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UNIVERSITY OF GHANA

DEPARTMENT OF PSYCHOLOGY

ANXIETY, DEPRESSION AND SUICIDAL IDEATION AMONG PRISONERS IN GHANA

BY

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DECLARATION

This is to certify that this thesis is the result of research carried out by DZIEDZORM ABRA ADZAM towards the award of the MPhil Clinical Psychology in the Department of Psychology, University of Ghana.

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DEDICATION

This work is dedicated to my mother Bertha and my sister Kabuki for sacrificing it all.

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ACKNOWLEDGEMENT

My deepest appreciation goes to the Almighty God who has made this work a profound success. I also wish to express my immense appreciation to my supervisors, Dr. Paul Doku, and Dr. Kingsley Nyarko for their astounding patience and intellectual support throughout this work.

To my mother Bertha Agbozo, I must admit that no amount of compilation of quotations and range of expressions could accurately convey my innermost appreciation to you for your support, love and kindness. To my sister Kabuki, I am truly grateful.

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Finally, I thank the Ghana Prison Service and all the research participants for their immense support. Course Mates! I thank you all. May the Good Lord bless and keep you beyond reasonable expectations.

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ABSTRACT

The present study investigated anxiety, depression and suicidal ideation among prisoners in Ghana. Specific aims and objectives for this research were to (a) find the levels of psychopathological symptoms among male and female prisoners; (b) examine the differences in psychological symptoms among prisoners based on age, educational level, duration of sentence, type of crime, and religious affiliation; (c) find the relationship between coping strategies and suicidal ideation among prisoners; (d) find the extent to which coping strategies used by prisoners would moderate the relationship between depression and suicidal ideation; (e) find the relationship between coping mechanisms and depression; (f) examine the various causes of anxiety and depression among the prison population; and (g) evaluate how the conditions in the prison affect their psychological well-being. Using 170 research participants from the Nsawam Prisons in Ghana, the depression anxiety stress scale, cope inventory, modified scale for suicidal ideation, and an interview guide were administered in a sequential transformative mixed methods design. 150 participants were used for the quantitative study and four independent focus groups of 20 participants were used to qualitatively investigate the causes of depression and anxiety among prisoners as well as how the prison environment affects the psychological wellbeing of prisoners. This qualitative aspect was achieved through open-ended questions pertaining to anxiety, depression and psychological wellbeing among prisoners. Fundamental findings from this study include the fact that, high levels of depression, anxiety, stress and suicidal ideation exists among prisoners in Ghana. Of the male and female inmates, females experience greater proportions of psychopathologies than males. Besides, the coping mechanisms used by prisoners does not help them deal effectively with their psychopathological issues. Remarkably, the causes of these psychopathological issues among prisoners are partly due to internal conditions in the prisons such as relationship with inmates and officers, inadequate resources such as water, food, and health-care facilities, and external conditions such as relationships lost or left behind such as family, friends, and property. Findings supports most literature reviewed and the transactional model of stress as well as three-step theory. It is thus recommended that immediate psychological services be provided for prisoners to make their reformative exercise complete.

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CHAPTER ONE

INTRODUCTION

BACKGROUND OF THE STUDY

Mental health is of great importance to humanity. Mental illness, on the other hand, has debilitating effects not only on one's life, but others in the environment as well. It becomes very unfavourable to the larger society if it (mental illness) should adopt an undesirable and unfriendly form of reaction towards the world. Society as a whole does not condone criminal acts and the perpetrators of such acts are loathed and labelled as 'evil'. Third world countries such as Ghana do not always consider the possibility of a mental health issue when punishing a wrongdoer. There has been an endless debate in other parts of the globe over the plea for insanity and its proper punishment, especially in cases of murder. In the public eye, the more brutal the crime under consideration is, the more severe its consequences are supposed to be. Prisoners are usually detested and seen as evil no matter the crime they may have committed and "are more likely to suffer from psychological disorders. They have also been identified as a risk group" (Wolff, 2005). There have been studies that have examined a variety of these disorders like depression (Allen, Phillips, Roff, Cavanaugh, & Day, 2008; Condon, Hek, & Harris, 2008) and anxiety disorders (Allen et al., 2008; Condon et al., 2008).

"More than 10 million people are incarcerated worldwide; this number has increased by about a million in the past decade" (Coid et al., 2009). Mental disorders and infectious diseases are "more common in prisoners than in the general population. High rates of suicide within prison and increased mortality from all causes on release, have been documented in many countries. The contribution of prisons to illness is unknown, although shortcomings in treatment and aftercare provision contribute to adverse outcomes." Research has highlighted that "women, prisoners aged

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55 years and older, and juveniles present with higher rates of many disorders than do other prisoners" (James &Glaze, 2006).

Prison is an ancient institution, where "diverse types of people, who had run afoul of the law, some of them possibly innocent, live" (Jordan et al., 1996). They further stated that, "mental disorders occur frequently in the context of incarceration. Related to this, is the fact that imprisonment may lead to the development of mental illness. The prison environment neutralizes the formation and development of basic human values, contributes to stigmatization, alters the convict's conduct and leads to temporary or even irreversible psychic consequences" (Jordan et al., 1996; Jewkes, 2002). Evidence suggests that, "imprisonment conditions can lead to anxiety, depression, self-harming or heteroaggressive behaviour, obsessions, psychoactive substance abuse and suicide" (Kirchner et al., 2008).

Over the past decade, a variety of substantial reports have presented through definite empirical evidences on the existence of offensive actions, and the growing rate of mental health problems among inmates, but there have been scanty proofs on the level of psycho-pathological symptoms among the prisoners in Ghana. Obviously, "physical health and mental health problems are a real issue of concern for the prisoner population, as well as being a critical health issue for the general community into which these individuals return. Furthermore, a large number of prisoners with mental illness also have a history of alcohol and/or drug abuse, compounding the health problems that may be experienced upon release" (Ditton, 1999).

In Ghana, there are a total of forty-three (43) prisons with an authorized holding capacity of nine thousand eight hundred and seventy five (9,875) prisoners (Hagan, 2013). Over the last few years governments have put in place sanctions that have increased the number of prisoners. There are

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about eight (8) different types of prisons. We have one maximum security prison, one medium security prison, seven central prisons, fourteen local prisons, seven female prisons, eleven open and agricultural settlement camp prisons, one juvenile facility and one special facility. The probability of an offender being housed in one of these prisons depend on the type of crime committed, duration and type of sentence, the age of the offender and the sex of the offender. There are a total of fourteen thousand and fifty one (14, 051) prisoners, this includes eleven thousand five hundred and thirty five (11, 535) and one hundred and forty four (144) convicted male and female prisoners respectively. The unconvicted prisoners are a total of two thousand three hundred and seventy two (2, 372) and this includes forty two (42) females and two thousand three hundred and thirty (2, 330) males. Six hundred and eighty eight (688) foreigners and one hundred and twenty (120) juveniles can be found in the different types of prisons mentioned (Hagan, 2013).

Incarceration can be painful. The features of the prison environment give rise to social and psychological needs that the inmates will try to address. Criminological research has described "these needs in terms of the pains of imprisonment" (Sykes, 2006) and the "environmental concerns" (Toch, 1977). These factors can be divided in a number of categories.

First, prisoners are deprived of self-worth. They are incarcerated in relatively small cells and cut off from the outside world, family and friends (Sykes, 2006; Riley, 2002). Also, "they have to cope with the moral rejection by the community and the degradation by the prison regime" (Irwin and Owen, 2005; Sykes, 2006). Second, the strictly controlled prison regime, the commands of the warders and the limited choices a prisoner has can lead to a reduced internal locus of control and 'reduce the prisoner to the weak, helpless, dependent status of childhood (Jones & Schmid, 2000;

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Sykes, 2006). Third, although inmates may have access to basic goods, many commodities that define our comfort and our self-image are prohibited in penal settings (Vandebosch, 1999). Fourth, prisoners always need to keep up their guard because they have not chosen their cohabitants and these cohabitants may not be friendly or welcoming enough to make the stay in the prison manageable.

Fifth, many prisoners are deprived of (sexual) contact for long periods of time. This can frustrate them and have a profound influence on their self-image (Jewkes, 2002). Sixth, prisoners are said 'to do time'. They need to survive in an environment that is usually considered monotonous (Cooke et al., 1990; Cohen & Taylor, 2006). This uniformed and under stimulated setting can also lead to hours of undesired self-reflection, which makes time 'an undifferentiated landscape which has to be marked out and traversed (Cohen & Taylor, 2006). Finally, "a lack of stimulation can lead to mental deterioration" (Fellner, 2006; Liebling & Maruna, 2005) or "worsened problem solving capabilities" (Cohen & Taylor, 1972; Cooke et al., 1990).

Besides the pains of imprisonment, which show similarities with forms of chronic stress (Vandebosch, 2004), prisoners can experience acute stress resulting from stimuli that are imported from the broader environment (life partner, children, friends, victims etc.) (Vandebosch, 1999, 2004). This form of stress is often comparable to the tension resulting from stressful life events such as the death or illness of a family member (Kendler et al., 2010) and to "feelings of guilt and uncertainty" (Vandebosch, 1999).

The nature of influence of prison sentence on offender's behaviour and adaptation ought to be one of the basic questions not only in criminological and penological research and theory but also, in psychological research and theory. The rational and efficient use of imprisonment requires that we

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understand the ways that individuals are affected by the experience of prison life. Despite the different views regarding the aims and purpose of the penal system (Simonson & Gordon, 1982), there is a general consensus that imprisonment should not be damaging. Social and correctional policy objectives are not met in the sense that, imprisonment serves to worsen emotional difficulties, psychological vulnerabilities, reinforce pro-criminal and antisocial attitudes and aggressive coping skills needed to function upon release to the outside world. It can be accepted by all that confinement can be highly stressful. This fact can easily be accepted considering specific features of imprisonment itself as the most severe form of punishment on contemporary civilized societies.

Aside from its apparent features (i. e. isolation and ex-communication, restrictions on freedom of movements, choice and control over one's own life), incarceration carries with it a variety of consequences which may include the loss of employment and the disruption of family life. Upon incarceration, as an inmate moves from the free world to imprisonment, increases in blood pressure, anxiety, and depression are evidenced (MacKenzie & Goodstein, 1985). However, with time, inmates appear to employ coping strategies allowing them to successfully adjust to the prison environment, as evidenced by decreases in physiological and psychological symptoms.

