  (large) effect. The 1% level of significance was used. The analyses were performed for the three criterion variables (Internal Adjustment, External Adjustment and Physical Adjustment) independently.

In Section 4.4, the stepwise regression analysis with Internal Adjustment as criterion variable will be discussed.

#### 4.4. Stepwise regression analysis with Internal Adjustment as criterion variable

The results of the stepwise regression analysis with Internal Adjustment as the criterion variable are reported in Table 7.

Table 7

*Stepwise regression analysis with Internal Adjustment as criterion variable*

Step	Variable entered N = 418	Partial $R^2$	Model $R^2$	F- value	Change statistics		Pr > F
					Direction of relationships with Internal Adjustment		
1	Friends	0.063	0.063	27.943	Positive		0.000**
2	Avoidance	0.034	0.097	22.346	Positive		0.000**
3	Problem-solving	0.027	0.124	19.532	Negative		0.000**

\*\* $p \leq 0.01$

All 13 predictor variables resulted in an explanation of a combined 16.2% ( $F_{13;404} = 5.999$ ;  $p \leq 0.01$ ) of the variance in the Internal Adjustment scores of the sample.

In Step 1 of the stepwise regression analysis, the independent variable, Friends, was first entered into the regression equation and found to be significant on the 1% level of significance. Friends accounted for 6.3% of the variance of Internal Adjustment ( $F = 27.943$ ,  $p \leq 0.01$ ). A positive correlation between Friends and Internal Adjustment was found. Due to the scoring structure of the PAQ, where optimal adjuster have a low score, this finding implies that those participants that perceive more social support from their friends will seemingly have poorer Internal Adjustment. However, the corresponding effect size ( $\rho^2 = 0.06$ ) indicates that the result is not of any practical significance.

In Step 2, the independent variable, Avoidance, was added to the regression equation. Avoidance contributed an additional 3.4% to the variance of Internal Adjustment on the 1% level of significance ( $F = 22.346$ ,  $p \leq 0.01$ ). The corresponding effect size ( $\rho^2 = 0.03$ ) for the partial  $R^2$  indicates that the contribution of Avoidance is not of practical importance. Combined, these two

independent variables, Friends and Avoidance, accounted for 9.7% ( $p \leq 0.01$ ) of the variance in the offenders' Internal Adjustment. Thus, the corresponding effect size ( $\rho^2 = 0.10$ ) indicates that the contribution of these two independent variables in combination is of medium practical importance. A positive correlation was found between Avoidance and Internal Adjustment, which implies that when participants do not avoid solving their problems that their Internal Adjustment improved. On the other hand, the more the offenders' make use of avoidance, the worse their Internal Adjustment becomes.

In the last step (Step 3), the independent variable, Problem-solving, was added to the regression equation. Problem-solving contributed an additional 2.7% ( $F = 19.532, p \leq 0.01$ ) to the variance of Internal Adjustment of the participants. The corresponding effect size ( $\rho^2 = 0.03$ ) for the partial  $R^2$  indicates that the contribution of Problem-solving is not of practical importance. In Step 3 these three independent variables, Friends, Avoidance and Problem-solving, explained 12.4% ( $p \leq 0.01$ ) of the variance in the Internal Adjustment of offenders. Therefore, the corresponding effect size ( $\rho^2 = 0.12$ ) indicates that the contribution of these three independent variables in combination is of medium practical importance. The direction of the correlation between Problem-solving and Internal Adjustment is negative, which suggests that participants who tend to make more use of and have better Problem-solving abilities seem to have better Internal Adjustment.

From the discussion, it is evident that these **three** independent variables succeeded in explaining 12.4% of the total variance in Internal Adjustment, whilst the remaining 10 variables ( $16.2\% - 12.4\% = 3.8\%$ ) in combination only explained an additional 3.8% to the variance in Internal Adjustment.

#### 4.5 Stepwise regression analysis with External Adjustment as criterion variable

The results of the stepwise regression analysis with External Adjustment as the criterion variable are reported in Table 8.

Table 8

*Stepwise regression analysis with External Adjustment as criterion variable*

Step	Variable entered N = 418	Partial $R^2$	Model $R^2$	F- value	Change statistics		Pr > F
					Direction of relationships with Internal Adjustment		
1	Anger	0.057	0.057	25.094	Negative		0.000**
2	Friends	0.030	0.087	19.854	Positive		0.000**
3	Verbal Aggression	0.025	0.112	17.425	Positive		0.000**

\*\* $p \leq 0.01$

Altogether the predictor variables explained a combined 17.5% ( $F_{13;404} = 6.577$ ;  $p \leq 0.01$ ) of the variance in the External Adjustment scores of the sample.

In Step 1 of the stepwise regression analysis, the independent variable, Anger, was first entered into the regression equation and found to be significant on the 1% level of significance. Anger explained 5.7% of the variance of External Adjustment ( $F = 25.094$ ,  $p \leq 0.01$ ). A negative correlation was found between Anger and External Adjustment. This finding seems to imply that when the anger levels of the participants increased, their External Adjustment improves. However, the corresponding effect size ( $\beta^2 = 0.05$ ) indicates that the result is not of any practical significance.

In Step 2 of the regression equation, the independent variable, Friends, was added and contributed an additional 3.0% to the variance of External Adjustment on the 1% level of significance ( $F = 19.854$ ,  $p \leq 0.01$ ). The corresponding effect size ( $\beta^2 = 0.03$ ) for the partial  $R^2$  indicates that the contribution of Friends is not of practical importance. Together these two independent variables, Anger and Friends, accounted for 8.7% ( $p \leq 0.01$ ) of the variance in their

External Adjustment. Therefore, the corresponding effect size ( $\beta^2 = 0.10$ ) indicates that the contribution of these two independent variables in combination is of medium practical importance. A positive correlation was found between Friends and External Adjustment. This finding implies that when the participants have more support from their friends that their External Adjustment worsens.

Thirdly, the independent variable, Verbal Aggression, was added to the regression equation. Verbal Aggression contributed an additional 2.5% ( $F = 17.425, p \leq 0.01$ ) to the variance of External Adjustment of the participants. The corresponding effect size ( $\beta^2 = 0.03$ ) for the partial  $R^2$  indicates that the contribution of Verbal Aggression is not of practical importance. In Step 3 these three independent variables, Anger, Friends, and Verbal Aggression, explained 11.2% ( $p \leq 0.01$ ) of the variance in the External Adjustment of the offenders. In this instance, the corresponding effect size ( $\beta^2 = 0.11$ ) indicates that the contribution of these three independent variables in combination is of medium practical importance. There is a positive correlation between Verbal Aggression and External Adjustment. This finding indicates that when the participants have lower levels of Verbal Aggression that their External Adjustment improves. On the other hand, the more Verbal Aggression the participants have, the more their External Adjustment worsens.

It is therefore evident that these **three** independent variables succeeded in explaining 11.2% of the total variance in External Adjustment, whilst the remaining 10 variables ( $17.5\% - 11.2\% = 6.3\%$ ) in combination only explained an additional 6.3% to the variance in External Adjustment.

#### 4.6 Stepwise regression analysis with Physical Adjustment as criterion variable

The results of the stepwise regression analysis with Physical Adjustment as the criterion variable are reported in Table 9.

Table 9

*Stepwise regression analysis with Physical Adjustment as criterion variable*

Step	Variable entered N = 418	Partial $R^2$	Model $R^2$	$F$ - value	Change statistics		Pr > $F$
					Direction of relationships with Internal Adjustment		
1	Friends	0.057	0.057	25.283	Positive		0.000**
2	Avoidance	0.016	0.073	16.261	Positive		0.000**
3	Problem-solving	0.020	0.093	14.071	Negative		0.000**

\*\* $p \leq 0.01$

All 13 predictor variables explained a combined 11.6% ( $F_{13;404} = 4.073$ ;  $p \leq 0.01$ ) of the variance in the Physical Adjustment scores of the sample.

In Step 1 of the stepwise regression analysis, the independent variable, Friends, was first entered into the regression equation and found to be significant on the 1% level of significance. Friends explained 5.7% of the variance of Physical Adjustment ( $F = 25.283$ ,  $p \leq 0.01$ ). A positive correlation was found between Friends and Physical Adjustment. This finding implies that when the participants perceive to have more support from their friends that their Physical Adjustment worsened. However, the corresponding effect size ( $\rho^2 = 0.06$ ) indicates that this result is not of any practical significance.

Secondly, the independent variable, Avoidance, was added to the regression equation. Avoidance contributed an additional 1.6% to the variance of Physical Adjustment on the 1% level of significance ( $F = 16.261$ ,  $p \leq 0.01$ ). The corresponding effect size ( $\rho^2 = 0.02$ ) for the partial  $R^2$  indicates that the contribution of Avoidance is not of practical importance. Combined, these two independent variables, Friends and Avoidance, explained 7.3% ( $p \leq 0.01$ ) of the variance in the

offenders' Physical Adjustment. In this instance, the corresponding effect size ( $\beta^2 = 0.07$ ) indicates that the contribution of these two independent variables is not of practical importance.

In Step 3, the independent variable, Problem-solving, was added to the regression equation. Problem-solving contributed an additional 2.0% ( $F = 14.071, p \leq 0.01$ ) to the variance of Physical Adjustment. The corresponding effect size ( $\beta^2 = 0.02$ ) for the partial  $R^2$  indicates that the contribution of Problem-solving is not of practical importance. In Step 3 these three independent variables, Friends, Avoidance and Problem-solving, explained 9.3% ( $p \leq 0.01$ ) of the variance in the Physical Adjustment of the offenders. The corresponding effect size ( $\beta^2 = 0.09$ ) indicates that the contribution of these three independent variables in combination is of no practical importance.

It is clear that these **three** independent variables were successful in explaining 9.3% of the total variance in Physical Adjustment, whilst the remaining 10 variables ( $11.6\% - 9.3\% = 2.3\%$ ) in combination only explained an additional 2.3% to the variance in Physical Adjustment.

#### 4.7 Summary

The results of the statistical analyses were presented in this chapter. According to the results from the hierarchical regression analyses the combination of the predictor variables (Age, Offender Type Classification, Sentence Length, MSPPS subscales, AQ subscales and CSI subscales) statistically significantly predicted all aspects of the PAQ (Internal Adjustment, External Adjustment and Physical Adjustment). However, the contribution to the variance of each of the three criterion variables by the sets of predictor variables or individual predictor variables delivered no practical significance. Due to these findings, a stepwise regression

analysis was also conducted in order to explore in more detail which predictor variables explain the highest variance in each of the criterion variables.

In terms of Internal Adjustment, the results of the stepwise regression analysis indicated that three of the 13 predictor variables, namely Friends, Avoidance, and Problem-solving, made a statistically significant contribution to the variance of Internal Adjustment on the 1% level of significance. The Friends predictor variable made the largest contribution to the variance of Internal Adjustment (6.3% contribution). Thus, it seems that those participants who perceived more support from their friends were inclined to experience poorer Internal Adjustment. In addition, Avoidance (3.4%) and Problem-solving (2.7%) contributed statistically significantly to the variance of Internal Adjustment. Friends and Avoidance combined, explained 9.7% of the variance of Internal Adjustment and this finding was of medium practical significance. All three independent variables (Friends, Avoidance and Problem-solving) explained 12.4% of the variance of Internal Adjustment and this finding was also of medium practical importance. These three independent variables explained more of the variance of Internal Adjustment (12.4%) than the remaining 10 independent variables (3.8%).