In the past few years, research involving the prison population has been increasing due to the rapid growth of the population (Gussak, 2009). Some of the researches focus on the underlying factors that contribute to criminality among the inmates (Rogstad & Rogers, 2008), while other researches seek to emphasize on effective treatment and rehabilitation programmes for the inmates (Gussak, 2009).

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Several risk factors towards the criminal offending have been underlined. Among the factors are psychiatric disorders such as substance related disorders, personality disorders, and affective disorders. Subsequently, these risk factors are related to the effectiveness of the existing rehabilitation programmes as well as the success of the latest programmes. Apart from being the underlying factors contributing to criminal offending, psychiatric disorders are often associated with repeat offending and in-prison offending (Fazel & Yu, 2011). Again, inappropriate rehabilitation received during imprisonment has often been related to the unwanted outcome. The underlying factors particularly those involving psychiatric disorders are in need of specific and appropriate treatment (Fraser, Gatherer, & Hayton, 2009). Fraser et al. also emphasized that, other than substance-related disorder that essentially needs proper treatment, psychiatric disorders such as depression and anxiety disorder also require specific rehabilitation during imprisonment.

Prisoners generally, have been found to suffer from severe psychological distress, including PTSD, anxiety and depression (Ehlers,Maercker, & Boos, 2000; Silove et al., 2002). According to clinical observations, prisoners show complex mental health problems and unique patterns of psychological distress that may reflect the dilemmatic prison experiences (Graessner et al., 2004). Being a target of humiliation and violence arouses strong feelings of anger, frustration, and revenge. Expressing aggression in prison conditions, however, leads to harsh punishment and life threatening situations, and, therefore, must be suppressed and/or disguised (Denis, Jana, &Priebe, 1997).

Both psychoanalysts like Lindy (1989) and emotion researchers like Tomkins (1991) argue that suppressed feelings of pain are in need of other expression, otherwise they may find their way into

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somatic complaints, projected at other people, and displaced to less dangerous targets such as family members. There is some evidence that, typical mental health problems among prisoners and/or torture victims reflect suppression and displacement of angry and frustrated feelings. They suffer from somatic and psychosomatic symptoms (de Jong et al., 2001; Silove et al., 2002), feel constantly hostile, alert, and easily end up in conflict with family members (Kanninen et al., 2002).

Former prisoners tend to feel suspicious toward other people and may also interpret neutral situations as threatening, dangerous and/or hostile (Ehlers et al., 2000). This suspiciousness can, in extreme instances, lead to paranoid ideation and/or anxiety. Alternatively, prisoners and torture victims may direct their anger toward themselves and, therefore, are at risk for depression (Silove et al., 2002) and can have suicidal ideations. Accordingly, studies have hypothesized that ex-prisoners and prisoners would exhibit higher levels of psychological distress than non-prisoners, especially somatization and somatic complaints, hostility, interpersonal problems, paranoid ideation, depressiveness, anxiety and PTSD (Silove et al., 2002).

Psychopathological Symptoms among Prisoners

Depression, one of most common psychiatric disorders in prison, can be defined as persistent depressed mood, loss of interest and enjoyment, and reduced energy, which lead to increased 'fatigability' and diminished activity (WHO, 1992). Generally, it is a mood disorder characterized by lack of interest or pleasure in most activities and may include any wide array of symptoms including but not limited to effects on appetite, complaints of pain, and feelings of hopelessness and/or helplessness (American Psychiatric Association (APA), 2000). Causes for depression include genetic and hormone imbalances, situational crises, and/or environmental stressors (APA, 2000; Matheson et al., 2006).

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Gender differences exist with respect to effects of incarceration on both male and female inmates (Ulzen & Hamilton, 1998). According to Joukamma (1995), mental health problems have been observed to be higher among incarcerated inmates compared to the general population and are a significant source of morbidity among prisoners. The episodes of depression are usually related to the experience of sudden or prolonged stressful events (Gunter, 2004; Drapalski et al., 2009). It is common for newly admitted inmates [to] suffer from depression for certain period of time due to shock or stress of the new environment (Zlotnick et al., 2008; Piselli, Elisei, Murgia, Quartesan, & Abram, 2009).

In addition to feelings of inadequacy and stress, important feelings in imprisoned people are anticipated suffering in life outside of incarceration, fear of family abandonment, guilt for being absent from raising and educating their children, losing their right to the social importance of work, identity loss, social discrimination that impairs prospects for working outside of the criminal context and social recognition (Fernandes&Hirdes, 2006). All these and more contribute to the development of depression among incarcerated people.

Cognitive theorists propose that, anxiety disorders result from distorted beliefs about the dangerousness of certain situations, sensations and/or mental events (Harvey, Richards, Dziadosz, &Swindell, 1993). Anxiety refers to “brain states elicited by signals that predict impending but not immediately present danger.” Thus unlike "fear", "anxiety" involves a more sustained change in the brain, manifested when a threat is still relatively removed from the organism in a spatial or temporal context. Anxiety disorders are also one of the most common of all mental health problems. It is estimated that they affect approximately 1 in 10 people (WHO, 1992). They are more prevalent among women than men, and they affect children as well as adults. Among

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prisoners, the presence of anxiety disorders may increase behaviour problems and limit participation in offender rehabilitation programs and work training. While medicines also reduce anxiety and their use requires less mental health staff time, inside prisons, medicines can be used as contraband (Emslie, Ridge, Ziebland, & Hunt, 2006).

According to Haycock (1991), the rate of suicide in prisons is expected to grow due to new mandatory sentencing laws, increase in the rate of incarceration, increase in the number of life sentences and death penalties, overcrowded correctional facilities, increased prevalence of AIDS, and the aging of the inmate population. Additionally, the trend of deinstitutionalizing mental health patients and societal trends of migration and loss of traditional social networks has led to a greater proportion of incarcerated individuals with mental health problems, including those at risk for suicide. Suicidal ideation, a common precursor to suicide attempts and completions, is also prevalent among prison inmates.

Suicidal ideation has been found to be strongly associated with completed suicide and past suicide attempts in prisoners (Fazel, Cartwright, Norman-Nott, &Hawton, 2008). Seventy-two percent of prison suicide victims report suicidal ideations to staff before their deaths (He et al., 2001) and 29% of male jail inmates report high-intent suicidal ideation during incarceration (Bonner & Rich, 1990). The relatively high prevalence of suicidal behaviour and ideation in incarcerated populations, in combination with failed attempts at suicide risk assessment and prevention, suggest that a more thorough understanding of risk factors for suicide in jails and prisons is greatly needed.

Blaauw and Kerkhof (1998) demonstrated in their study an increase of stress in jailed populations, related fundamentally to the deprivation of contact with the external world and all its

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consequences (restriction of heterosexual relationships, lack of autonomy, loss of personal security, etc.). Spielberger, Gorsuch, and Lushene (1983) observed that inmates show higher levels of state anxiety than non-jailed populations. This high degree of stress is reflected in a noticeable increase in attempts to commit suicide (Liebling, 1992) and in self-harming behaviour (Dollar, Dollar, Byrne, & Byrne, 2003) and which also leads to higher rates of psychological disorders.

Coping among Prisoners

Effective coping strategies can be crucial for mental health and physical survival in prison conditions. Coping is the way people deal with and overcome difficulties. Coping is defined as behavioural and cognitive efforts to manage stressors (Lazarus & Folkman, 1984) and may be categorized as active or problem-focused, avoidant, or accommodative coping strategies.

Generally, coping skills are methods available for individual in doing each action. Having an efficient collection of coping skills strengthens individual's sense of self-control and self-direction. But when a person's vulnerability is high, the individual shows non-adaptive behaviour even in times of mild stresses. However, the higher the coping resources of people, the lower the possibility of getting caught in situations they are vulnerable (Jahangir et al., 2009). The basic function of coping is to manage specific demands that are appraised as taxing and exceeding one's resources in order to protect mental health and psychological integrity (Lazarus & Folkman, 1984).

Upon incarceration, as an inmate transitions from the free world to imprisonment, increases in blood pressure, anxiety, and depression are evidenced (MacKenzie & Goodstein, 1985). However, with time, some inmates appear to employ coping strategies allowing them to successfully adjust

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to the prison environment, as evidenced by decreases in physiological and psychological symptoms (Islam-Zwart, Vik, & Rawlins, 2007), while others are unable to cope and adjust successfully to the prison environment. The extent of coping abilities of prisoners contribute to conduct problems, these skills are central to the individuals' rehabilitation in general, and to the safety of facility staff and residents in particular. It is important to examine the degree to which a prisoners' coping affects their emotional adjustment to incarceration, especially during the early stages of confinement, which may be particularly stressful (Islam-Zwart et al., 2007)

STATEMENT OF THE PROBLEM

Prisoners usually experience high levels of anxiety and depression as a result of their helplessness to cope effectively with their present situation. This is sometimes due to the coping strategies used by the prisoners (Kirchner et al., 2008). Also, with prison populations continuing to rise, stressors within prisons, such as overcrowding, are likely to increase and resources are likely to be increasingly stretched. The nature of the prison experience today is one that often has intense psychological effects upon the prisoner (Nyarko & Alhassan, 2013). There is no doubt the prison life can be very stressful and sometimes unbearable, which leads to most psychological and psychiatric problems. The inability to cope effectively is sometimes due to the fact that prisoners are not helped by professionals to deal with and accept their current situation. Once people are convicted or are sent to jail, they lose their identity, support of their family, friends and are more likely to lose their jobs upon return. These problems exacerbate their levels of anxiety and depression and make some have suicidal ideations while serving their sentence. The relatively high prevalence of suicidal behaviour and ideation in incarcerated populations, in combination with failed attempts at suicide risk assessment and prevention, suggest that a more thorough understanding of risk factors for suicide in prisons sorely needed. Also, suicide in our part of the

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worlds is seen as a crime, thus inmates having suicidal thoughts are unable to share their problems in case a staff should hear of it, they would be severely punished.

AIMS AND OBJECTIVES OF THE STUDY

This study intends to;

- Find the levels of Psychopathological symptoms among male and female prisoners.
- Examine the differences in psychopathological symptoms among prisoners based on age, educational level, duration of sentence, type of crime, and religious affiliation.
- Ascertain the relationship between coping strategies and suicidal ideation among prisoners.
- Understand the extent to which coping strategies used by prisoners would moderate the relationship between depression and suicidal ideation.
- Establish the relationship between coping mechanisms and depression.
- Examine the various causes of anxiety and depression among the prison population.
- Evaluate how the conditions in the prison affect the psychological well-being of prisoners.

RELEVANCE OF THE STUDY

Although exploring how people cope with imprisonment is not a new area of research, the evolving nature of prisons means there is a need for this type of research to remain a current focus. Prisoners in Ghana are a population that have been ignored for a very long time. Most people are of the view that once a person has been inside the walls of the prison, the person is of no good and should not be entertained. Some people even after being convicted continue to sometimes live in denial and are reluctant to find effective strategies that may help them deal or live with the situation.

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Proof on prison victimization and inter-mate violence (Wright, 1991), also illustrate that prison environments can be quite taxing and that many prisoners react in extreme maladaptive ways. Yet it is also apparent that other prisoners manage to adjust reasonably well to the demands and deprivations of prison life during their prison term with no visible signs of pathology either in social, psychological or physical health domains, (Zamble, 1992).

Studies conducted in the past few decades on the area has not significantly added to our understanding of the determinants and the process of adjustment and change that occurs with imprisonment. By improving our understanding of what factors help individuals to cope with life in prison, the more can be done to minimize levels of psychological distress among prisoners, thus helping to ease pressure on resources. Thus, this study seeks to gain more insight into the life of prisoners, some perceived causes and the specific stressors that cause prisoners to experience some form of anxiety and/or depression leading to suicidal ideations. The present study investigates the prevalence and severity of depression, anxiety and/or suicidal ideations among prisoners. This is of particular interest to psychologists and all concerned stakeholders as there may be prisoners who are likely to use “effective” coping strategies but still end up facing a lot of psychological problems. This study aims to investigate the different forms of coping that are available to the prison population. It is sometimes easy for those outside the prison to say that the prisoners should be able to adjust to prison life after they have spent a number of months or years, but the case may be different as there may be fewer activities to keep prisoners busy and prepared for their return to the outside world. This study also throws more light into the relationship between number of years spent in prison and the probability of developing anxiety and/or depression and the coping strategies used as one spends more time in prison.

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Despite experiences within prison having emotive and personal qualities to them, this has not generally been reflected in the empirical literature, with studies mainly using quantitative approaches with large groups of prisoners. The use of qualitative studies is clearly needed if professionals hope to develop an insight into individuals' subjective experiences of prison life. Also, further understanding will help the prisons service and all stakeholders be better able to prepare prisoners for re-entry back into society. Increasing ex-convicts ability to transition back into society may lead to reductions in psychiatric hospitalization or re-incarceration among this population. Again this study is beneficial to families of inmates, the inmates themselves, the prison service and the nation as a whole as understanding the psychopathological problems inmates face would influences policies made and how they can be helped while doing time and once they return to society.

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CHAPTER TWO

LITERATURE REVIEW

THEORETICAL FRAMEWORK

The study of stress leading to psychological disorders such as anxiety and depression and coping has become quite popular in recent years, particularly with respect to traumatic life events. Although the area is broad and the coping process is complex, there is a striking consistency in much of the literature. This coherence is based on two concepts central to an understanding of coping with trauma: approach and avoidance. In its simplest form, this pair of concepts refers to two basic orientations toward stressful information, or two basic modes of coping with stress. Approach and avoidance are shorthand terms for the cognitive and emotional activity that is oriented either toward or away from threat. For any given stress, anticipation and recovery are not always clearly separable; dealing with a trauma involves coming to terms with the event itself and with the threat of recurrence in the future.

Transactional Model of Stress (Lazarus & Folkman, 1984).

Coping strategies may be one mechanism by which prisoners adapt to the stress they experience. The transactional model of stress defines coping as "the process of managing demands (external and internal) that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984). Basically, the Transactional Model of Stress is based on the interplay between meta-theoretical principles that fall into three categories, namely antecedent variables, mediating processes, and outcomes. In the context of antecedents, two personality resources are considered to be of great relevance as antecedents of coping, namely commitments and beliefs. Commitments represent motivational aspects of personality, which influence the meaning, the perceived relevance of a situation, and the coping strategy individuals' use over time. Jerusalem (1990) mentions two examples, namely the Type A and the Type B personality as two contrasting profiles

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in terms of motivational structure of the personality. The other dimension concerns "the beliefs individuals have regarding their own capabilities, in concrete," Lazarus refers to the self- efficacy concept developed by Bandura (1997).

Given its process oriented approach, the Transactional Model of Stress conceptualizes stress in terms of a relation between the person and its environment by considering the nature of the stressful transaction (Parkes, 1986). The Transactional Model of Stress conceives a reciprocal, bi-directional relation between the person and the environment which jointed together, form new meanings through appraisal processes. Cognitive appraisal is the evaluation of the significance of what is happening in the person-environment relationship. It pertains to mediating processes and is divided into primary appraisal (whether what is happening is personally relevant), secondary appraisal (the one's available coping options for dealing with demands at hand), and reappraisal.

According to Lazarus and Folkman (1984), a situation can be appraised as irrelevant, benign-positive, or stressful, as the result of primary appraisal, while in terms of the stake a person has in a stressful encounter, the situation can be appraised as challenging, threatening, or as a harm/loss. The latter is defined as a damage that has already occurred, as in the death of a friend or an accidental injury. Threat also refers to "damage, but an anticipated one and it may or may not be inevitable." Challenge, on the other hand, differs from threat in the generally positive tone, nevertheless, "demanding exceptional efforts from the individual. Both, threat and challenge can be chronic, whereas losses tend to be acute stressors" (McCrae, 1984). In secondary appraisal, the person evaluates whether he or she has the competences, the social support, and any other kind or resources to deal with stressors and to re-establish equilibrium between person and environment (Schwarzer, 2001).

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The Transactional Model of Stress separates coping into two broad functions, namely, problem-focused coping and emotion-focused coping (also known as cognitive coping). While the former aims at changing the nature of the problem by taking direct actions to control the situation, the latter involves mainly thinking rather than acting to change the person-environment relationship (Schwarzer, 2001). In general terms, coping efforts aim at improving the source of stress (or the related emotions and appraisals) and distress, but it may sometimes provoke more stress and distress, depending on the suitability of the strategy used by the person to face demands. Irrespective of the debate on the bidimensionality or multidimensionality of coping, researchers have considered that problem-focused coping (e.g., active) can moderate the adverse influence of both negative life events and enduring role stressors on psychological functioning (Billings & Moos, 1981; Pearlin & Schooler, 1978). In addition, problem- focused coping has been associated with reduced depression and the reduction in concurrent distress (Menaghan, 1982; Mitchell, Cronkite, & Moos, 1983). On the contrary, emotionally- focused coping, which often entails avoidance-oriented coping (e.g., denial) has been generally associated with general distress, more depression, and the increase of future problems.

With regard to research examples provided by Holahan et al. (1996), for the adaptive function of approach versus avoidance oriented coping in human adaptation, they name empirical evidence that clinical depression was related to the use of avoidance-oriented coping, such as emotional discharge, self-consolation, and distraction. In the context of physical illness, avoidant forms of coping, such as denial, have been found to be detrimental in the longer term after a health crisis.

Utilizing this model, Endler and Parker (1990), propose that, individuals cope with stress in the following ways: task-oriented coping (i.e. strategies that attempt to solve a problem,

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reconceptualise a problem, or minimize the effects of a problem), emotion- oriented coping (i.e. emotional responses, self-preoccupation and fantasizing reactions), and the avoidance – oriented coping, including social diversion (i.e. strategies that involve avoiding a stressful situation by seeking out others) and distraction (i.e. engaging in a substitute task). Task-oriented coping and social diversion coping has been found to be related to adaptation, whereas emotion-oriented coping has been associated with psychopathology (Endler et al., 1993; McWilliams et al., 2003).

Effective coping strategies can be fundamental for mental health and physical survival in prison conditions. Famous political prisoners, such as Nelson Mandela, have insightfully described their attempts to survive and cope with the extreme danger of torture and incarceration (Mandela, 1995). Their secret of endurance seemed to be the integration of socio-political and psychological coping strategies; they have reported strong ideological commitment and political activity, on one hand, and vivid mental imagery and emotional regulation, on the other. Human rights organizations estimate that tens of thousands of prisoners, for example political prisoners, are routinely tortured and detained without access to proper juridical procedures (Amnesty International, 2000). The rehabilitation of released prisoners creates great challenges for their communities and clinical professionals (Foley, 2006). It becomes imperative to learn about the ways of coping that prisoners instinctively employ in order to protect their integrity and mental health in traumatic conditions.

Generally, the basic function of coping is to manage specific demands that are judged as taxing and exceeding one's resources in order to protect mental health and psychological integrity (Lazarus & Folkman, 1984). In emotion-focused coping, people attempt to manipulate their feelings, perceptions, and attributes to be less threatening and more controllable. In problem-

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focused coping, people aim at changing the distressing reality and remove the cause of stress and trauma (Folkman & Lazarus, 1985; Skinner, Edge, Altman, & Sherwood, 2003). Earlier research suggests that exposure to severe and uncontrollable trauma, especially combined with feelings of helplessness, is related to emotion-focused and distancing coping strategies, whereas trauma allowing greater degrees of control is associated with problem-focused coping (Mikulincer, Florian, & Weller, 1993; Mikulincer& Solomon, 1989).

Also, coping researchers agree that the study of coping is fundamental to an understanding of how stress affects people, for better and for worse. Although it has proven difficult to document clearly, coping researchers argue that how people deal with stress can reduce or strengthen the effects of adverse life events and conditions, not just on emotional distress and short-term functioning, but also long-term, on the development of physical and mental health or disorder. Researchers maintain that indeed coping matters (Foley, 2006).