Regarding External Adjustment, the results of the stepwise regression analysis indicated that three (i.e. Anger, Friends, and Verbal Aggression) of the 13 predictor variables made a statistically significant contribution to the variance of External Adjustment on the 1% level of significance. The predictor variable Anger made the largest contribution to the variance of External Adjustment (5.7%). It thus appears that the participants' External Adjustment improved when they displayed higher levels of Anger. The remaining two predictor variables also contributed statistically significantly to the variance of External Adjustment, namely Friends (3.0%) and Verbal Aggression (2.5%). Anger and Friends combined explained 8.7% of the

variance of External Adjustment and this finding was of medium practical significance. All three independent variables (Anger, Friends, and Verbal Aggression) explained 11.2% of the variance of External Adjustment and this finding was also of medium practical importance. These three independent variables explained more of the variance of External Adjustment (11.2%) than the remaining 10 independent variables (6.3%).

Concerning Physical Adjustment, the results of the stepwise regression analysis indicated that three of the 13 predictor variables, namely Friends, Avoidance and Problem-solving, made a statistically significant contribution to the variance of Physical Adjustment on the 1% level of significance. The Friends predictor variable made the largest contribution to the variance of Physical Adjustment (5.7% contribution). In addition, Avoidance (1.6%) and Problem-solving (2.0%) contributed statistically significantly to the variance of Physical Adjustment. However, the contributions of the independent variables individually and together were of no practical importance.

#### **4.8 Conclusion**

Overall, Chapter Four extensively detailed the results of this study. The results of the correlations were presented, followed by the hierarchical regression analyses in relation to each criterion variable (Internal Adjustment, External Adjustment and Physical). Furthermore, a stepwise regression analysis was conducted, with the results also presented. In Chapter Five, the results reported here will be discussed within the context of the relevant literature.

## **CHAPTER FIVE**

### **DISCUSSION, LIMITATIONS, RECOMMENDATIONS AND CONCLUSIONS**

#### **5.1 Introduction**

Chapter Five encompasses a presentation on the integration of various sources of literature which assist in explaining the results of this study. The discussion of the measuring instruments used in this study are discussed, which is followed by the perspectives and discussions of the results in relation to literature. The limitations of the study are also acknowledged and discussed, including the recommendations for future research and practice. Chapter Five concludes with a summary of the research with an emphasis on the pertinent pointers that were valuable during this research process.

#### **5.2 Perspectives/Discussion of the findings**

The sections below detail the results of the study in relation to existing literature. A discussion on the measuring instruments will be included before the results of the study are discussed in light of the relevant literature. This discussion is set out in sections 5.2.1 to 5.2.4.

##### **5.2.1 Discussion of the measuring instruments used in this study**

The results of this study were determined by using several measuring instruments. These included the Prison Adjustment Questionnaire (PAQ), the Coping Strategy Indicator (CSI), the Multidimensional Scale of Perceived Social Support (MSPSS) and the Aggression Questionnaire (AQ). Table 2 (p. 92) displays the Cronbach's  $\alpha$  coefficients for these instruments. The

coefficients of all the scales ranged between 0.619 and 0.864 and therefore display acceptable levels of internal consistency (Vogt, 2005).

Regarding the PAQ, the Cronbach's alpha coefficients indicate adequate internal consistency for each of the subscales with internal consistencies ranging from 0.713 for Physical Adjustment; 0.727 for Internal Adjustment; and 0.757 for External Adjustment. These findings are more favourable than those found in previous studies (Warren et al., 2004; Wright, 1983). As an example, the creator of the PAQ, Wright (1983, 1985), found that the alpha coefficient for the External dimension equals 0.74, the Internal dimension equals 0.67, while the Physical dimension equals 0.50 in a sample of offenders. Warren et al. (2004) however, suggested a two-factor model for the PAQ, known as the Conflict and Distress Scale. This two-factor model has only been used on populations of female incarcerated offenders. Four studies (Thompson & Loper, 2005; Van Tongeren & Klebe, 2010; Warren, 2004; Warren et al., 2004) made use of the PAQ on samples of female incarcerated offenders; the two-factor solution (Conflict and Distress) was utilised instead of the previously reported three-factor model, (Internal, External and Physical), as proposed by Wright (1983, 1985). This study however, validates that the three-factor model of the PAQ is satisfactory for use on a modern sample of male incarcerated offenders in a private, maximum-security correctional centre.

The internal consistency reliability of each factor on the CSI has been calculated in this study as 0.800 for the Problem-solving scale; 0.847 for the Seeking Social Support scale and 0.634 for the Avoidance scale. This is in line with previous findings (Jordaan, 2014; Jordaan et al., 2018) which displayed alphas ranging between 0.68 and 0.90 for Problem-solving; 0.72 to 0.86 for Seeking Social Support; and 0.62 to 0.72 for Avoidance. These findings also correspond with the findings of other researchers (Desmond, Shevlin, & MacLachlan, 2006; Soderstrom,

Castellano, & Figaro, 2001; Sullivan, Shroeder, Dudley, & Dixon, 2010), who obtained alpha coefficients of 0.82 to 0.98 for Problem-solving; 0.88 to 0.98 for Seeking Social Support; and 0.75 to 0.96 for Avoidance in their studies.

The MSPSS has internal consistencies ranging from 0.826 for the Friends scale, 0.841 for the Significant Other scale and 0.864 for the Family scale. In a previous study with a population of offenders the MSPSS had good internal reliability with Cronbach's alpha reported at 0.93 for Family, 0.90 for Friends and 0.91 for the Significant Others subscale (Brown & Day, 2008). The results of this study also correspond with findings from other studies, which support the good internal consistency of the MSPSS (Osman, Lamis, Freedenthal, Gutierrez, & McNaughton-Cassill, 2013; Pushkarev, Zimet, Kuznetsov, & Yaroslavskaya, 2018; Wongpakaran, Wongpakaran, & Ruktrakul, 2011; Zimet et al., 1990).

With regards to the AQ, the internal consistency reliability of each factor has been calculated in this study as 0.700 for Physical Aggression; 0.633 as Verbal Aggression; 0.619 for Anger; and 0.802 for Hostility. These findings correlate with similar alpha coefficients produced by other research projects (Buss & Perry, 1992; Jordaan, 2014; Jordaan et al., 2018; Loots, 2010; Moller & Deci, 2010; Ongen; 2010; Palmer & Thakordas, 2005; Samani, 2013).

### **5.2.2 Discussion of the correlations between variables in this study**

In this study, several correlations were completed in order to determine the relationships between the predictor variables and the outcome variables. This included correlations between adjustment and coping; adjustment and perceived social support; adjustment and aggression; adjustment and age; adjustment and offender type classification; as well as adjustment and sentence length. In this study, due to small corresponding effect sizes, all of the correlations

were not of any statistical or practical significance. As mentioned in Chapter Four and according to Steyn (2005), for correlations, 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. Therefore, the correlations in this study will not be discussed in relation to relevant literature as all the corresponding effect sizes were small. Previous studies however, confirmed and found strong correlations between the variables analysed in this study. In terms of correlations between adjustment and coping strategies, previous research found that offenders that make use of problem-solving as their preferred form of coping tend to experience incarceration in a more effective and positive way (Biggam & Power, 1999; Jordaan, 2014; Hesselink-Louw, 2004; Lipsey & Cullen, 2007). Seeking social support as a coping strategy has also been found to significantly contribute to better correctional adjustment (Rocheleau, 2013; Wallace et al., 2014). However, other research has indicated that while problem-focused coping (i.e. problem-solving) is often considered a healthy and effective form of coping in the real world (Carver, 2011), it has been found to be ineffective and particularly frustrating within the correctional context (Chahal et al., 2016; Picken, 2012; Van Herreveld et al., 2007), as the offenders' controllability of problems within the correctional environment is often quite low and since offenders have limited autonomy and freedom whilst incarcerated (Matshaba, 2007; Sykes, 1958), particularly in a maximum-security correctional centre (Jordaan, 2014; Loots, 2010; Matshaba, 2007; Neser, 1993).

With regards to the correlations between adjustment and perceived social support, while not able to be validated in this study, previous literature indicated that support provided to offenders by the correctional centre or by friends, family or significant others lessens criminal involvement while incarcerated and reinforces social ties (Cochran & Mears, 2013; Liu & Chui, 2013; Siennick et al., 2013, Woo et al., 2016). Previous research further found that offenders who

perceive an adequate degree of social support from friends and family as well as the correctional centres that they are confined to, are less likely to be aggressive and show signs of correctional misconduct (Cullen, 1994; Liu & Chui, 2013; Woo et al., 2016). However, it has also been argued that support is seemingly not seen as supportive unless the individual perceives it to be. Theories tend to indicate that in most cases it is assumed that all sources of support are actually supportive (Pagel et al., 1987) but this is not always the case (Hobbs, 2000). This mentality asserts that the primary function of supportive relationships is actual support, thus ignoring the fact that all social relationships, especially those that are exacerbated by incarceration, can involve both costs and benefits to the provider and the recipient (Larson & Lee, 1996). The effect size of correlations between adjustment and perceived social support in this study however, were small and will not be discussed in relation to literature.

In terms of adjustment and aggression levels, previous studies have affirmed that offenders with higher levels of aggression also reported being more lonely and suicidal than their less aggressive counterparts (Carrizales, 2013) and that these maladaptive psychological factors impacted upon their correctional adjustment (Picken, 2012). Other researchers however, argued that more aggressive and violent offenders do adjust better to correctional centres as they tend to control and intimidate other offenders and are targeted less frequently than non-violent offenders (Crank, 2010, HM Prison & Probation Service, 2018). To elaborate, a 2018 analytical summary indicated that offenders who acknowledged bullying others whilst incarcerated reported perceiving benefits from doing so and from engaging in aggression in general (HM Prison & Probation Services, 2018). More aggressive, angry and violent offenders may experience better correctional adjustment as they may be intimidating to other offenders and be targeted less often (Crank, 2010; HM Prison & Probation Services, 2018). It is also likely that they may be more

feared by other offenders and thus other offenders avoid them (Picken, 2012; Shover, 1985). This however, could not be validated in this study.

The correlations between correctional adjustment and age is well documented in previous literature. Other studies have indicated that older offenders have an easier time adjusting socially and psychologically to the correctional environment than younger, less experienced offenders (Crank, 2010; Logan, 2015; Shover, 1985). Previous research suggested that older offenders learnt to keep to themselves and avoid potential conflict and danger whilst incarcerated, which assists with the adjustment process (Akerstrom, 1985; Shover, 1985). However, some research suggests that as offender's age, they are at an increased risk of victimisation, which could also impact upon their adjustment to the correctional environment (Cervello, 2015; Wright, 1983). Kerbs and Jolley (2007) found that older male offenders were more vulnerable to varying forms of victimisation. This however, could not be validated in this study.

The correlations between adjustment and offender type classification were not of any statistical or practical significance in this study. Other research endeavours however, have designated that offenders with prior incarceration experience have learnt particular techniques to cope with and adjust to the correctional environment (Crank, 2010; DeVeaux, 2013; Picken, 2012; Santos, 2003, 2006). Other studies also acknowledged that offenders with prior incarceration experience are more willing to be sentenced to correctional centres than offenders without such experience (May et al., 2005; Williams et al., 2008; Wood & May, 2003). Research highlighted that most offenders are fearful of and dread incarceration before actually experiencing it (Akerstrom, 1985; May et al., 2008). However, as incarceration becomes less of an unknown phenomenon, experienced

offenders are less fearful of it (May et al., 2008). These previous findings could not be validated by the results of this study.

Furthermore, while the correlations between adjustment and sentence length were small and of no statistical or practical significance in this study, previous studies confirmed their correlation. Agbakwuru and Ibe-Godrey (2017) found that sentence length significantly influenced how an incarcerated offender copes with and ultimately adjusts to incarceration. In addition, Casey et al. (2016) found that offenders who had been imprisoned for more than 6 months regarded incarceration as significantly more tolerable and positive than those who had only been imprisoned for less than 6 months. This suggests that offenders who have spent some period of time incarcerated have learnt to cope with and adapt to the correctional environment (Picken, 2012). However, Adams (1992) asserted that the element of time can intensify common offender issues and impact on the psychological health and overall adjustment of offenders. Offenders sentenced for long offences, such as 10 years or more, experience unique fears and challenges that are associated with an extended sentence length. The correlations between adjustment and sentence length could not be validated in this study.

### **5.2.3 Discussion of the predictors of adjustment in relation to the criterion variables from the hierarchical regression analysis**

While the combination of the various predictor variables (coping skills, aggression levels, perceived social support, age, offender type classification and sentence length) adequately explain the percentage variance of the criterion variable (adjustment) and the result is statistically significant, the corresponding effect sizes of each of these analyses indicate that the results are of

limited practical significance. Nonetheless, literature can be used to explain some of these findings.

The combination of independent variables (coping skills, aggression levels, perceived social support, age, offender type classification and sentence length) accounts for 16.2% ( $F_{13;404} = 5.999$ ;  $p \leq 0.01$ ) of the variance in the Internal Adjustment (uncomfortableness around offenders and correctional officials, anger, trouble sleeping) of the offenders. Thus, in practical terms, 16.2% of the uncomfortableness offenders feel around other offenders and correctional officials, and the offenders' anger and trouble sleeping can be explained by the combination of their coping skills, aggression levels, perceived social support and their age, offender type classification and sentence length. The hierarchical regression analysis with External Adjustment (frequency of fights/arguments and heated arguments with other offenders/guards) as criterion variable, found that the combination of the independent variables (coping skills, aggression levels, perceived social support, age, offender type classification and sentence length) accounts for 17.5% ( $F_{13;404} = 6.577$ ;  $p \leq 0.05$ ) of the variance in the External Adjustment scores of the sample. Practically, this suggests that 17.5% of the frequency of fights/arguments that offenders are involved in and the heated arguments they have with other offenders and guards can be explained by the combination of the offenders' coping skills, aggression levels, perceived social support, age, offender type classification and sentence length. When looking at the results of the hierarchical regression analysis with Physical Adjustment as criterion variable, the combination of the independent variables account for 11.6% ( $F_{13;404} = 4.073$ ;  $p \leq 0.01$ ) of the variance in the Physical Adjustment scores of the sample (e.g. frequency of being sick, hurt, fear of being attacked, and how frequently offenders are taken advantage of). This finding suggests that 11.6% of the variance of how frequently offenders are sick, hurt and fear being attacked and

taken advantage of can be explained by the combination of their coping skills, aggression levels, perceived social support, age, offender type classification and sentence length.

Overall, the results of the statistical analyses indicate that the combination of the predictor variables (CSI subscales, MSPSS subscales, AQ subscales, Age, Offender Type Classification and Sentence Length) significantly predicted all aspects of the PAQ (Internal Adjustment, External Adjustment and Physical Adjustment). Unfortunately, all of these findings were of limited practical significance. While only 16.2% of the offenders' Internal Adjustment, 17.5% of the offenders' External Adjustment and 11.6% of the offenders' Physical Adjustment can be explained by the combination of predictor variables, previous literature does indicate that each of these variables can be used to explain and predict correctional adjustment. As evidence of this, research has shown that the offender populations' *coping skills*, whether it be problem-focused, seeking social support, avoidance or emotion focused coping, can and does predict correctional adjustment (Chahal et al., 2016; Chubaty, 2001; Crank, 2010; Newhard, 2014; Picken, 2012; Rocheleau, 2013). The *aggression level* of the offenders (whether they display higher or lower levels of physical violence, anger, hostility and verbal aggression), has also been shown to predict correctional adjustment (Carrizales, 2013; Chubaty, 2001; Dye, 2010; McShane & Williams, 1989). The same applies to *perceived social support*, which is experienced by a group of incarcerated offenders, particularly the perceived social support provided by friends, family and a significant other as well as the correctional centre. In essence, perceived social support can and has in previous studies significantly predicted whether an offender does or does not adjust to the correctional environment (Asberg & Renk, 2012; Asberg et al., 2008; Liu & Chui, 2013; Woo et al., 2016). In terms of *age* as a predictor variable, numerous studies identified a particularly strong relationship between age and correctional adjustment (Adams, 1992; Driscoll,

1952; Greenberg, 1985; Hirschi & Gottfredson, 1983; MacKenzie, 1987; Moffitt, 1993; Nagin et al., 1995; Wolfgang, 1961). The results of the current study differ from the findings of previous studies since other research has confirmed that younger offenders are less adjusted to the correctional environment (Adams, 1992; Driscoll, 1952; MacKenzie, 1987; Toch & Adams, 1992; Valentine, 2012). With respect to the *offender type classification* variable, which refers to whether the offender is a first time or repeat offender, research and first-person accounts of the incarceration experience have confirmed that repeat offenders (those that have been incarcerated before), adjust better to the correctional environment than offenders incarcerated for the first time (Akerstrom, 1985; Crank, 2010; DeVeaux, 2013; Picken, 2012; Santos, 2003, 2006; Shover, 1985; Wolfgang, 1961). Furthermore, with regards to the *sentence length* variable as a predictor of correctional adjustment, previous studies have successfully predicted correctional adjustment by considering the offenders' length of sentence (Adams, 1992; Agbakwuru & Ibe-Godrey, 2017; Flanagan, 1980b; Logan, 2015; Thompson & Loper, 2005; Van Tongeren & Klebe, 2010; Zamble, 1992a). In this study, in terms of the demographic variables, sentence length was the only variable that made a statistically significant contribution to the explanation of the variance of the offenders' Internal Adjustment. Sentence length also made a statistically significant contribution to the explanation of variance of the offenders' Physical Adjustment. This is supported by research which has indicated that sentence length does impact on the offenders' adjustment (Adams, 1992; Agbakwuru & Ibe-Godrey, 2017; Logan, 2015; Thompson & Loper, 2005; Van Tongeren & Klebe, 2010). A 2016 study found that offenders who had spent more than five years incarcerated, had adjusted to incarceration significantly better than those who had been incarcerated for less than five years (Agbakwuru & Ibe-Godrey, 2017). Other studies (Smith et al., 2002; Toch & Adams, 1989; Wright, 1991; Zamble, 1992a) have also found that

offenders with longer sentences and thus more time served become more institutionalised as they immerse themselves in the daily routine of the correctional environment and tend to become more involved in activities provided by the correctional environment. As highlighted previously, the results of this particular study differ from previous studies conducted. It is probable that there are numerous factors that may account for these differences. Firstly, the environment in which this research was conducted is a highly contextualised, structured and unique correctional space with offenders serving mostly long (life) sentences for very violent offences (G4S Presentation, 2007). The private nature of the environment also differs significantly from other public correctional centres in South Africa (G4S Presentation, 2007; Jordaan, 2014; Matshaba, 2007; Sekhonyane, 2003). Literature used to decide upon the six predictor variables analysed in this study was mostly obtained from international sources and may not be applicable to the South African correctional context. It is also possible that offenders could have been influenced by social desirability and thus responded to the questionnaires in order to appear more socially desirable or better than they really are. Social desirability can be particularly problematic in a correctional context where offenders may be motivated to misrepresent themselves and depict themselves in a more favourable light (Hare 1991, 2011; Seager, 2005). Furthermore, the results of this study may differ due to most of the participants already previously being incarcerated for a long time. A total of 60.5% of the sample had already served between 13 months and 5 years of their current sentence and had thus learned to adapt to the strict environment, resulting in these individuals being considered more institutionalised (Smith et al., 2002; Toch & Adams, 1989; Wright, 1991; Zamble, 1992b) and thus no specific predictors of adjustment could be determined using a hierarchical regression analysis.

#### **5.2.4 Discussion of the results of the stepwise regression analysis**

In terms of Internal Adjustment, the results of the stepwise regression analysis indicated that the offenders with more support from their friends tend to experience poorer Internal Adjustment. That is, the more uncomfortable they tend to feel around other offenders/correctional officials and the more anger and trouble sleeping they experience. This contradicts previous literature which has indicated that offenders who perceive more support from friends experience better correctional adjustment (Adams, 1992; Asberg & Renk, 2012; Cobean & Power, 1978; Liu & Chui, 2013; Woo et al., 2016). However, previous research on a South African sample of incarcerated offenders indicated that offers of ‘friendship’ by other offenders whilst incarcerated can be used as a way to control and manipulate an offender (Gear, 2002). In addition, the more offenders are exposed to other offenders with delinquent behaviours, the more of a negative impact it can have on them (Gear, 2002; Hesselink & Grobler, 2016; Peacock & Theron, 2007). In essence, while offenders may perceive some degree of support from ‘friends’ while incarcerated, research has shown that “moves resembling gestures of friendship” are amongst the most commonly reported forms of trickery amongst incarcerated offenders (Gear, 2002, p.18). Previous research has indicated that the psychosocial mechanisms of received and perceived social support are extremely interconnected and complex (Thoits, 1995; Travis, 2005; Uchino, 2004; Uchino, Cacioppo, & Kiecolt-Glaser, 1996; Umberson & Montez, 2010) and it is important to be cognizant of this when attempting to understand this highly unique population. In addition to this complexity, offenders who have more support from ‘friends’ who are also incarcerated may be forced or coerced into gang activity as a form of protection and survival and be required to engage in behaviours, such as providing or selling of illegal items which may impact on their adjustment (Dissel, 1996; Gear,

2007a, 2007b, 2008; Gear & Ngubeni, 2002), especially their Internal Adjustment (i.e. trouble sleeping). This study however, did not require the offender to indicate which ‘friends’ he is referring to when answering questions related to his perceived social support. This includes whether the ‘friends’ are those outside the correctional environment or fellow incarcerated offenders. This is a recommendation for future research (see Section 5.4). In addition, the results indicated that Avoidance and Problem-solving contributed statistically significantly to the variance of Internal Adjustment. Friends and Avoidance combined, explained 9.7% of the variance of Internal Adjustment and this finding was of medium practical significance. All three independent variables (Friends, Avoidance and Problem-solving) explained 12.4% of the variance of Internal Adjustment and this finding was also of medium practical importance. Practically, this suggests that 12.4% of the uncomfortableness offenders feel around other offenders and correctional officials, their anger and trouble sleeping, can be explained by their perceived social support from friends, their avoidance coping as well as their problem-solving abilities. Each of these variables, namely friends (Cohen & Wills, 1985; DeLisi et al., 2004; Monahan, Goldweber, & Cauffman, 2011), avoidance coping (Carr, 2013; Chahal et al., 2016; Van Herreveld et al., 2017), and problem-solving abilities (Biggam & Power, 1999; Hesselink-Louw, 2004; Lipsey & Cullen, 2007) has significantly predicted outcomes that are linked to correctional adjustment in previous studies.

Regarding External Adjustment, the results of the stepwise regression analysis indicated that three of the 13 predictor variables, namely Anger, Friends and Verbal Aggression, made a statistically significant contribution to the variance of External Adjustment on the 1% level of significance. The predictor variable Anger made the largest contribution to the variance of External Adjustment (5.7%). This asserts that when the participants have higher levels of Anger

that their External Adjustment actually improved. Practically, this suggests that the more angry the offender, the less fights and heated arguments he is involved in with other offenders and guards. This is partly supported by previous literature, which has found that offenders with higher aggression levels (anger often being a precursor) (Buss & Perry, 1992), may adjust better to the correctional environment as they control, dominate, manipulate and intimidate other offenders more easily (Crank, 2010; HM Prison & Probation Service, 2018). Furthermore, due to their anger levels, other offenders may be more fearful of them and thus have learnt to stay out of their way (Shover, 1985). The remaining two predictor variables also contributed statistically significantly to the variance of External Adjustment, namely Friends (3.0%) and Verbal Aggression (2.5%). Anger and Friends combined, explained 8.7% of the variance of External Adjustment and this finding was of medium practical significance. All three independent variables (Anger, Friends, and Verbal Aggression) explained 11.2% of the variance of External Adjustment and this too was of medium practical importance. Practically, this suggests that 11.2% of the offenders' heated fights and arguments they are involved in with other offenders and correctional officials can be explained by their anger, friends and verbal aggression. This is supported by previous literature which indicates that more angry offenders sometimes experience better adjustment to the correctional environment (Crank, 2010; HM Prison & Probation Service, 2018), with social support from friends also impacting an offenders adjustment (Asberg & Renk, 2012; Asberg et al., 2008; Liu & Chui, 2013; Woo et al., 2016) as well as their aggression levels (Chubaty, 2001; Dye, 2010; McShane & Williams, 1989), which comprises verbal aggression too. During the development and testing of the PAQ, Wright (1983) found that it is expected that the rate of aggressive behaviour whilst incarcerated (including anger, verbal aggression) might be

related to External Adjustment problems, but this was not the case. Wright's (1983) findings thus support the findings of this study.