In a study of political prisoners, it was seen that they were frequently exposed to severe traumatic experiences. Physical, sexual, and psychological torture methods are employed to get information about resistance activities and opposition networks, as well as to frighten, degrade, and humiliate supporters of the resistance (Amnesty International, 2000; Graessner, Gurris, & Pross, 2004; IRCT, 2006). Torture and ill-treatment are expected to lead to generalized helplessness and mental defeat among prisoners (Abrahamson, Seligman, & Teasdale, 1978; Maercker et al, 2000), and subsequently passive, emotion-focused, and distractive coping would emerge. Research shows, however, that along with emotion-focused coping, political prisoners use a variety of social, political, and personal coping strategies, indicating resourcefulness. They cope by sharing their experiences with others, initiating and joining political activity, and ignoring and denying the

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imposed humiliation and suffering (Emmelkamp, Komproe, Van Ommeren, &Schagen, 2002; Kanninen, Punamaki, & Qouta, 2002; Qouta, Punamaki, & El Sarraj, 1997). Research on prisoners of war confirms that "emotion-focused and passive coping strategies are ineffective and form a risk for psychological disorders, including posttraumatic stress disorder (PTSD), whereas problem-focused and active coping predict good adjustment" (Kanninen, Punamaki & Qouta, 2002).

In a study of Vietnam veterans, those with Post Traumatic Stress Disorder (PTSD) mainly used coping involving religious meditation and denial when coping with trauma-related memories (Green, Lindy, & Grace, 1988) and current interpersonal problems" (Nezu & Carnevale, 1987). Coping characterized by wishful thinking, self-blame, and seeking social affiliation was associated with PTSD diagnosis among World War II veterans (Blake, Cook, & Keane, 1992) and prisoners of war (Fairbank, Hansen, & Fitterling, 1991). Avoidance and passive coping were common among Gulf War veterans, and these coping responses were associated with and predicted PTSD (Benotsch et al., 2000; Stein et al., 2005). On the contrary, problem-focused coping strategies, such as constructive activity, information seeking and planning have been found to predict low level of PTSD among Israeli soldiers (Mikulincer& Solomon, 1989; Solomon, Mikulincer, & Avitzur, 1988).

The results of coping effectiveness in the context of war and military trauma are in line with general findings suggesting passivity and denial to be ineffective (Fiedler et al., 2000), and active and problem-focused strategies to be effective forms of coping (Lazarus, 2000). Other researchers on the other hand specify that, coping effectiveness depends on the nature and appraisal of stress. General findings may not be binding in life-endangering and extremely harsh conditions such as

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imprisonment, but the compatibility or ''goodness of fit'' between individual's coping strategies and environmental demands predict survival (Stein et al., 2005).

Also, research shows that problem-focused and active coping strategies are effective in controllable environments, while passive and emotion-focused coping responses are protective when the stress situation is uncontrollable (Lazarus, 1993). Compatibility between personality traits and environmental demands entail low psychological costs, which may allow for the transfer of energy to other more creative and resilient enhancing activities. Prisoners do not always have a good range of coping strategies to face this high level of stress. Previous research has suggested that generally some prisoners use coping strategies less effectively (Liebling, 1992), and that their coping is characterized by avoidance and emotional reaction (Zamble & Porporino, 1990).

The trauma literature generally suggests it is beneficial to apply coping strategies in the mixture of stressful experiences, but there is limited understanding of strategies that provide maximum benefit for short-term and long-term adjustment. According to transactional stress and coping theory, ways of dealing with traumatic situations can act as a shock absorber or worsen effects on well-being of individuals (Aldwin, 2007). Coping strategies that reflect active engagement with stressful circumstances, or attempts to actively solve problems when presented with a difficult situation, are referred to as approach-based coping strategies. On the other hand, avoidance-based coping strategies reflect detachment from a stressor, or attempts to evade difficult circumstances and associated emotions. The coping literature suggests that using more avoidance-based coping strategies is associated with higher distress, such as anxiety and depressive symptoms (Austenfeld & Stanton, 2004), on the contrary, using approach-based coping strategies results in better outcomes (Billings & Moos, 1981).

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Coping theory also suggests that the effectiveness of any particular strategy may depend on the characteristics of the stressor, thus, it makes some types of coping more or less appropriate in specific situations. This goodness-of-fit hypothesis suggests that problem solving (approach based coping) may be counterproductive in low-control situations (e.g., Park, Folkman, & Bostrom, 2001). Controllability appears to moderate the influence of stressful situations on psychological adjustment (Park, Armeli, & Tennen, 2004). A theoretically informative test of this goodness-of-fit coping hypothesis can be built around the usefulness of approach-based and avoidance-based coping strategies in an environment in which individuals have little control over their behaviour and surroundings, such as being held captive or imprisoned. Prisoners are particularly relevant because they experience a high-stress environment in which they have little control, an experience that involves physical hardship, psychological trauma, and deprivation. Many ex-prisoners sometimes suffer long-term consequences (Hunter, 1978) including posttraumatic stress disorder (PTSD) (Eberly, Harkness, &Engdahl, 1991), depression (Sutker&Allain, 1996), and physical health problems (Nice et al, 1996).

The Three-Step Theory (3ST) (Klonsky & May, 2014)

Suicide is a leading cause of death worldwide, killing more than 800,000 people each year (World Health Organization [WHO], 2014). A much larger number of people make suicide attempts, with some researchers estimating that approximately 25 attempts occur for every suicide death (Goldsmith, Pellmar, Kleinman, & Bunney, 2002). An even greater number of people consider suicide; a worldwide study found that for every person who attempts suicide, there are two to three who have seriously considered suicide without attempting it (Nock et al., 2008). Given this immense public health problem, suicide has been the focus of many research and prevention efforts, particularly in the past few decades. However, despite these efforts, there is no evidence of

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sustained reductions in suicide rates (WHO, 2014). The development of more effective prevention and intervention strategies will very likely require a deeper understanding of the fundamental processes that cause suicide ideation, attempts, and deaths.

The three step theory's ideation-to-action framework should guide all suicide theory and research (Klonsky & May, 2014). That is, the (a) development of suicide ideation and (b) progression from ideation to suicide attempts should be viewed as distinct processes with distinct explanations. The theory is relatively parsimonious in that suicide ideation and attempts are explained in terms of just four factors: pain, hopelessness, connectedness, and suicide capacity.

STEP 1: DEVELOPMENT OF SUICIDAL IDEATION

Regarding the development of suicidal ideation, it is believed that the first step toward ideation begins with pain. Pain usually, but not necessarily, refers to psychological or emotional pain. Fundamentally, people are shaped by behavioural conditioning. We perform behaviours that are rewarded and avoid behaviours that are punished. If someone's day-to-day experience of living is characterized by pain, this individual is essentially being punished for living, which may decrease the desire to live and, in turn, initiate thoughts about suicide. Different sources of pain can all lead to a decreased desire to live (Klonsky & May, 2014). These may include "physical suffering" (Ratcliffe, Enns, Belik, &Sareen, 2008), "social isolation" (Durkheim, 1951), "burdensomeness and low belongingness" (Joiner, 2005), "defeat and entrapment" (O'Connor, 2011), "negative self-perceptions" (Baumeister, 1990), and myriad other aversive thoughts, emotions, sensations, and experiences. The first step toward suicidal ideation begins with pain, regardless of its source.

However, pain alone cannot be said to be sufficient to produce suicidal ideation. If someone living in pain has hope that the situation can improve, the individual likely will focus on obtaining a

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future with diminished pain rather than on the possibility of ending his or her life. For this reason, hopelessness is also required for the development of suicidal ideation (Klonsky & May, 2014). Thus, when someone's day-to-day experience is characterized by pain, and the person feels hopeless that the pain will improve, he or she will consider suicide. In short, the combination of pain and hopelessness is what causes suicide ideation to develop. This step is consistent with recent research finding that pain and hopelessness are the two most common motivations for suicide attempts" (May & Klonsky, 2013). Importantly, it is the blend of pain and hopelessness that is required to bring about suicidal ideation. Someone in pain but with hope for a better future will continue to engage with life. Similarly, someone who feels hopeless about the future but without day-to-day pain will not consider suicide.

STEP 2: STRONG VERSUS MODERATE IDEATION

The second step toward potentially lethal suicidal behaviour involves connectedness. Connectedness most often means connection to other people; however, we use the term more broadly; for example, it can also refer to one's attachment to a job, project, role, interest, or any sense of perceived purpose or meaning that keeps one invested in living (Klonsky & May, 2014). Connectedness matters, because even if someone feels pain and hopelessness and considers suicide, the suicidal ideation will remain moderate (e.g., "sometimes I think I might be better off dead") rather than strong (e.g., "I would kill myself if I had the chance") as long as one's connectedness to life is greater than one's pain.

Disrupted connectedness is similar to low belongingness and burdensomeness as described in Joiner's Interpersonal Theory. A key difference between the 3ST theory and the Interpersonal Theory is the fact that, in the 3ST theory, the primary role of connectedness is to protect against

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strong suicidal ideation in those at high risk due to pain and hopelessness. It is believed that disrupted connectedness can contribute directly to pain and hopelessness, but it is not viewed as necessary for the development of pain or hopelessness, and thus the development of suicidal ideation. Many people with disrupted connectedness do not have suicidal ideation, and that many people with suicidal ideation do not experience disrupted connectedness (Klonsky & May, 2014). To be clear, the emphasis on pain, hopelessness, and connectedness in explaining suicidal ideation is not meant to suggest that other traditional risk factors for suicide are irrelevant. Indeed, numerous disorders (e.g., depression), states of mind (e.g., self-criticism), personality traits (e.g., borderline personality), temperaments/dispositions (e.g., negative emotionality), and experiences (e.g., interpersonal loss) are highly relevant to suicidal ideation. However, they are seen to be relevant in a specific way, through their effects on pain, hopelessness, and/or connectedness (Klonsky & May). For example, we would expect depression to relate to suicidal ideation to the extent that it influences pain, hopelessness, and/or connectedness.

STEP 3: PROGRESSION FROM IDEATION TO ATTEMPTS

Once an individual has developed a desire to end his or her life, the next question is whether the person will act on that desire and make an attempt. Joiner (2005) stated that "the key determinant is whether the individual has the capability to make a suicide attempt." He argues that, "people are biologically and evolutionarily wired to avoid pain, injury, and death. It is therefore very difficult for people to attempt suicide, even in the presence of strong suicidal ideation." However, Joiner's notion of capability is expanded in the 3ST in two ways.