Concerning Physical Adjustment, the results of the stepwise regression analysis indicated that three of the 13 predictor variables, namely Friends, Avoidance and Problem-solving, made a statistically significant contribution to the variance of Physical Adjustment on the 1% level of significance. The Friends predictor variable made the largest contribution to the variance of Physical Adjustment (5.7% contribution). Thus, it seems that those participants who perceive more support from their friends tend to experience poorer Physical Adjustment. Furthermore, this finding is in contradiction of previous literature and indicates that offenders who have more perceived social support from their friends tend to be ill more frequently, are more fearful of being attacked and are more frequently injured. Findings by Gear (2002), Peacock and Theron (2007) and Wright (1983) as highlighted previously can explain these findings since the pathological correctional context often creates an environment where "friendships" are used as a means to manipulate and control. Previous studies have found that perceived social support from friends is actually a protective factor and aids correctional adjustment (Liu & Chui, 2013; Woo et al., 2016). In addition, Avoidance as a coping strategy (1.6%) and Problem-focused coping (2.0%) contributed statistically significantly to the variance of Physical Adjustment. However, the contributions of the independent variables individually and together were of no practical importance. Wright (1983) found that Physical Adjustment problems are reported much less frequently amongst offenders than Internal and External adjustment problems.

### 5.3 Limitations of the study

While several studies have detailed the correctional adjustment of incarcerated offenders (Adams, 1992; Carr, 2013; Crank, 2010; Cook, 2018; DeVeaux, 2013; Goncalves, 2014), a search on EBSCO Host did not deliver results as to any previous, similar studies that have investigated the predictors of correctional adjustment amongst male incarcerated offenders in a private, maximum-security correctional centre particularly in the South African context. This is a pertinent limitation of the study, especially considering that there was no specific previous literature to draw upon or compare the results from this very specific population to.

Another limitation of the study was that although all information leaflets and informed consent forms that were given to participants were available in English, Afrikaans as well as Sesotho, the questionnaires the participants received for completion were only available in English. Translation did take place on the days of data collection with correctional officials translating specific questions to participants in Afrikaans and Sesotho, as and when required. This however can lend itself to the possibility of participants not fully understanding questions or important information being 'lost in translation'. Third party correctional officials assisted with the data collection, and were present during the questionnaire completion, while the researcher was not. Although the officials had been trained by the researcher and prior information on the study had been presented to participants by the researcher, it is possible that during data collection, incorrect information was provided to participants without the researcher's knowledge, which could possibly impact on the results of the study. The literacy levels of the offenders, which ranges from no formal schooling at all to tertiary level education, was also in some sense a limitation of the study. Some offenders had an education and literacy level below Grade 6 and this may have impacted on their understanding or interpretation of certain questions.

In most cases, individuals with very low literacy levels were excluded from participation in the study, as advised by the correctional officials who knew them.

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 (Baum & Singer, 1987; Chahal et al., 2016; Skowroński & Talik, 2018; Van Herreveld et al., 2007), 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.

Another limitation of this study is that the site of the data collection, MCC, is a highly unique, structured and contextualised environment. The vast majority of offenders who are detained there and who participated in this study are serving very long sentences, most more than 25 years, for similar, violent-type offences. Due to this, the results of this study are not particularly generalisable to incarcerated offenders in public correctional centres around South Africa and beyond. Minimum and medium-security offenders may also adjust to incarceration differently than maximum-security offenders, whose movements and routines are austere controlled (Matshaba, 2007). With this view, the offender is ultimately forced to adapt to the structured-nature of the environment and this can thus impact on adjustment as the offender is ultimately forced to adapt; there is no alternative in this harsh environment. Another particular limitation of the study pertains to the use of convenience sampling. With the use of convenience sampling, the sample is not representative of the population and therefore these results are not generalisable (Maree, 2014) to other populations of offenders.

Furthermore, all of the data used to formulate the results of this study was gathered using self-report questionnaires. The transparency of self-report assessment methods is viewed as a limitation as participants could in some cases determine the purpose of the instruments. For the measuring instruments to be of any value, the participants would have needed to respond accurately and honestly to questions. This can be particularly problematic in the correctional context where offenders may be motivated to misrepresent their true selves to outsiders as they have been understood to be deceptive individuals who will portray themselves in a more favourable light (Hare 1991, 2011; Seager, 2005). The possibility therefore exists that the participants in this study could have engaged in reactivity when responding to the questionnaires in an attempt to appear more socially desirable or promote themselves through their responses in the hopes that it will improve their parole prospects or other correctional conditions.

#### **5.4 Recommendations for future research**

There are several important recommendations regarding potential future research, particularly relating to incarcerated offenders in private, maximum-security correctional centres. Firstly, it is imperative that South African researchers undertake to conduct sustained research not only amongst incarcerated offender populations but more specifically male incarcerated offenders in the two private maximum-security correctional centres in South Africa. The Research Agenda of the Department of Correctional Services (2019-2023) unequivocally states that “research in corrections has led to significant discoveries, development of new ways of rehabilitating offenders and improvements in correctional care” (2019, p. 1). Without continued research, it is difficult to support offenders in their adjustment to these challenging environments, which in turn impacts on their rehabilitation within the correctional centre and upon the broader society if

and when released. Also, when offenders experience continued states of emotional crisis, it is difficult to work toward long-range behavioural change (Adams, 1992) and thus understanding correctional adjustment and the factors that predict this adjustment, is vital to offender rehabilitation. Further research will assist with understanding how offenders make sense of and experience these corrective and rigid spaces. It is also important for future researchers to be cognisant of the notion that maximum-security correctional centres are in and of themselves designed to be a difficult experience in order to create a sense of punishment and deterrence for the offender. Keeping this in mind throughout the course of the research is essential in ensuring that within any findings, regardless of how expectant they are or not, that the integrity of the offender and research participant is retained. This is a reminder that offender adjustment, even negative adjustment, is normal given the correctional environment (Peacock & Theron, 2007). Even though interest in correctional research is expanding rapidly (Tyson, 2017), specific research on offenders within private, maximum-security correctional centres is lagging significantly. Thus, for the purpose of this study, there was limited research amongst offenders incarcerated in private, maximum-security correctional centres regarding adjustment to draw upon.

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. Another pertinent recommendation for future research is the further investigation of the sub-factors mentioned in Chapter Two that could contribute to predicting correctional adjustment amongst male incarcerated offenders in a private, maximum-security correctional centre. The sub-factors (see

Chapter Two, sections 2.11.1- 2.11.5) include gang affiliation, history of drug and alcohol abuse, ethnicity/race, mental illness as well as type of offence.

Given that the perceived support from ‘friends’ predicted the offenders’ Internal, External and Physical Adjustment, it would be interesting to differentiate between different types of ‘friends’ that the offender receives support from (i.e. those outside the correctional environment as well as fellow offenders who are considered ‘friends’). It would be an interesting endeavour to determine whether there are similarities or differences when conducting the same, or similar-type, research at Kutama Sinthumule Correctional Centre (KSCC), the other private, maximum-security correctional centre located in Makhado in the Limpopo Province.

Given that research shows that there is an ‘adjustment period’ for the offender (Haney & Zimbardo, 1998; Smyth et al., 1994; Towl, 2003), typically lasting up until one year after initial incarceration in a new environment, future researchers can endeavour to conduct research with only those incarcerated offenders that have been incarcerated for less than one year in public and/or private correctional centres. This will most probably yield more significant results.

The use of random sampling is another recommendation for future research as random sampling is more representative of the larger population (Maree, 2014). Another potential area for future research is the relationship between offender adjustment and the mental health of offenders. Previous research has indicated that the mental health of incarcerated offenders is an important consideration when studying adjustment within the correctional environment (Asberg & Renk, 2012; Picken, 2012) and this is therefore another important recommendation for future research.

The same or a similar-type research can expectantly be conducted at a public, medium or maximum-security correctional centre in South Africa. This would ensure a more varied sample

of offenders of different ages, awaiting trial detainees, offender type classifications, sentence lengths etc. Therefore, more research may be able to address the question of which variables are the best predictors of correctional adjustment amongst male incarcerated offenders in correctional centres. Future research may also prove useful in answering this question within the context of public correctional centres in South Africa.

## **5.5 Conclusion**

A more distinct understanding of offender adjustment in private, maximum-security correctional centres is required. This study further emphasises the contradictory nature of literature on the topic of adjustment to private, maximum-security correctional centres and other incarceration facilities in both the South African and international context. There are several instances where the literature is incongruent in relation to the findings, which highlights the need for further research on the differences between the environmental and cultural competencies faced by incarcerated offenders in public and private correctional centres in South Africa. This research highlights that while there are variables (coping skills, aggression levels, perceived social support, age, offender type classification, sentence length) that can predict correctional adjustment and it is statistically significant, it is of little practical significance. The stepwise regression analyses did however, reveal that the combination of some variables (Friends, Avoidance, and Problem-solving) for Internal Adjustment and (Anger, Friends and Verbal Aggression) for External Adjustment were of medium practical importance. This study overall aimed to determine if any of the following variables namely coping strategies, aggression levels, perceived social support, age, offender type classification and sentence length predicted correctional adjustment amongst a sample of male offenders incarcerated in a private, maximum-

security correctional centre. The results indicated that the combination of Friends, Avoidance and Problem-solving were significant predictors of Internal Adjustment to the correctional environment while Anger, Friends and Verbal Aggression combined were significant predictors of External Adjustment.

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## ABSTRACT

Offenders adjust to incarceration in different ways. When adjusting to a highly structured, austere and unique maximum-security correctional centre, this adjustment process is further compounded. The aim of this research was to determine which variables are the best predictors of correctional adjustment amongst male incarcerated offenders in a private maximum-security correctional centre in South Africa. The subsequent purpose of the research was to determine how male offenders with different coping strategies, aggression levels, perceived social support, ages, offender type classifications (first time offender vs repeat offender) and sentence lengths adjust to incarceration in a private maximum-security correctional centre. The conceptualisation of this research was based on existing literature albeit very little prior research could be contextualised due to the very distinctive private, maximum-security correctional system in South Africa. N=418 offenders voluntarily participated in this study and the Prison Adjustment Questionnaire was used to measure the offenders' Internal (uncomfortableness around other offenders, correctional staff, anger and trouble sleeping), External (heated arguments and fights with other offenders and correctional staff) and Physical Adjustment (frequency of illness, injury, fear of being attacked and taken advantage of). This study was the first South African research endeavour that made use of the PAQ. The PAQ indicated good internal consistencies and this validates the use of the instrument on a sample of male incarcerated offenders in a private, maximum-security correctional centre in South Africa. Participants conveniently situated within pockets of the correctional centre, such as the school, the skills development workshops and social work group sessions were invited to participate in this study. The results of this study indicated that offenders' Internal and External Adjustment were predicted by a number of variables used in this study and these findings were of medium practical importance.

Firstly, the combination of Friends and Avoidance Coping significantly predicted an offenders' Internal Adjustment. The combination of Friends, Avoidance Coping and Problem-Solving also significantly predicted and explained 12.4% of the variance in the Internal Adjustment of offenders and the results were of medium practical importance. Furthermore, the combination of Anger and Friends significantly predicted the offenders External Adjustment. The combination of three predictor variables namely Anger, Friends and Verbal Aggression significantly predicted and explained 11.2% of the variance in the External Adjustment of the offenders and the results were of medium practical importance. None of the identified independent variables (coping strategies, aggression levels, perceived social support, age, offender type classification or sentence length) that predicted the Physical Adjustment of the offenders were of any practical importance. More research on offender adjustment to private, maximum-security correctional centres in South Africa is required to validate these findings.

*Keywords:* Offender, adjustment, private maximum-security correctional centre, predictors, coping strategies, aggression levels, perceived social support, age, offender type classification, sentence length, Prison Adjustment Questionnaire, Internal Adjustment, External Adjustment, Physical Adjustment.

## ABSTRAK

Misdadigers pas op verskillende maniere aan by opsluiting in die gevangenis. Die aanpassingsproses word verder bemoeilik, aangesien aanpassing moet geskied by 'n hoogs gestruktureerde, streng en unieke maksimum-sekuriteit gevangenis. Die doel van hierdie navorsing was om te bepaal watter veranderlikes die beste voorspellers is van aanpassing by die gevangenis onder manlike misdadigers wat opgesluit is in 'n privaat maksimum-sekuriteit gevangenis in Suid-Afrika. Die daaropvolgende doel van die navorsing was om te bepaal hoe manlike misdadigers met verskillende hantering strategieë, aggressie-vlakke, waargenome sosiale ondersteuning, ouderdomme, misdadiger klassifikasie (eerste oortreder teenoor herhaalde oortreder) en vonnislengte aanpas by opsluiting in 'n privaat maksimum-sekuriteit gevangenis. Die konseptualisering van die navorsing is gebaseer op bestaande literatuur, alhoewel baie min vorige navorsing gekonseptualiseer kon word vanweë die uiters besondere sisteem van die privaat maksimum-sekuriteit gevangenis in Suid-Afrika. N=418 misdadigers het vrywillig aan die studie deelgeneem en die Gevangenis-Aanpassing-Vraelys (*Prison Adjustment Questionnaire*) is gebruik om die misdadigers se Interne (ongemak by ander oortreders, gevangenispersoneel, aggressie en sukkel met slaap), Eksterne (hewige argumente en gevegte met ander oortreders en gevangenispersoneel) en Fisiese Aanpassing (gereeldheid van siektes, beserings, vrees om aangeval te word en misbruik te word). Die studie was die eerste Suid-Afrikaanse navorsingspoging wat die PAQ gebruik het. Die PAQ het goeie interne konsekwentheid aangetoon en dit regverdig dus die gebruik van die meetinstrument op 'n groep manlike misdadigers wat opgesluit is in 'n privaat, maksimum-sekuriteit gevangenis in Suid-Afrika. Deelnemers wat genooi is om deel te neem aan die studie was gerieflik gestasioneer binne groeperings in die gevangenis, soos byvoorbeeld die skool, vaardigheidsontwikkeling-

werkswinkels en maatskaplike werk groepsessies. Die resultate van die studie het aangetoon dat oortreders se Interne en Eksterne Aanpassing voorspel kan word deur 'n aantal veranderlikes wat in hierdie studie gebruik is en hierdie bevindinge was van medium praktiese belang. Eerstens, die kombinasie van Vriende en Vermyding Hantering het beduidend 'n oortreder se Interne Aanpassing voorspel. Die kombinasie van Vriende, Vermyding Hantering en Probleemoplossing het ook beduidend 12.4% van die variansie in die Interne Aanpassing van oortreders voorspel en verduidelik en die resultate was van medium praktiese belang. Verder, die kombinasie van Woede en Vriende het misdadigers se Eksterne Aanpassing beduidend voorspel. Die kombinasie van drie voorspelling-veranderlikes naamlik Woede, Vriende en Verbale Aggressie het 11.2% van die variansie in die Eksterne Aanpassing van oortreders voorspel en verduidelik en die resultate was van medium praktiese belang. Geeneen van die geïdentifiseerde onafhanklike veranderlikes (hantering strategieë, aggressie-vlakke, waargenome sosiale ondersteuning, ouderdom, misdadiger klassifikasie of vonnislengte) wat die Fisiese Aanpassing van oortreders voorspel, was van enige belang nie. Meer navorsing oor die aanpassing van misdadigers in privaat, maksimum-sekuriteit gevangenis in Suid-Afrika is nodig ten einde die bevindinge te bekragtig.

*Sleuteltermes:* Misdadiger, aanpassing, privaat maksimum-sekuriteit gevangenis, voorspellers, hantering strategieë, aggressie-vlakke, waargenome sosiale ondersteuning, ouderdom, misdadiger klassifikasie, vonnislengte, Gevangenis-Aanpassing-Vraelys (*Prison Adjustment Questionnaire*), Interne Aanpassing, Eksterne Aanpassing, Fisiese Aanpassing.

## **APPENDIX A:**

Questionnaires provided to participants

EvaSys

Questionnaire



Dear Respondent. Thank you for choosing to participate in this study. Please answer the questions below:



Mark as shown:      Please use a ball-point pen or a thin felt tip. This form will be processed automatically.

Correction:      Please follow the examples shown on the left hand side to help optimize the reading results.

## 1. DEMOGRAPHIC QUESTIONNAIRE

Please answer the following questions about yourself:

1.1 Age in years:

1.2 Ethnicity:  Black  White  Coloured  
 Indian  Other

1.3 Home Language:  Sesotho  Setswana  isiXhosa  
 isiZulu  isiNdebele  Tswana  
 Afrikaans  English  Other

1.4 Marital Status:  Not married and not in a relationship  Married  Common law marriage/ living together  
 In a serious relationship  Divorced  Separated but not divorced  
 Widower/ spouse deceased

1.5 Employment status at time of arrest/ incarceration:  Employed (Full-Time)  Employed (Part-Time)  Unemployed

1.6 What is your highest level of education?  Grade 6 or below  Grade 7- Grade 11  Completed Grade 12 (Matric)  
 Post-School Certificate  Diploma  Degree

1.7 Have you ever been formally diagnosed with a psychiatric disorder?  Yes  No

For example: Clinical Depression, Generalized Anxiety Disorder, Psychosis

Have any of your closest biological family members ever been incarcerated?

1.8 Father:  Yes  No  I don't know  
 1.9 Mother:  Yes  No  I don't know  
 1.10 Brother(s):  Yes  No  I don't know  
 1.11 Sister(s):  Yes  No  I don't know  
 1.12 Cousin(s), Uncle(s), Aunt(s):  Yes  No  I don't know

1.13 Have you ever been sentenced for a crime?  Yes  No

1.14 If YES, please list the crime(s) you have been sentenced for:



**1. DEMOGRAPHIC QUESTIONNAIRE** [Continue]

1.15 How many times have you been incarcerated before this sentence?

- I have never been incarcerated before this sentence
     
  Once before
     
  Twice before  
 Three or more times before

1.16 What crime(s) are you currently serving time in this correctional centre for?

Choose, by placing an 'X' in the box next to the listed crime, all the crimes that apply to your current sentence.

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Homicide, murder, attempted murder, conspiracy to commit murder, culpable homicide                 | <input type="checkbox"/> Drug offence, possession of drugs, selling of drugs, drug trafficking | <input type="checkbox"/> Sexual offence, rape, sexual assault, indecent assault, any sex-related offence |
| <input type="checkbox"/> Theft, fraud, forgery, extortion, impersonation, shoplifting or any other economic-related offence | <input type="checkbox"/> House breaking with intent to commit a crime, robbery, car-jacking    | <input type="checkbox"/> Assault, grievous bodily harm   |
| <input type="checkbox"/> Weapons offence, illegal possession of a weapon or any other weapon-related offence                | <input type="checkbox"/> Other   |  |

1.17 If other, please specify:

1.18 How long is your current sentence?

1.19 How many months/ years of your current sentence have you served?

Please select the statement that you agree with most:

1.20 How do you feel about the crime(s) you have committed?

- The crime(s) was not my fault and I was let down by the criminal justice system
     
  I take some responsibility for the crime(s) but not all of it
     
  I accept full responsibility for the crime(s) and feel sorry about what I have done

Please read the following statements and choose the extent to which you agree with the statement:

1.21 "I think being incarcerated is difficult"

- Strongly Agree
     
  Agree
     
  Unsure  
 Disagree

1.22 "Being incarcerated is not that bad once you get used to it."

- Strongly Agree
     
  Agree
     
  Unsure  
 Disagree

1.23 "Being incarcerated is easier than being in the outside world"

- Strongly Agree
     
  Agree
     
  Unsure  
 Disagree



### 1. DEMOGRAPHIC QUESTIONNAIRE [Continue]

1.24 "I regularly/ often participate in correctional programmes and activities"

- Strongly Agree     Agree     Unsure  
 Disagree     Strongly Disagree

1.25 "I am regularly/ often in trouble while incarcerated"

- Strongly Agree     Agree     Unsure  
 Disagree     Strongly Disagree

1.26 During your current sentence, have you taken part in any correctional programmes?

- Yes     No

1.27 In the year before you were incarcerated, did you have a problem with drugs and/or alcohol?

- Yes     No

For example: did you use/ abuse drugs and/or alcohol regularly?

1.28 Are you currently in a gang while in this correctional centre?

- Yes     No     I prefer not to answer

1.29 If YES, which gang are you in?

- 26's     27's     28's  
 Airforce     Big Five     Other  
 Not Applicable

1.30 If YES, what rank are you in the gang?

Thank you for your time and input.

Please complete the next questionnaire.

### 2. PRISON ADJUSTMENT QUESTIONNAIRE

People adjust to incarceration in different ways.  
Some people sleep better while incarcerated, others get into fights while incarcerated.

**We are interested in how you are adjusting to the correctional environment.**

In this questionnaire, you are going to be asked to compare how you feel or act here in this correctional centre to how you felt or acted when you were freed in the outside world. You will also be asked how often you feel or act a certain way.

Please select only one response/ option per question that best represents you and how you feel. There are no right or wrong answers, only how you are handling incarceration.

Even if the decision is hard, try to answer all the questions as best you can.  
Choose only **ONE** answer from each question that best describes you.