Joiner (2005) emphasizes acquired capability. Acquired capability refers to an individual's habituation to pain, fear, and death through exposure to life experiences such as physical abuse,

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nonsuicidal self-injury, the suicide of a family member or friend, combat training, or any other experience that subjects someone to painful and provocative events. Taking a broader perspective, three specific categories of variables are proposed that contribute to suicide capacity: "dispositional, acquired, and practical."

Dispositional refers to "relevant variables that are driven largely by genetics, such as pain sensitivity" (Young, Lariviere, &Belfer, 2012) or "blood phobia" (Czajkowski, Kendler, Tambs, Røysamb, &Reichborn-Kjennerud, 2011). For example, someone born with low pain sensitivity will have a higher capacity to carry out a suicide attempt, whereas someone born with a squeamishness or even phobia of blood will have a lower capacity. Indeed, more recent work from Joiner and others has found that capability for suicide is largely genetic (Smith et al., 2012). Acquired refers to the same construct Joiner describes, that habituation to experiences associated with pain, injury, fear, and death can lead over time to higher capacity for a suicide attempt. Practical refers to concrete factors that make a suicide attempt easier. There are many kinds of practical factors. For example, someone with both knowledge of and access to lethal means, such as a firearm, will be more able to act on suicidal thoughts than someone who lacks knowledge of and access to lethal means. Another example is anaesthesiologists and other medical professionals whose suicide rates are elevated (Swanson, Roberts, & Chapman, 2003).

In summary, "dispositional, acquired, and practical factors" contribute to the capacity for attempted suicide, and an individual with strong suicidal ideation will only make a suicide attempt if and when they have the capacity to do so.

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CRITIQUE OF THEORIES

Other disciplines such as sociology and biology also use the term coping to describe the ways in which society or an organism deals with a crisis. The main axis of all the definitions which have been suggested is the struggle against external and internal adversities, conflicts and intense emotions (Lazarus & Folkman, 1984). Lazarus and Folkman (1984), who are considered the founders of the theory, define coping as "on-going cognitive and behavioural efforts to manage specific (external and/or internal) demands that are appraised as taxing or exceeding the resources of the individual." This theory which is widely accepted first describes the term coping as "a process" rather than "a stable characteristic or behavioural style." The process is described in a more functional manner, but can also become an object of intervention. Again it refers to "an individual's attempts to assess/evaluate (and not to control, which in itself is often impossible) negative stimuli. This appraisal may include redefinition, tolerance, even acceptance of a negative incident, if it is to lead to an effective adaptation" (Compas, 1987). Finally, this theory regards coping as the individuals' mobilization or intentional effort of the individual to react to external or internal adversity. This bring to light the appropriateness of the theory in relation to the study, this is because dealing with stress, specifically prison stress requires conscious effort, it cannot be equal with an individual's reflective or spontaneous reactions, since these are beyond an individual's conscious control (Compas, 1987).

The Three-Step Theory (3ST) (Klonsky & May 2014), has its primary tenets as (a) suicidal ideation develops due to a combination of pain and hopelessness, (b) connectedness is a key protective factor against escalating ideation in those high on both pain and hopelessness, and (c) progression from suicide ideation to attempts occurs when dispositional, acquired and practical factors create sufficiently high capacity to face pain and fear inherent in attempting to end one's

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life (Klonsky & May, 2014). Research findings indicate that suicide attempts are motivated by pain and hopelessness more than any other factor (May & Klonsky, 2013). Joiner (2005), notes that "serious or lethal suicidal behaviour is only likely when both suicidal desire (driven by a sense of isolation, a belief that one's death is worth more to others than their continued life, and hopelessness that this will change) and the capability for suicide are present. This theory highlights the fact that various psychopathological symptoms lead to the development of suicidal ideation which may further lead to suicide attempts or suicide in itself.

REVIEW OF RELATED STUDIES

Psychopathological Symptoms among Prisoners

Senol-Durak and Gencoz (2010, p. 587) examined factors associated with the symptoms of depression and anxiety among male Turkish prisoners by emphasizing a life crisis and personal growth model perspective. Participants of the study were composed of 179 male Turkish prisoners. The mean age of the prisoners was 32.20 (SD ¼ 8.58, range: 18–62). In terms of education level, 6.7% of them were literate, 41.9% of them were primary-school graduates, 25.1% of them were secondary-school graduates, 20.7% of them were high-school graduates and 5.6% of them were university graduates. With regards to family income level, 29.1% of them were in low-income, 63.1% of them were in middle-income and 7.8% of them were in high-income groups. Concerning crime type, "69.3% of the participants were in prisons due to committing organized crimes (crime was committed by more than six people; such as being a member of a gang; deriving an improper belonging, murderer, usurping, and illegal national/international drug traffic. The rest of the participants (30.7%) were in prisons because of committing judicial crimes committed by one individual, such as usurping; burglary, murder, assaulting others, injuring others due to traffic accident, and selling illegal drugs. Newly opened prisons were selected for this

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research, thus, the mean length of the time spent in prison was relatively short at 18.43 months (SD ¼ 20.93). Participants were administered a set of scales that included the Life Events Inventory for Prisoners (LEIP), Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Rotter's Internal External Locus of Control Scale (RIELC) and Demographic Information Form.

Results from the study indicated that, both symptoms of depression and anxiety had significant positive correlations with experienced stress and locus of control for both symptoms of depression and anxiety. Prison type was significantly related to anxiety symptoms and crime type. Prison-life stress was significantly related to locus of control, crime type, and time spent in prison indicating higher level of stress experienced by the organized crime prisoners having external locus of control and living in maximum security prisons. Further, the locus of control was significantly related to prison-life stress and symptoms of depression and anxiety directly. This is to say prisoners with external locus of anxiety symptoms. Also, situational and crime-related variables were significantly related to prison-life stress. Prisoners living in medium- security prisons, judicial control reported higher prison-life stress and depression and prisoners, and prisoners living in prison for longer durations reported lower levels of prison-life stress. Further, prison-life stress was significantly associated with symptoms of depression and anxiety. Prisoners with higher scores of prison-life stress reported higher levels of depressive and anxiety symptoms.

In the study, the significant effect of locus of control on the symptoms of depression and anxiety was found. Similar to the findings of the previous studies on depression and anxiety, individuals having external locus of control reported higher levels of depression and anxiety symptoms. Moreover, as suggested by the previous findings, prison type (prisoners living in medium-security prisons), crime type (judicial prisoners), and time spent in prison (prisoners living in prison for

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longer durations) were negatively related to prison-life stress. Therefore, similar to related literature, organized crime prisoners (who had committed many crimes to obtain sovereignty as gang members) living in maximum-security prisons (where people live in small units of one person or three people), and the ones who had recently entered prison can be considered to have higher prison-life stress. Also, consistent with the depression (Cooper & Berwick, 2001) and anxiety literature (Lapornik et al., 1992), prison-life stress was positively associated with the symptoms of depression and anxiety.

Furthermore, the effects of both locus of control and situational and crime-related variables on the symptoms of depression and anxiety were explained by the effect of third variable that is prison-life stress. In other words, prison-life stress mediated the relationship between locus of control and both the symptoms of depression and anxiety. Through the effect of prison-life stress, external locus of control increased the level of depression and anxiety symptoms of the prisoners. As well as locus of control and depression /anxiety relationship, prison- life stress did also mediate the relationship between situational and crime- related variables and symptoms of depression /anxiety. Organized crime prisoners living in maximum-security prisons, where people live in small units and have limited contact with the other inmates and prisoners who have recently entered prison were more likely to experience prison-life stress. Due to the effect of prison-life stress, "these prisoners had higher symptoms of depression and anxiety. Therefore, the mediator role of prison-life stress in the relationship between situational and crime-related variables and symptoms of depression / anxiety was significant.

The fundamental purpose of the study of Shinkfield et al. (2009) was to examine co-morbidity of conditions of ill-health and substance use with depression and anxiety among prisoners.

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Participants of the study were 87 prisoners (58 males; 29 females) ranging in age from 18 to 61 years. The sample was selected from four minimum-medium security prisons in Queensland and eight minimum to maximum security prisons in Victoria. Three instruments were used for the study, these included a pre-release questionnaire, the BDI-II and the BAI. Results from the study indicated that, approximately two-thirds of the participants reported having no current diagnosed physical (63.2%, N¼87) or mental ill-health (66.7%, N¼87) condition. Chi-square analyses revealed no significant difference in the proportion of current diagnosed physical and mental ill-health conditions for male and female participants. Over one-third (36.7%) of participants had at least one physical ill-health condition, with the mean number of current diagnosed physical ill-health conditions being .45 (SD¼.65).

Similarly, mental ill-health conditions were also common among participants, with one in three prisoners (33.3%) reporting at least one current diagnosed mental ill-health condition. The mean number of current diagnosed mental ill-health conditions was .49 (SD¼.83). There was no significant main effect for gender with respect to the number of physical ill- health conditions or mental ill-health conditions. Fifty- two percent of participants had received physical health treatment in prison and 68% of participants had received mental health treatment in prison.

There was also a high prevalence rate of physical and mental ill-health conditions among prisoners, in addition to high rates of substance use prior to prison entry (NCCHC, 2002). Although on the average, the current depression and anxiety experienced by prisoners was within the normal range, the proportion of participants who experienced levels of depression and anxiety above the normal range was much greater. This finding may also suggest that the pre-release period is, potentially, a time of heightened depression and anxiety for some prisoners and not

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necessarily the time spent in jail. This finding does not in any way contradict prior research showing higher prevalence rates of depression among prisoners and jail detainees than among community residents (Ditton, 1999; Fazel & Danesh, 2002). Rather, the findings confirm that anxiety disorders are relatively common in the prisoner population, with prevalence rates above that reported for an Australian community sample (n = 10,600 adults) at 9.7%" (Henderson, Andrews, & Hall, 2000).

Another significant finding was the fact that, substance use was found to be the main contributor to co-morbidity among prisoners, more so than conditions of physical and mental ill-health, with around one in five and one in seven prisoners, respectively, reporting a history of substance use with a condition of physical ill-health or mental ill-health (Hickie et al., 2001). The frequent association between depression and substance use, according to Hickie et al. suggests that these individuals may self-medicate with substances including alcohol as a means of coping with the effects of their physical or mental ill-health condition(s). A history of self-medicating behaviour may also reflect a failure to properly treat the physical and mental ill-health conditions of these individuals. Further findings of the study showed that, a higher number of diagnosed mental ill-health conditions among prisoners were associated with greater anxiety. This suggests that prisoners might become increasingly stressed and anxious due to the effects of their mental ill-health conditions. It is also clear that living in prison is to some degree anxiety provoking (Haney, 2002), as is getting out and dealing with the many challenges of reintegration (Shinkfield, 2006). Also, the fact that many prisoners may have to deal with a mental ill-health condition both in prison and upon release is also a potential source of anxiety.