2.1 In comparison to the outside world, are you

more comfortable with the people in the correctional centre   
  more comfortable with the people in the outside world   
  about as comfortable with the people in the correctional centre as with the people in the outside world



**2. PRISON ADJUSTMENT QUESTIONNAIRE** [Continue]

- 2.2 How often do you feel uncomfortable around other offenders here?
- most of the time (you are uncomfortable several times a day)  at least once a day  occasionally (you feel uncomfortable every few days)
- seldom/ not very often (you don't feel uncomfortable very often)  never
- 2.3 How often do you feel uncomfortable around the staff here?
- most of the time (you are uncomfortable several times a day)  at least once a day  occasionally (you feel uncomfortable every few days)
- seldom/ not very often (you don't feel uncomfortable very often)  never
- 2.4 Would you say you are
- more angry while incarcerated  more angry in the outside world  about as angry while incarcerated as in the outside world
- neither too angry while incarcerated or in the outside world
- 2.5 How often are you angry here?
- most of the time (you are angry several times a day)  at least once a day  occasionally (you are angry every few days)
- seldom/ not very often  never
- 2.6 Are you sick
- more often while incarcerated  more often in the outside world  about as often while incarcerated as in the outside world
- never really sick while incarcerated or in the outside world
- 2.7 Since you have been incarcerated, how often have you been sick?
- most of the time  at least once a day  occasionally (you are sick every few days)
- seldom/ not very often (you are not sick often)  never



**2. PRISON ADJUSTMENT QUESTIONNAIRE** [Continue]

2.8 Do you have

<input type="checkbox"/> a harder time sleeping while incarcerated	<input type="checkbox"/> a harder time sleeping in the outside world	<input type="checkbox"/> about as hard a time sleeping while incarcerated as in the outside world
<input type="checkbox"/> hardly ever have trouble sleeping while incarcerated or in the outside world		

2.9 How often do you have a hard time sleeping here?

<input type="checkbox"/> at least once a day	<input type="checkbox"/> occasionally (you have a hard time sleeping every few days)	<input type="checkbox"/> seldom/ you hardly ever have trouble sleeping
<input type="checkbox"/> never		

2.10 In comparison to the outside world, are you

<input type="checkbox"/> more afraid of being attacked while incarcerated	<input type="checkbox"/> more afraid of being attacked in the outside world	<input type="checkbox"/> about as afraid of being attacked while incarcerated as in the outside world
<input type="checkbox"/> not afraid of being attacked while incarcerated or in the outside world		

2.11 How often are you afraid of being attacked while in this correctional centre?

<input type="checkbox"/> most of the time (you are afraid several times a day)	<input type="checkbox"/> at least once a day	<input type="checkbox"/> occasionally (you are afraid every few days)
<input type="checkbox"/> seldom/ you are hardly ever afraid of being attacked	<input type="checkbox"/> never	

2.12 Do you get into

<input type="checkbox"/> more physical fights while incarcerated	<input type="checkbox"/> more physical fights in the outside world	<input type="checkbox"/> about as many physical fights while incarcerated as in the outside world
<input type="checkbox"/> hardly any physical fights while incarcerated or in the outside world		

2.13 How often do you get into a fight here?

<input type="checkbox"/> most of the time (you fight several times a day)	<input type="checkbox"/> at least once a day	<input type="checkbox"/> occasionally (you get into a fight every few days)
<input type="checkbox"/> seldom/ you hardly ever get into a fight	<input type="checkbox"/> never	



**2. PRISON ADJUSTMENT QUESTIONNAIRE [Continue]**

2.14 Do you get into

<input type="checkbox"/> more heated arguments while incarcerated	<input type="checkbox"/> more heated arguments in the outside world	<input type="checkbox"/> about as many heated arguments while incarcerated as in the outside world
<input type="checkbox"/> hardly ever get into heated arguments while incarcerated or in the outside world		

2.15 How often do you get into a heated argument with another offender?

<input type="checkbox"/> most of the time (you argue several times a day)	<input type="checkbox"/> at least once a day	<input type="checkbox"/> occasionally (you argue every few days)
<input type="checkbox"/> seldom/ you hardly ever argue	<input type="checkbox"/> never	

2.16 How often do you argue with guards?

<input type="checkbox"/> most of the time (you argue several times a day)	<input type="checkbox"/> at least once a day	<input type="checkbox"/> occasionally (every few days)
<input type="checkbox"/> seldom/ you hardly ever argue	<input type="checkbox"/> never	

2.17 Are you injured or hurt

<input type="checkbox"/> more often while incarcerated	<input type="checkbox"/> more often in the outside world	<input type="checkbox"/> about as often while incarcerated as in the outside world
<input type="checkbox"/> hardly ever hurt while incarcerated or in the outside world		

2.18 How often are you injured or hurt while incarcerated?

<input type="checkbox"/> most of the time (you are hurt several times a day)	<input type="checkbox"/> at least once a day	<input type="checkbox"/> occasionally (you are hurt every few days)
<input type="checkbox"/> seldom/ you are hardly ever hurt	<input type="checkbox"/> never	

2.19 Are you taken advantage of

<input type="checkbox"/> more often while incarcerated	<input type="checkbox"/> more often in the outside world	<input type="checkbox"/> about as often while incarcerated as in the outside world
<input type="checkbox"/> hardly ever taken advantage of while incarcerated or in the outside world		

2.20 How often are you taken advantage of by other offenders?

<input type="checkbox"/> most of the time (you are taken advantage of several times a day)	<input type="checkbox"/> at least once a day	<input type="checkbox"/> occasionally (you are taken advantage of every few days)
<input type="checkbox"/> seldom/ you are hardly ever taken advantage of	<input type="checkbox"/> never	



## 2. PRISON ADJUSTMENT QUESTIONNAIRE [Continue]

- 2.21 Do you feel that your cell is your home?  never  seldom/ hardly ever  often  
 always
- 2.22 Do you get enough exercise?  never  seldom/ hardly ever  often  
 always
- 2.23 Do you get enough sleep?  never  seldom/ hardly ever  often  
 always
- 2.24 Do you get enough to eat?  never  seldom/ hardly ever  often  
 always
- 2.25 Do you have enough to do?  never  seldom/ hardly ever  often  
 always
- 2.26 Do you have enough privacy?  never  seldom/ hardly ever  often  
 always
- 2.27 Do you understand the correctional centre's rules?  never  seldom/ hardly ever  often  
 always
- 2.28 Do you have good friends here?  none  some  many
- 2.29 Do you believe this correctional centre's programs are providing you with the necessary training to better yourself in the job/ employment situation after release?  yes  no
- 2.30 Given your own situation, which living arrangements do you prefer?  open dorm/ cells  semi-closed dorm/ cells  individual cell  
 shared cell

Thank you for your time and input.

Please complete the next questionnaire.



### 3. COPING STRATEGY INDICATOR

We are interested in how you cope with and handle problems in your life.

Listed below are several possible ways of coping. We would like you to indicate to what extent you, yourself, used each of these ways of coping.

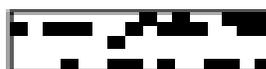
Try to think of one problem that you have experienced since you have been incarcerated. This should be a problem that was important to you and that caused you to worry. This problem can be **anything**, such as separation from your family/ friends or getting into a physical fight.

3.1 Please describe this problem in a few words:

With this one problem in mind, indicate how you coped or dealt with the problem by placing an 'X' in the box next to the answer that indicates to what extent or degree you dealt with the problem, keeping that one problem in mind the entire time. Make sure you answer every question even though some may sound the same.

Keeping the problem in mind, select the ONE answer that best describes the extent to which you dealt with the problem:

3.2	Let your feelings out to a friend?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.3	Rearranged things around so that your problem had the best chance of being solved?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.4	Thought of many different ways to distract yourself from the problem?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.5	Tried to distract yourself from the problem?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.6	Accepted sympathy and understanding from someone?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.7	Did all you could to keep others from seeing how bad things really were?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.8	Talked to people about the problem because talking about it made you feel better?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.9	Set some goals for yourself to deal with the problem?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.10	Compared your options to solve the problem very carefully?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.11	Daydreamed about better times?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.12	Tried different ways to solve the problem until you found the one that worked?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.13	Told a friend or family member about your fears and worries?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.14	Spent more time alone than usual?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.15	Told people about the problem because just talking about it helped you to come up with ways to solve the problem?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.16	Thought about what needed to be done to solve the problem?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.17	Turned all of your attention to solving the problem?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all
3.18	Formed a plan to solve the problem in your mind?	<input type="checkbox"/> A lot	<input type="checkbox"/> A little	<input type="checkbox"/> Not at all



### 3. COPING STRATEGY INDICATOR [Continue]

- |   |                                |                                   |                                     |
|---|--------------------------------|-----------------------------------|-------------------------------------|
| 3.19 Watched television more than usual?  | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.20 Went to someone (a friend, psychologist, social worker, pastor) in order to feel better? | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.21 Stood firm and fought for what you wanted in the situation?                              | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.22 Avoided being with other people?   | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.23 Tried to distract yourself from the problem by doing a sport or other activity?          | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.24 Went to a friend to help you feel better about the problem?                              | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.25 Went to a friend for advice on how to change the situation?                              | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.26 Accepted sympathy and understanding from friends who have also had the same problem?     | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.27 Slept more than usual?   | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.28 Fantasized/ thought about how things could have been different?                          | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.29 Saw yourself and your problem in characters from books or movies?                        | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.30 Tried to solve the problem?  | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.31 Wished that people would just leave you alone?   | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.32 Accepted help from a friend or relative?   | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.33 Asked for people who know you best to help you?  | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |
| 3.34 Tried to plan a way to solve the problem rather than just acting out?                    | <input type="checkbox"/> A lot | <input type="checkbox"/> A little | <input type="checkbox"/> Not at all |

Thank you for your time and input.

Please complete the next questionnaire.

### 5. MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT

We are interested in how you feel about the following statements. Please read each statement carefully and select **ONLY ONE** answer that best describes how much you agree with the statement.

- |  |   |  |  |
|--|---|--|--|
| 5.1 There is a special person who is around when I am in need              | <input type="checkbox"/> Very Strongly Disagree               | <input type="checkbox"/> Strongly Disagree | <input type="checkbox"/> Mildly Disagree |
|  | <input type="checkbox"/> Neutral (neither agree nor disagree) | <input type="checkbox"/> Mildly Agree      | <input type="checkbox"/> Strongly Agree  |
|  | <input type="checkbox"/> Very Strongly Agree                  |  |  |
| 5.2 There is a special person with whom I can share my happy and sad times | <input type="checkbox"/> Very Strongly Disagree               | <input type="checkbox"/> Strongly Disagree | <input type="checkbox"/> Mildly Disagree |
|  | <input type="checkbox"/> Neutral (neither agree nor disagree) | <input type="checkbox"/> Mildly Agree      | <input type="checkbox"/> Strongly Agree  |
|  | <input type="checkbox"/> Very Strongly Agree                  |  |  |



**5. MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT [Continue]**

- |   |   |  |  |
|---|---|--|--|
| 5.3 <b>My family really tries to help me</b>                                | <input type="checkbox"/> Very Strongly Disagree               | <input type="checkbox"/> Strongly Disagree | <input type="checkbox"/> Mildly Disagree |
|   | <input type="checkbox"/> Neutral (neither agree nor disagree) | <input type="checkbox"/> Mildly Agree      | <input type="checkbox"/> Strongly Agree  |
|   | <input type="checkbox"/> Very Strongly Agree                  |  |  |
| 5.4 <b>I get the emotional help and support that I need from my family</b>  | <input type="checkbox"/> Very Strongly Disagree               | <input type="checkbox"/> Strongly Disagree | <input type="checkbox"/> Mildly Disagree |
|   | <input type="checkbox"/> Neutral (neither agree nor disagree) | <input type="checkbox"/> Mildly Agree      | <input type="checkbox"/> Strongly Agree  |
|   | <input type="checkbox"/> Very Strongly Agree                  |  |  |
| 5.5 <b>I have a special person who is a source of comfort for me</b>        | <input type="checkbox"/> Very Strongly Disagree               | <input type="checkbox"/> Strongly Disagree | <input type="checkbox"/> Mildly Disagree |
|   | <input type="checkbox"/> Neutral (neither agree nor disagree) | <input type="checkbox"/> Mildly Agree      | <input type="checkbox"/> Strongly Agree  |
|   | <input type="checkbox"/> Very Strongly Agree                  |  |  |
| 5.6 <b>My friends really try to help me</b>                                 | <input type="checkbox"/> Very Strongly Disagree               | <input type="checkbox"/> Strongly Disagree | <input type="checkbox"/> Mildly Disagree |
|   | <input type="checkbox"/> Neutral (neither agree nor disagree) | <input type="checkbox"/> Mildly Agree      | <input type="checkbox"/> Strongly Agree  |
|   | <input type="checkbox"/> Very Strongly Agree                  |  |  |
| 5.7 <b>My friends are there for me when things go wrong</b>                 | <input type="checkbox"/> Very Strongly Disagree               | <input type="checkbox"/> Strongly Disagree | <input type="checkbox"/> Mildly Disagree |
|   | <input type="checkbox"/> Neutral (neither agree nor disagree) | <input type="checkbox"/> Mildly Agree      | <input type="checkbox"/> Strongly Agree  |
|   | <input type="checkbox"/> Very Strongly Agree                  |  |  |
| 5.8 <b>I can talk about my problems with my family</b>                      | <input type="checkbox"/> Very Strongly Disagree               | <input type="checkbox"/> Strongly Disagree | <input type="checkbox"/> Mildly Disagree |
|   | <input type="checkbox"/> Neutral (neither agree nor disagree) | <input type="checkbox"/> Mildly Agree      | <input type="checkbox"/> Strongly Agree  |
|   | <input type="checkbox"/> Very Strongly Agree                  |  |  |
| 5.9 <b>There is a special person in my life who cares about my feelings</b> | <input type="checkbox"/> Very Strongly Disagree               | <input type="checkbox"/> Strongly Disagree | <input type="checkbox"/> Mildly Disagree |
|   | <input type="checkbox"/> Neutral (neither agree nor disagree) | <input type="checkbox"/> Mildly Agree      | <input type="checkbox"/> Strongly Agree  |
|   | <input type="checkbox"/> Very Strongly Agree                  |  |  |



**5. MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT** [Continue]

- 5.10 My family helps me make decisions
- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Very Strongly Disagree               | <input type="checkbox"/> Strongly Disagree | <input type="checkbox"/> Mildly Disagree |
| <input type="checkbox"/> Neutral (neither agree nor disagree) | <input type="checkbox"/> Mildly Agree      | <input type="checkbox"/> Strongly Agree  |
| <input type="checkbox"/> Very Strongly Agree                  |  |  |

- 5.11 I can talk about my problems with my friends
- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Very Strongly Disagree               | <input type="checkbox"/> Strongly Disagree | <input type="checkbox"/> Mildly Disagree |
| <input type="checkbox"/> Neutral (neither agree nor disagree) | <input type="checkbox"/> Mildly Agree      | <input type="checkbox"/> Strongly Agree  |
| <input type="checkbox"/> Very Strongly Agree                  |  |  |

Thank you for your time and input.

Please complete the last questionnaires.

**6. THE AGGRESSION QUESTIONNAIRE**

Rate each of the following statements in terms of how characteristic they are of you (how much the statement sounds like you). In other words, decide if the statement is very much like you or not like you at all or somewhere in between.

**Extremely uncharacteristic of me-** this statement definitely DOES NOT sound like me

**Somewhat uncharacteristic of me-** this statement does not really sound like me

**Neither uncharacteristic nor characteristic of me-** this statement neither sounds nor does not sound like me

**Somewhat characteristic of me-** this statement may sound like me in some circumstances

**Extremely characteristic of me-** this statement DEFINITELY DOES sound like me

You will be given the statement and you will have to choose to which extent the statement sounds like you.

Choose only ONE response per statement.

**SECTION 1:**

- 6.1 Once in a while, I can't control the urge to hit another person
- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Extremely uncharacteristic of me (this definitely DOES NOT sound like me)    | <input type="checkbox"/> Somewhat uncharacteristic of me (this does not really sound like me) | <input type="checkbox"/> Neither uncharacteristic nor characteristic of me (this neither sounds nor does not sound like me) |
| <input type="checkbox"/> Somewhat characteristic of me (this may sound like me in some circumstances) | <input type="checkbox"/> Extremely characteristic of me (this definitely DOES sound like me)  |   |

- 6.2 If someone irritates me, I may hit them
- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Extremely uncharacteristic of me | <input type="checkbox"/> Somewhat uncharacteristic of me | <input type="checkbox"/> Neither uncharacteristic nor characteristic of me |
| <input type="checkbox"/> Somewhat characteristic of me    | <input type="checkbox"/> Extremely characteristic of me  |  |



**6. THE AGGRESSION QUESTIONNAIRE** [Continue]

**6.3 If someone hits me, I hit back**
 Extremely uncharacteristic of me

 Somewhat uncharacteristic of me

 Neither uncharacteristic nor characteristic of me

 Somewhat characteristic of me

 Extremely characteristic of me

**6.4 I get into fights a little more than other people**
 Extremely uncharacteristic of me

 Somewhat uncharacteristic of me

 Neither uncharacteristic nor characteristic of me

 Somewhat characteristic of me

 Extremely characteristic of me

**6.5 If I have to turn to violence to protect my rights I will**
 Extremely uncharacteristic of me

 Somewhat uncharacteristic of me

 Neither uncharacteristic nor characteristic of me

 Somewhat characteristic of me

 Extremely characteristic of me

**6.6 There are people who have pushed me so far so I hit them**
 Extremely uncharacteristic of me

 Somewhat uncharacteristic of me

 Neither uncharacteristic nor characteristic of me

 Somewhat characteristic of me

 Extremely characteristic of me

**6.7 I cannot think of a good reason to ever hit anyone**
 Extremely uncharacteristic of me

 Somewhat uncharacteristic of me

 Neither uncharacteristic nor characteristic of me

 Somewhat characteristic of me

 Extremely characteristic of me

**6.8 I have threatened people that I know**
 Extremely uncharacteristic of me

 Somewhat uncharacteristic of me

 Neither uncharacteristic nor characteristic of me

 Somewhat characteristic of me

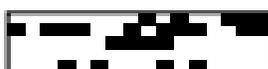
 Extremely characteristic of me

**6.9 I have been so mad that I have broken things**
 Extremely uncharacteristic of me

 Somewhat uncharacteristic of me

 Neither uncharacteristic nor characteristic of me

 Somewhat characteristic of me

 Extremely characteristic of me


## 6. THE AGGRESSION QUESTIONNAIRE [Continue]

### SECTION B:

6.10 I tell my friends when I don't agree with them

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	

6.11 I often don't agree with other people

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic or characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	

6.12 When people annoy me, I may tell them what I think of them

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	

6.13 I cannot help getting into arguments when people don't agree with me

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	

6.14 My friends say that I like to argue

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	

### SECTION 3:

6.15 I get angry quickly but get over it quickly

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	

6.16 When I am frustrated, I let my irritation show

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	



**8. THE AGGRESSION QUESTIONNAIRE** [Continue]

6.17 I sometimes feel I am so angry I can explode

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	

6.18 I don't often get angry

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	

6.19 Some of my friends think I get angry easily

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely uncharacteristic of me	

6.20 Sometimes I get angry for no reason

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	

6.21 I have a hard time controlling my anger

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	

**SECTION 4:**

6.22 I am sometimes full of jealousy

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	

6.23 Sometimes I feel life has cheated me

<input type="checkbox"/> Extremely uncharacteristic of me	<input type="checkbox"/> Somewhat uncharacteristic of me	<input type="checkbox"/> Neither uncharacteristic nor characteristic of me
<input type="checkbox"/> Somewhat characteristic of me	<input type="checkbox"/> Extremely characteristic of me	



## **APPENDIX B:**

Participant information leaflet and informed consent forms

**RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM****DATE**

1 July 2018- 1 September 2018

**TITLE OF THE RESEARCH PROJECT**

Predictors of prison adjustment amongst male incarcerated offenders.

**PRINCIPLE INVESTIGATOR/ RESEARCHER NAME/ CONTACT DETAILS**

Codi Rogers  
RogersC@ufs.ac.za

**FACULTY AND DEPARTMENT**

Faculty of the Humanities  
Department of Psychology

**STUDY LEADERS NAME AND CONTACT DETAILS**

Dr. Jacques Jordaan  
JordaanJ1@ufs.ac.za

**RESEARCH ETHICS COMMITTEE SECRETARY CONTACT DETAILS**

Charné Vercueil  
VercueilCC@ufs.ac.za

**WHAT IS RESEARCH?**

Research is undertaken in order to find new knowledge about the ways things and people work. We use research projects to help us find out more about people and the factors that affect their lives and experiences. This research is being conducted for the sole purpose of understanding adjustment within a correctional centre. As you are incarcerated in this correctional centre, you have been randomly selected and subsequently invited to voluntarily participate in a study that aims to understand adjustment to a correctional environment. The researcher is interested in factors that may predict adjustment to a correctional environment. These factors include the offender's relatively unique set of coping strategies, aggression levels and perceived

social support as well as the offender's age, type of offence and sentence length.

### **WHAT IS THE AIM/ PURPOSE OF THE STUDY?**

The aim of this research is to determine which variables are the best predictors of correctional adjustment amongst male incarcerated offenders in a South African correctional centre. The subsequent purpose of the research is to determine how male offenders with different coping strategies, aggression levels, perceived social support, ages, type of offences and sentence lengths adjust to incarceration. Using six questionnaires, the researcher will examine certain key variables that can be used to predict correctional adjustment. In doing so, the findings may assist with the identification of particular types of offenders that are at an increased risk of maladjustment whilst incarcerated. If this is the case, these findings will expectantly be used to inform future research that will aim to develop and evaluate a correctional adjustment programme for offenders in order to assist offenders with developing vital skills that will aid the adjustment process.

### **WHO IS DOING THE RESEARCH?**

The principal investigator is a Research Master's Psychology Student at the University of the Free State. She is conducting this research as part of her Research Master's Psychology degree. She is interested in understanding populations of incarcerated offenders in the South African context. Furthermore, she intends to one day develop programmes that will assist offenders with developing vital skills that will support rehabilitation within the correctional environment and reduce recidivism upon release.

### **HAS THE STUDY RECEIVED ETHICAL APPROVAL?**

This study has received ethical approval from the Research Ethics Committee of the Faculty of the Humanities at the University of the Free State. A copy of the approval letter can be obtained from the researcher.

**Approval number: UFS-HSD2017/0939**

### **WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?**

The purpose of this research is to understand correctional adjustment amongst male incarcerated offenders. As you are incarcerated in this correctional centre and have met the relevant criteria that we would like to study, we are interested in learning more about you as an individual and your experiences with incarceration. 400 participants have been invited to take part in this study and you are one of them. Since you are furthering your education at the school, are in skills development workshops and/or take part in

psychological or social work services you have been invited to take part in this study.

## **WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?**

If you voluntarily choose to participate in this study and have signed the written consent form at the end of this information leaflet, you will be required to complete five separate questionnaires which will be given to you in book format. Take your time reading through these questionnaires and understanding the questions as far as possible. Be as honest as you can when answering the questions. The questionnaires do contain personal and sensitive questions. The first questionnaire that you will be asked to answer is a demographic questionnaire that includes individual-related questions such as your age, ethnicity and marital status as well as questions relating to your prior criminal history and your current sentence. Some of these questions may be sensitive and as a result you are encouraged to take your time when answering these questions. As we are interested in understanding your adjustment to the correctional environment, the next questionnaire you will be asked to complete is The Prison Adjustment Questionnaire (PAQ). Answer this as honestly as possible. This information will help us to understand how you are experiencing the correctional environment. There will also be a coping questionnaire, namely the Coping Strategy Indicator (CSI) which will be used to identify the method of coping that you usually use in the correctional environment. The next questionnaire, the Aggression Questionnaire (AQ) will help us to understand aggression levels and the role they play in adjusting to incarceration. You will then be asked to complete the Multidimensional Scale of Perceived Social Support (MSPSS) which will give the researcher an indication of the perceived social support you feel you receive from friends, family members as well as a significant other. It is very important that you understand that at no time will you be asked to identify yourself by giving your name/ nickname/ correctional number or anything else that might identify you. Once your questionnaire has been handed to the researcher, your answers will be completely anonymous and there will be no way for the researcher to connect any responses that you provide to you. Depending on the instructions provided by the Department of Correctional Services as well as the instructions provided by this correctional centre, the completion of the questionnaires will take place in one of several possible ways. Firstly, you may be asked to complete the questionnaires over a one week period (7 days) at any time and in your own time. Thus you can take the questionnaires with you to your cell and complete all six questionnaires whenever you would like before the end of the 7 days. Once you have completed the questionnaires, you can hand your answer book to your supervising officer who will personally give it to the researcher. Once your completed answer book is handed to the researcher, your responses will be completely anonymous and confidential as she will be the only person handling the data and will have no way to identify you by your answers. The second method of questionnaire-completion will take place over 5 days or a period of one working week. However, in this case you will be asked to complete all six questionnaires in a specific location for a specific amount of time. As an example, between 8am and 4pm, with a lunch time break in between, you will complete all six questionnaires. There will be five separate sessions from Monday- Friday and you will