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Coping Strategies and Suicidal Ideation among Prisoners

Examining how the coping strategies used by incarcerated persons in relation to their adjustment is an important work. Coping may be understood as the cognitive and behavioural strategies individuals employ in response to stress (Compas et al., 2001).The scientific community realizes the stress, psychological and physical problems that prisoners have to deal with while serving their sentences and how these affect them even after they have been released. A study by Kirchner et al. (2008) showed that, during imprisonment the appearance of deliberate self-harming (DSH) behaviours is frequent among prisoners. According to Brooker et al. (2002), nearly 30% of offenders have engaged in some form of DSH during their incarceration. Incidences of DSH have been defined as the intentional behaviour of an individual who wishes to harm himself physically and the result of which is an injury (Isacsson & Rich, 2001). Some researchers attribute these episodes to "the high degree of stress that imprisonment generates (Paulus &Dzindolet, 1993), which is estimated to be 3.6 times higher than among the general adult population of the United States (Jones, 1976). The high degree of stress experienced by prisoners is reflected in a visible increase in attempts to commit suicide (Liebling, 1992) and in self-harming behaviour. The aim of the study by Kirchner et al. (2008) was to detect, by means of their use of the various coping strategies available to inmates with greater risk of DSH during imprisonment. Participants were made up of "102 male prisoners from a young offenders unit in Barcelona (Spain). The average age of the subjects was 19.89 years (SD= 1.46). A majority (78%) had only a basic educational level and had not completed secondary schooling. The others included participants who had completed some secondary or high school courses, and those who had done vocational training. Participants were serving sentences for various crimes, ranging from robbery with violence to homicide or attempted murder. Fifty-six inmates were sentenced and 49 were on remand.

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Results from the study indicated that of the 102 prisoners, 24 (23.53%) had inflicted DSH on at least one occasion during their time in prison. An important association between coping style and self-harm risk during imprisonment was seen. The group at higher risk was the one that used both avoidance coping over the average and approach coping below the average. This finding is said to fit with coping theories, which postulates that avoidance coping is related to worse psychological adjustment than that of approach coping with better adjustment (Seiffge-Krenke, 2000).

The main aim of the study by Punamaki et al. (2008) was to understand the unique and universal coping characteristics and function, and mental health among former political prisoners. The fate of these political prisoners communicates a dilemma of committed and active persons ending up in prison where survival may demand passive and submissive coping strategies, and refrain from using active coping. As was hypothesized in their study, imprisonment was not associated with dispositional coping styles which typically are formed early in development and reflect personality or temperamental characteristics such as activity or passivity, and need or tolerance for excitement (Ayers et al., 1996). "The former prisoners differed from their controls in employing less avoidant and denying, and emotion-focused situational coping strategies. However, none of the coping styles and strategies could protect prisoners' mental health from negative impact of trauma, whether imprisonment or other military trauma (Punamaki et al., 2008).

Punamaki, Salo, Komproe, Qouta, El-Masri, & De Jong, (2008) stated in their study that, although none of the coping styles or strategies could moderate the negative impact of imprisonment and military trauma on mental health, direct associations between coping and psychological distress are in line with earlier research on coping effectiveness. High levels of active and constructive, and low levels of emotion-focused dispositional coping were associated with good mental health;

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this is indicated by low levels of psychological distress, as well as depression and somatoform symptoms. The results of the study revealed that dispositional and situational coping may be differently associated with mental health. Effectiveness of situational coping was a combination of seemingly opposite coping: both avoidance and denying and political activity were effective that is, they were related to low PTSD and depressive symptoms. The result of the study further harmonizes with observations that flexibility and range of various kinds of coping strategies is effective in dealing with multiple stressful demands (Lazarus, 2000).

In a cross-sectional survey of prevalence and correlates of suicidal ideation and suicide attempts among prisoners in New South Wales, Australia, Larney et al. (2012) randomly stratified a sample of 996 inmates Aboriginals and non - aboriginals who completed a telephone survey. They found from their study that, a lifetime prevalence of suicidal ideation among New South Wales inmates was 33.7%, and of suicide attempt was 20.5%. There was no gender difference in terms of prevalence of suicidal ideation; however, women were significantly more likely than men to report a lifetime suicide attempt (28.7% vs. 19.9%, $p = .03$). Similarly, there was no difference in suicidal ideation between Aboriginal and non-Aboriginal inmates; however, Aboriginal inmates were significantly more likely than non-Aboriginals to report a lifetime suicide attempt (26.9% vs. 18.7%, $p = .01$), and were more than twice as likely to have attempted suicide in the previous 12 months (4.4% vs. 2.1%, $p = .03$). As expected, there was a strong association between suicidal ideation and suicide attempt. More than half of participants reporting lifetime suicidal ideation reported a lifetime suicide attempt. Almost all participants reporting a lifetime suicide attempt also reported lifetime suicidal ideation.

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In univariate analyses of the correlates of lifetime suicidal ideation, they found that, lower education levels, childhood experiences of out-of-home care, harmful alcohol use and regular illicit drug use in the 12 months prior to incarceration were significantly associated with increased probabilities of lifetime suicidal ideation. On the other hand, the multivariate model showed that, older age, having a violent offence as one's most serious offence, a history of traumatic brain injury, Beck's depression inventory scores indicative of moderate to severe depression, and self-harm without suicidal intent were all associated with significantly increased probabilities of lifetime suicidal ideation. Findings further suggested that, over half of participants who reported suicidal ideation also reported a suicide attempt, confirming the importance of suicidal ideation in identifying prisoners most at risk of suicide attempt. Suicide attempt in the absence of suicidal ideation was rare. It could therefore be argued that a suicide attempt cannot occur in the absence of suicidal ideation (Bebbington et al., 2010); however, it is possible that some participants perceive their suicide attempt/s as impulsive acts that occurred in the absence of formal thoughts about suicide.

Additionally, in a study conducted with a Chinese prison sample, 70% reported suicidal ideation in the last week (Zhang, Grabiner, Zhou, & Li, 2010). As is evident, suicidal thoughts and behaviours represent a significant public health problem in jails and prisons. These same suicide risk factors hold up in prison, except for age: more than half of all inmates who die in prison as a result of suicide are relatively young (25 to 34 years old; Daniel, 2006). Low reasons for living (Ivanoff et al., 1996) anxiety, guilt (Lekka et al., 2006), low social support, and low self-esteem (Zhang et al., 2010) has also received support as clinical risk factors for current suicidal ideation in a study. Adolescence is also a high-risk period for suicide in the general population (Mazza, 1997). Along these lines, Daniel (2006) found that prisoners younger than 21 who were housed in

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adult institutions had risk for suicide that was eight times greater than that of juveniles placed in juvenile facilities.

Prison Conditions and Psychological Wellbeing

Berto (2014) investigated the role of physical settings in psycho-physiological stress and wellbeing in the United States. According to the researcher, Physical settings can play a role in coping with stress; in particular experimental research has found strong evidence between exposure to natural environments and recovery from physiological stress and mental fatigue, giving support to both Stress Recovery Theory and Attention Restoration Theory (p. 394). To Berto (2014), "exposure to natural environments protects people against the impact of environmental stressors and offer physiological, emotional and attention restoration more so than urban environments" (p. 396). By way of operational definition of terms in this regard, "natural places that allow the renewal of personal adaptive resources to meet the demands of everyday life are called restorative environments" (Berto, 2014, p. 399).

The aim of this researcher was to find out how physiological, behavioural and performance issues in an area influences psycho-physiological stress in a person. Another aim was to investigate the factors that account for the restorative value of natural and urban settings, as well as outdoor activities including vacations. The research design for the study was archival research. Berto (2014) did a literature search and meta-analysis of 33 peer-reviewed articles from 1963 to 2011. Eventually, the researcher found that, natural environments elicit greater calming responses than urban environments, and in relation to their vision there is a general reduction of physiological symptoms of stress in that regard. Again, Berto (2014) reported that, exposure to natural scenes mediates the negative effects of stress reducing the negative mood state and above all enhancing positive emotions. This moreover this can recover the decrease of cognitive performance

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associated with stress, especially reflected in attention tasks, through the salutary effect of viewing nature. With the many merits of contact with nature in view, Berto (2014) thus recommended that, "plans for urban environments should attend to restorativeness."

Indeed, Berto's (2014) research is an eye-opener to the fact that, even busy or hardworking people should work in harmony with nature or better still, take time to enjoy nature environment or outdoor activities to help release stress. In this regard, Felsten (2009) reported that, stress reduction activities should not necessarily be rigorous or medical, but could include activities such as play, vacations, rests and many other. To some extent, the restorative value of natural and outdoor centres are aspects of life that prisoners in Ghana do not get. They are deprived of natural environment and outdoor activities but put in an area of high walls and medium or high security measures. This in Berto's (2014) view contributes immensely to "psycho-physiological stress" which is an impediment to psychological wellbeing. Although, Berto's (2014) research highlights the role of the environment on our psychological health, it does not cover prison services. Besides, it does not really account for factors responsible for this finding. Reason for this inability of the research to cover these aspects of knowledge partly lies in the method used by Berto (2014) – archival research. For that matter, the views of people accounting for these findings cannot be further explored. It appears necessary therefore that a research technique that would explore the local views of participants pertaining to the effect of a particular condition which in this case is prison life be explored to mark-out its bearing on psychological wellbeing.

Picken (2012, p. 2045) also investigated "the coping strategies, adjustment and well-being of male inmates in the prison environment" in England. This research was partly influenced by the earlier findings of Cohen and Taylor (1972) that imprisonment has negative psychological and physical

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effects on its inmates, leading to psychological deterioration. According to Cohen and Taylor, 'long-term prisoners have an obsessive fear of being inferior and reducing in quality and strength due to imprisonment.' However, other researchers such as Richards (1978, p. 165) and Bolton, Smith, Heskin, and Banister (1976, p. 40) reported that most prisoners do not see "imprisonment as a fundamental threat to their psychological health and that, it enhances their verbal intelligence." Yet, Sapsford (1978) and Mackenzie and Goodstein (1985) independently investigated the "psychological effects of imprisonment" and reported that, a significant proportion of prisoners experience the most difficulty during the early part of their conviction.