be informed ahead of time which session you will be completing the questionnaires in. Please take note of the dates below. The scheduled dates for the research to take place is from the 1 July- 1 September 2018. The extent of your involvement however will be a maximum of one week regardless of which method of questionnaire completion takes place. Take your time when answering the questionnaires as much as you can. Each questionnaire should take you around half an hour to an hour to complete but there is no suggested time limit that you will need to abide by for each questionnaire. If you do decide to participate, you will be asked to anonymously provide personal information about yourself and your life and criminal history. It is also important to note that some questions may trigger an emotional response on your part and may cause you personal and/or cultural embarrassment in some circumstances. In order to ensure that your rights are protected during the course of this research, psychological and social work services have been arranged on your behalf. If you experience any personal, psychological, social and/ or emotional distress as a result of participating in this study, the psychologist and/or the social worker has been arranged to assist you. These individuals will assist you in working through this experience if the need arises. You can contact these individuals by notifying your supervising officer and the service will then be arranged on your behalf. Please note that the choice to participate or not participate in this research will in no way influence your parole outcomes, sentencing, benefits or privileges and there is no reward, money, remuneration or incentive for participation in this research. If you choose to participate in this study you do so completely voluntarily and with the promise of no benefits, gifts, privileges or rewards.

### **CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?**

Participation in this research is completely voluntary and you do not have to participate in this study if you do not want to. Once you have read the information leaflet and you have decided not to participate in the study you can indicate this to your supervising officer who will then notify the researcher. There will be no loss of benefits or privileges if you do not want to take part in this study. You do not have to provide a reason for choosing not to take part in this study. If you do choose to participate in this study, you are free to withdraw or stop participating in the study at any time without giving a reason. You do not have to complete the questionnaires if you would prefer not to. If you do take part, you will be given this information sheet to keep with you and you will be asked to sign the written consent form at the end of this information leaflet showing that you agree to participate in the study. While you can withdraw at any time through the course of the research or stop answering the questionnaires at any point, once you have completed and handed back the six questionnaires to the researcher, you will not be able to withdraw from the study as the researcher will be unable to identify your responses.

### **WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?**

There are limited or no potential benefits for you as the participant to taking part in this

study. You will not receive any money, rewards or benefits and privileges for taking part in this study. Taking part in this study will in no way influence your parole outcomes or any other privileges or benefits while incarcerated. While there are limited potential benefits for the participant itself to taking part in this study, the benefits however, for the larger population of incarcerated offenders and for South African correctional research is vast. Firstly, the findings of this study will contribute to the larger body of South African research which aims to understand incarcerated offenders in the South African context. Secondly, this study will help to determine which variables are the best predictors of correctional adjustment and can thus be used to inform future research and decide whether extra resources are needed to assist offenders with adjustment to incarceration. Lastly, this study can assist with the future development and implementation of rehabilitation programmes to support the treatment and eventual reintegration of offenders back into society.

### **WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?**

There are risks and inconveniences to taking part in this study. If you choose to participate in this research you will have to allocate a period of time to completing the questionnaires. This may interfere with other programmes, workshops, schooling or any other responsibilities or activities that you are currently involved in. It is possible that you may be questioned by other individuals who are not taking part in the study as to why you are participating in the research. If you do choose to participate in this study, it is important for you to completely understand what the research is about and why you are involved in it. You have been chosen at random to take part in the study and that is why you were asked to participate. You are not receiving any special benefits or privileges for participating in this research and your participation is for the purpose of broadening the understanding of correctional adjustment.

### **WILL WHAT I SAY BE KEPT CONFIDENTIAL?**

The researcher will ensure as far as possible that your rights to confidentiality are maintained and upheld. Once your answer book has been collected from the correctional centre by the researcher, all the information that you have provided will be strictly confidential and will only ever be seen by the researcher. At no point in the study will you be asked to identify yourself either by name, nickname or correctional number and as a result anonymity will be assured. The researcher will have no way of connecting you to the answers that you provide. The researcher will be the only person dealing with your answers and thus confidentiality will be further ensured. It is important to note however, that the research, containing answers provided by you, will be reviewed by the researchers study leader(s) and in some cases a research ethics committee but will in no way be connected to you. The anonymous data that will be collected from you will be put together in a research thesis and eventually into two articles that may be published or presented at conferences but you will never be

identifiable in any such circumstance. The researcher will ensure that your rights to privacy, confidentiality and anonymity are maintained as far as possible once she has collected your answer book.

### **HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?**

Hard copies of all of your answers that have been captured in book format will be stored in a locked cupboard in the office of the researcher for a duration of five years after the completion of the research endeavor. This will be done for future research or academic purposes. Any and all electronic data will be stored on the personal hard drive of the researcher in a password protected computer. Any future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After a duration of five years or after future research endeavors have been completed and a period of five years has elapsed, all data will be destroyed in a non-hazardous manner at a recycling deposit. There will be no level of inconvenience or discomfort to you in this regard.

### **WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?**

There will be no payment, remuneration, benefits, privileges, gifts or incentives to participating in this study. If you choose to participate, you do so voluntarily and with the promise of no financial or other expense or reward.

### **HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS/ RESULTS OF THE STUDY?**

As it may be challenging for you to contact the researcher directly to receive feedback on the outcome of the study, once the research has been completed, several feedback leaflets will be circulated to participants via your respective supervising officers. This leaflet will contain a summary of the findings of the study. You are welcome to request this at your supervising officer from the start of January 2019. A correctional official can then contact the researcher and/or the study leader to find out when the feedback leaflets will be available to you. Your supervising officer can then communicate when this will take place to you.

Thank you for taking the time to read this information sheet and for participating in the study. Please see the consent form below. If you would like to participate in this study, read the consent form thoroughly and then sign in the designated places.

**CONSENT TO PARTICIPATE IN THIS STUDY**

I, \_\_\_\_\_ (participant name),  
confirm that the person asking my consent to take part in this research  
has told me about the nature, procedure, potential benefits and anticipated  
inconvenience of participation.

I have read (or had explained to me) and understood the study as explained  
in the information sheet. I have had sufficient opportunity to ask  
questions and am prepared to participate in the study. I understand that  
my participation is voluntary and that I am free to withdraw at any time  
without penalty. I am aware that the findings of this study will be  
anonymously processed into a research report, journal publications and/  
or conference proceedings.

I agree to the recording of my responses via the six questionnaires as  
detailed in the information leaflet.

Full Name of Participant: \_\_\_\_\_

Signature of Participant: \_\_\_\_\_ Date: \_\_\_\_\_

Full Name of Researcher: \_\_\_\_\_

Signature of Researcher: \_\_\_\_\_

Date: \_\_\_\_\_

## **APPENDIX C:**

Faculty of the Humanities Research Ethics Committee  
Approval Letter



Faculty of the Humanities

27-Aug-2018

Dear Ms Rogers:

**Ethics Clearance: Predictors of prison adjustment amongst male incarcerated offenders:**

**Principal Investigator: Ms Codi Rogers**

**Department: Psychology Department (Bloemfontein Campus)**

**APPLICATION APPROVED**

With reference to your application for ethical clearance with the Faculty of the Humanities, I am pleased to inform you on behalf of the Research Ethics Committee of the faculty that you have been granted ethical clearance for your research.

Your ethical clearance number, to be used in all correspondence is: UFS-HSD2017/0939

This ethical clearance number is valid for research conducted from 27-Aug-2018 to 27-Aug-2019. Should you require more time to complete this research, please apply for an extension.

We request that any changes that may take place during the course of your research project be submitted to the ethics office to ensure we are kept up to date with your progress and any ethical implications that may arise.

Thank you for submitting this proposal for ethical clearance and we wish you every success with your research.

Yours Sincerely

**Dr. Asta Rau**

**Chair: Research Ethics Committee**

**Faculty of the Humanities**

Debaanskatoor: Fakulteit Geesteswetenskappe

Office of the Dean: Faculty of the Humanities

T: +27(0)51 401 2240, E: [humanities@ufs.ac.za](mailto:humanities@ufs.ac.za)

PiPPiegroenewald Building / Gebou, FG0106

205 Nelson Mandela Drive/Sydenham | Park West/Parkwes, Bloemfontein 9301 | South Africa/Suid-Afrika

PO. Box/Posbus 339 | Bloemfontein 9300 | South Africa/Suid-Afrika | [www.ufs.ac.za](http://www.ufs.ac.za)



**APPENDIX D:**

Department of Correctional Services Ethical Clearance Letter



## correctional services

Department:  
Correctional Services  
REPUBLIC OF SOUTH AFRICA

Private Bag X136, PRETORIA, 0001 Poyntons Building, C/O WF Nkomo and Sophie De Bruyn Street, PRETORIA  
Tel (012) 307 2770. Fax 086 639 2693

**Ms C Rogers**  
**P.O. Box 28672**  
**Danhof**  
**Bloemfontein**  
**9301**

Dear Ms C Rogers

**RE: FEEDBACK ON THE APPLICATION TO CONDUCT RESEARCH IN THE DEPARTMENT OF CORRECTIONAL SERVICES ON: "PREDICTORS OF PRISON ADJUSTMENT AMONGST MALE INCARCERATED OFFENDERS IN A PRIVATE MAXIMUM-SECURITY CORRECTIONAL CENTRE"**

It is with pleasure to inform you that your request to conduct research in the Department of Correctional Services on the above topic has been approved.

Your attention is drawn to the following:

- The Acting Regional Commissioner and Area Commissioner where the research will be conducted will be informed of your proposed research project.
- Your internal guide will be **Mr S Malle: Regional Head Corrections, Free State and Northern Cape Region.**
- You are requested to contact him at telephone number: **(051) 404 0256** before the commencement of your research.
- It is your responsibility to make arrangements for your interviewing times.
- Your identity documents and this approval letter should be in your possession when visiting.
- You are required to use the terminology used in the White Paper on Corrections in South Africa (February 2005) e.g. "Offenders" not "Prisoners" and "Correctional Centres" not "Prisons".
- You are not allowed to use photographic or video equipment during your visits. However, the audio recorder is allowed.
- You are required to submit your final report to the Department for approval by the Commissioner of Correctional Services before publication (including presentation at workshops, conferences, seminars, etc) of the report.
- Should you have any enquiries regarding this process, please contact the Directorate Research for assistance at telephone number (012) 307 2770.

Thank you for your application and interest to conduct research in the Department of Correctional Services.

Yours faithfully

**ND SIHLEZANA**  
**DC: POLICY COORDINATION & RESEARCH**

**DATE:** 25/6/2018

**APPENDIX E:**  
PLAGIARISM REPORT

## PLAGIARISM REPORT

### Full thesis

#### ORIGINALITY REPORT

<b>19%</b>	<b>13%</b>	<b>6%</b>	<b>11%</b>
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

#### PRIMARY SOURCES

<b>1</b>	<a href="http://cech.uc.edu">cech.uc.edu</a> <small>Internet Source</small>	<b>1%</b>
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<b>4</b>	S.L. Bacharach. "Regional left ventricular function from short SPECT gated blood pool studies", 1998 IEEE Nuclear Science Symposium Conference Record 1998 IEEE Nuclear Science Symposium and Medical Imaging Conference (Cat No 98CH36255) NSSMIC-98, 1998 <small>Publication</small>	<b>1%</b>
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