The aim of Picken (2012), was to find out the coping strategies used by male prisoners and how they adjust to the prison environment with its consequences on their psychological wellbeing. To achieve these aims, the researcher used a "systematic review methodology to examine the "relationships between coping strategies, adjustment and wellbeing of male inmates" (p. 2045). Picken's objectives for this review were, first, to determine if coping strategies affect the adaptation, adjustment and wellbeing of inmates and, secondly, to determine if institutional changes can improve inmate adjustment and coping. Results from the review thus indicated a complex relationship between the coping strategies, adjustment and wellbeing of male inmates and that institutional opportunities and changes can be beneficial. Picken's review concludes that "there is a link between coping strategies, adjustment and wellbeing of male inmates" indicating that the effect is due to conditions in the prisons (p. 3000)

By this, Picken (2012) has contributed to knowledge in this field that prison conditions affects male prisoners' coping strategies and adjustment which impacts on their psychological wellbeing. In relation to this, McNulty and Huey (2005) reported that the "depriving conditions in the prisons

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makes the inmates feel psychologically deprived from the outside world, lonely and dependent on others" Again, overcrowding and conflicts over limited resources in the prisons makes prisoners feel psychologically insecure and that increases suicidal tendencies among them. However, Yang et al. (2009) found out that "the most damaging factor to an inmate is the loss of their life in the outside world and relations with family, rather than the actual regime or conditions of imprisonment" (p. 300). To them, impediments of psychological wellbeing to inmates is not significantly due to the conditions of prison service but to external factors or anxieties. This brings a dichotomy in our understanding of prison conditions and psychological wellbeing. Besides, the findings from Picken is only limited to male inmates and not a field research.

It is paramount therefore that a field research that explores the influence of prison conditions on prisoners – males and females – psychological wellbeing be conducted. In this wise, it would be best that the field research employs both quantitative and qualitative research approaches. Reason for this include the fact that, Cameron (2009) pointed out that, such mixed approach to research "offers an immediate and useful middle position philosophically and methodologically; it offers a practical and outcome-oriented method of inquiry that is based on action and leads, iteratively, to further action and the elimination of doubt; and it offers a method for selecting methodological mixes that can help researchers better answer many of their research questions" (p. 150).

SUMMARY OF RELATED STUDIES

Senol-Durak and Gencoz (2010) who examined factors associated with the symptoms of depression and anxiety among male Turkish prisoners by emphasizing a life crisis and personal growth model perspective reported that both symptoms of depression and anxiety had significant positive correlations with experienced stress and locus of control for both symptoms of depression and anxiety. These researchers were critiqued for not having compared differences in gender since

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in prisons, males and females are housed differently with possible different situations. Shinkfield et al. (2009) also examined co-morbidity of conditions of ill-health and substance use with depression and anxiety among prisoners found that "mental ill-health conditions were common among prisoners, with one in three prisoners (33.3%) reporting at least one current diagnosed mental ill-health condition. Again, fifty-two percent of prisoners had received physical health treatment in prison and 68% of participants had received mental health treatment in prison.

Schwarzer (2001) highlighted that the prisoner evaluates whether he or she has the competences, the social support, and any other kind or resources to deal with stressors and to re-establish equilibrium between person and environment. This assessment determines whether they would experience psychopathological symptoms or not. Kirchner et al. (2008) in this regard showed that, during imprisonment the appearance of deliberate self-harming (DSH) behaviours is frequent among prisoners. According to Brooker et al. (2002), nearly 30% of offenders have engaged in some form of DSH during their incarceration, which is highly attributable to the high degree of stress that imprisonment generates (Paulus &Dzindolet, 1993). Liebling (1992) explained that, the high degree of stress experienced by prisoners is reflected in a visible increase in self-harming behaviours and attempts to commit suicide. In view of this, Kirchner et al. (2008) who found an important association between coping style and self-harm risk during imprisonment explained that prisoners at higher risk were the ones that used both avoidance coping over the average and approach coping below the average.

Punamaki et al. (2008) contributed to our understanding of the unique and universal coping characteristics and function, and mental health among former political prisoners highlighted that, the fate of these political prisoners communicates a dilemma of committed and active persons

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ending up in prison where survival may demand passive and submissive coping strategies, and refrain from using active coping. In this regard, Ayers et al. (1996) pointed that, active coping is successfully used by individuals who are independent and self-efficacious.

Larney (2012, p. 12) who surveyed the "prevalence and correlates of suicidal ideation and suicide attempts among prisoners." According to these researchers, "lower education levels, childhood experiences of out-of-home care, harmful alcohol use and regular illicit drug use in the 12 months prior to incarceration were significantly associated with increased probabilities of lifetime suicidal ideation." Punamaki et al. (2008) accounted that, none of the coping styles and strategies could protect prisoners' mental health from negative impact of trauma, whether imprisonment or other military trauma. Avoidance coping is related to worse psychological adjustment than that of approach coping with better adjustment (Seiffge-Krenke, 2000).

Problem- focused coping has been associated with reduced depression and the reduction in concurrent distress (Menaghan, 1982; Mitchell, Cronkite, & Moos, 1983). On the contrary, emotionally- focused coping, which often entails avoidance-oriented coping (e.g., denial) has been generally associated with general distress, more depression, and the increase of future problems. Similarly, Holahan et al. (1996), on the adaptive function of approach versus avoidance oriented coping in human adaptation, remarked that, clinical depression was related to the use of avoidance-oriented coping, such as emotional discharge, self-consolation, and distraction.

Berto (2014) reported that, physical settings has an influence on coping with stress and psychological wellbeing in that, "exposure to natural environments aid recovery from physiological stress and mental fatigue" (p. 395). Since it produces a calming response in us. Picken (2012, p. 2045) who investigated "the coping strategies, adjustment and well-being of male

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inmates in the prison environment" that conditions in the prisons really have a dichotomous effect on the psychological wellbeing of prisoners. It also supports McNulty and Huey's (2005) findings that the "depriving conditions in the prisons such as overcrowding and conflicts over limited resources makes the inmates feel psychologically deprived from the outside world, lonely and dependent on others even with suicidal tendencies."(p. 492) However, Yang et al.'s (2009) claim that "the most damaging factor to an inmate is the loss of their life in the outside world and relations with family, rather than the actual regime or conditions of imprisonment." (p. 295) To Yang et al., impediments of psychological wellbeing to inmates is not significantly due to the conditions of prison service but to external factors or anxieties.

RATIONALE FOR PRESENT STUDY

Effective coping strategies can be crucial for mental health and physical survival in prison conditions. Prisoners are likely to adopt various means to deal with the situation in which they find themselves. Some of researches focus on the underlying factors that contribute to criminality among the inmates (Rogstad & Rogers, 2008), while other researches seek to emphasize on effective treatment and rehabilitation programmes for the inmates (Gussak, 2009). Studies such as Shinkfield et al. (2009) have concentrated on the co-morbidity of psychological disorders and physical health of prisoners. Other studies like that of Berto (2014) have also looked at the effects of the stress of prison life on psychological wellbeing of the prisoners. Few studies have however looked at prison conditions and the how they affect the psychological wellbeing of the prisoners coupled with how they cope with the everyday stress of prison. Studies that have looked at coping strategies of prisoners have not really delved into the effects of how ineffective coping strategies affect the psychological wellbeing of prisoners specifically the combination of anxiety and/or depression leading prisoners to have suicidal ideations.

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Again, a lot of studies have been conducted outside Ghana. The few studies that have been conducted concerning prisoners have not focused on the various coping mechanisms that are available in the various prisons in Ghana. This present study would therefore throw more light on the coping strategies that are available in prisons such as ours and how these coping strategies affect the psychological well-being of the prisoners. This study would also look at how the length of term that is served by the prisoners affects their psychological well-being of the prisoners and the coping strategies that are used to alleviate the stress they face in prison.

STATEMENT OF HYPOTHESES

From the literature review and some background study we would like to assume that;

1. Female prisoners would have significantly higher psychopathological symptoms than male prisoners.
2. There will be significant age differences in psychopathological symptoms among inmates.
3. Inmates with higher level of education would have significantly lower psychopathological symptoms than those with other levels of education.
4. There will be significant differences in psychopathological symptoms among inmates based on the type of crime committed and duration of sentence.
5. The inmates would report more depressive symptoms than the other psychopathological symptoms.
6. Coping strategies would moderate the relationship between depression, anxiety and suicidal ideation.

RESEARCH QUESTIONS

1. What are the various causes of anxiety and depression among the prison population?
2. How does the conditions in the prison affect their psychological well-being?

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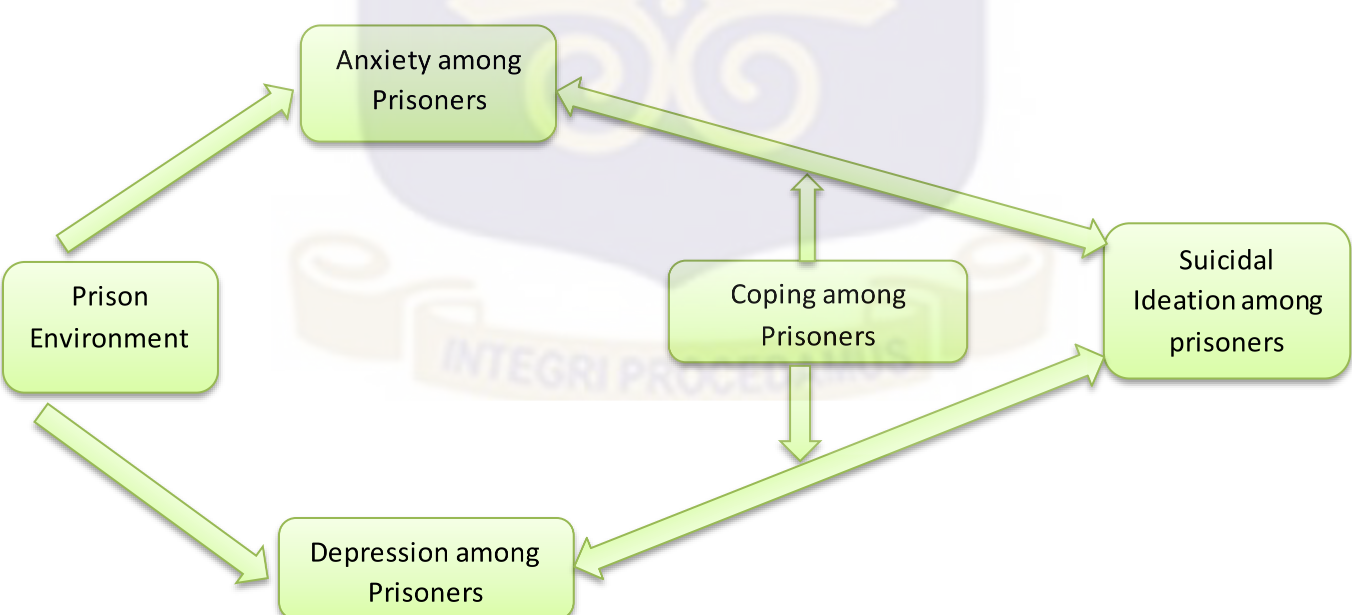
OPERATIONAL DEFINITION OF TERMS

- Higher educational level: prisoners with at least a senior high school certificate and those with tertiary education.
- Lower educational level: prisoners who have certificates of middle school, primary and junior high school.
- Longer sentence: prisoners who are serving more than a year.
- Short sentence: prisoners who are serving less than a year.
- Young prisoners: prisoners between the ages of 18 – 49 years.
- Older prisoners: prisoners who are above 50 years of age.

CONCEPTUAL FRAMEWORK

Figure 2.1: Hypothesised Model



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CHAPTER THREE

METHODOLOGY

INTRODUCTION

This Chapter deals with the processes adopted to collect data, this includes but not limited to research design, study location, population, sample and sampling technique, instruments/materials, procedure, reliability and validity of the fieldwork of this study.

RESEARCH DESIGN

The study used the sequential transformative mixed methods approach. Johnson, Onwuegbuzie& Turner (2007) defined mixed methods research as the type of research in which the researcher combines both qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breath and depth of understanding and corroboration. The mixed-method approach was selected because it has advantages of qualitative or quantitative research since the disadvantages of one research method (qualitative) is reduced by the use of another research method (quantitative).

The mixed method research approach also provides a full understanding of the phenomenon understudy through the use of both qualitative and quantitative methods. It is also seen as a good way to either develop or select a standardized questionnaire since it gives the researcher the room to use qualitative methods to explore and quantitative date to validate and establish reliability. In this accord, Cameron (2009) pointed out that, such mixed approach to research "offers an immediate and useful middle position philosophically and methodologically; it offers a practical and outcome-orientated method of inquiry that is based on action and leads, iteratively, to further action and the elimination of doubt; and it offers a method for selecting methodological mixes that can help researchers better answer many of their research questions" (p. 150).

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This particular study began with the qualitative exploration followed by a quantitative data collection and analysis. Following the approach outlined by Crewell and Plano Clark (2011), concepts and constructs were explored with qualitative data, which was followed by the use of the resulting qualitative findings to select an appropriate quantitative instrument. Qualitative data on prison environment stress was pulled together by organizing four (4) focus group discussions, 2 groups were made of only females and the remaining 2 were made up of males, with 5 participants in a group. They were asked 4 major questions which had other sub-questions. Questions included "What are your relationship with other prisoners like?", "As a prisoner what support do you feel other prisoners need?", "Would you say this prison is a safe place to be?" among others.

The quantitative instruments which measured coping, anxiety, depression and suicidal ideation was then administered to selected participants. These tests further explains the psychological turmoil prisoners go through as a result of the environment they find themselves in.

It is noteworthy however that, the mixed methods design was selected because the aim of the research was to explore how the environment of the prisoners affect their psychological wellbeing and then determine the rate at which prisoners experience psychopathological symptoms the quantitative data collection. The qualitative method was also a source of rich information that made the study more in depth. Most studies reviewed used either the qualitative or the quantitative methods, thus in using mixed method the gaps left by using only one research method was filled.

RESEARCH SETTING

The area under study is the Nsawam Medium Security (Male and Female) Prison; the largest Prison in Ghana, and most probably the whole of West Africa (Hagan, 2013). Its construction started in 1956 and was officially opened on 10th October, 1960. As a Medium Security Prison, it is reasonably fortified so much that the question of a successful internal escape is almost non-

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existent. According to Hagan (2013), the Ghana Prisons Service as established by the 1992 Constitution of Ghana is mandated to ensure the safe custody and welfare of prisoners and whenever practicable, undertake their reformation and rehabilitation. The Nsawam Medium Security Prison is established on a one (1) mile square plot of land located at the outskirts of the Nsawam Township in the Eastern Region of Ghana, and presently the only medium security prison in Ghana to undertake that constitutional mandate.

Also, the prisons ideal average capacity is seven hundred and seventeen (717), it now holds over three thousand (3,000) inmates making the prison a ware-house. Almost 60% of this number are remand prisoners, some with expired warrants. This prison was chosen because it has a very large population and results from this study would be able to give a general over view of the challenges prisoners across the country face as they try to go through their sentences. Since the research was in two folds, that is, the qualitative and quantitative studies, two sets of participants were selected form the population which included both male and the female prisoners.

POPULATION AND SAMPLE

The purposive sampling technique was used to select participants from the two sections of the prison (male and female). This method was used because the participants were selected based on specific purposes associated with the answering of specific research question and is also recommended for qualitative research (Teddlie & Yu, 2007). This sampling technique was also used because the aim of the research was to find out how the prison environment psychologically affects the prisoners. Thus, different category of prisoners (i.e. highly/less educated, convicted/remand, employed/unemployed) were purposefully targeted for this research. Again, participants who were willing and ready to take part in the research were targeted.

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The population was made up of prisoners from the Nsawam medium security (male and female) prison. A total of one hundred and seventy (170) participants were selected, one hundred and fifty (150) for the quantitative study and twenty (20) for the qualitative study.

For the qualitative aspect of the study there were four (4) focus groups. Two (2) of the groups were made up of males and the other two (2) were made up of females. Each group had a total of five (5) participants. Participants were included if they were eighteen (18) years and above and were willing to take part in the discussion.

For this present study, it as observed from the data analysis that more male prisoners than female prisoners were obtained as this is in the ratio 68.7:31.3 respectively. On the basis of age, more 33 – 40 year old prisoners were obtained as this is evident by 32.7%; and this was followed in descending order by 24 – 32 years (comprising 26.7%), 41 – 49 years (comprising 16.7%), 50 – 58 years (comprising 10%), 18 – 24 years (comprising 9.3%), 59 – 66 years (comprising 2.7%), and 67 – 75 years (comprising 2.0%). Furthermore, prisoners with skilled occupation were 38% as this was followed by 34.7% of unskilled persons, 16.7% of unemployed persons, and 10.7% of students. Moreover, there were more Christians (80.7%) than Muslims (14.7%) and persons of other religious affiliation (4.7%). Again, there were more prisoners who are single (46.7%) than those who are married (40.7%), divorced/separated (5.3%) and widowed (7.3%). In descending order of majority (length of stay in prison), there were 43.3% of prisoners who had stayed in prison for 1 – 5 years, 17.3% of 6 – 10 years, 16% of below 6 months, 14.7% of 6 – 11 months, 3.3% of 16 – 20 years and equal percentage (2.7%) of 11 – 15 years and 21 – 25 years.

Concerning the number of years convicted the greatest majority of prisoners had been sentenced to 11 – 15 years (24.7%), which was followed by 6 – 10 years (24%), 1 – 5 years (20.7%), 26 years and above (10%), remand (7.3%), 21 – 25 years (4.7%), 16 – 20 years (4%), 6 – 9 months (2.7%),

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and below 6 months (2%). The reason why most of the prisoners have been convicted was mainly due to robbery (28%), and this was followed in sequential order by defilement (24%), narcotics (28%), fraud (14.7%), murder (14%), and assault (4.7%). Most of these prisoners had education up to the JHS level (28.7%), as this was followed by those with SHS (28%), tertiary (15.3%), primary (12%), no education (10.7%), and middle school (5.3%).

Again, demographic analysis of qualitative sample showed that equal percentages – 50% each – of males and females were purposively obtained for the qualitative focus group discussions. Equal numbers of prisoners aged 25 – 32 years and 41 – 49 years – constituting 25% each – were obtained which makes that age group the highest; this was then followed by 20% of those aged 50 -58Years, 15% of those aged 33 – 40, 10% of those aged 18 -24, and 5% of those aged 67 – 75. On the basis of occupation, a greater number of prisoners used for the focus groups were skilled workers (45%) and this was followed in descending order by 30% of those who were unemployed, 15% of students and 10% of those who are unskilled. Most of the participants for the focus groups were Christians (90%) with very few (10%) being Muslims. 55% of these participants were single while 35% were married and 10% divorced/separated.

Moreover, 30% of these participants had stayed in prison for 1 – 5 years, while 25% had stayed for 6 – 10 years, with 25% between 11 – 15 years, 5% each of 16 – 20 years and 6 – 11 months, but just 5% of participants who have stayed below 6 months. Of these, 40% are to spend 6 – 10 years in prison, 25% between 11 – 15 years, 20% between 1 – 5 years, 10% for 21 – 25 years and 5% for 6 – 11 months. Furthermore, most of these participants had been imprisoned for robbery (45%) with 20% for murder, 15% each for assault and defilement and 5% for narcotics. Among these, 35% had their highest level of education being SHS, 30% as tertiary, 20% as JHS and 15% as middle school.

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INSTRUMENTS/MEASURES

Qualitative Interview Frame

For the qualitative research, the instrument used was an interview guide which was designed by the researcher to assist in the data collection process. For accuracy and validation of the interview guide, the Brislin translation method was used for translation. Through this method, the interview guide which was originally designed in English was translated to Twi, Ewe and Ga with the help of three Linguistic students who specialized in the respective languages from the University of Education, Winneba (Adwumako Campus). The questions were then translated back to English by seeking the assistance of tutors who taught the various languages. This was to guarantee that the meaning and understanding of the questions remained the same, which in turn ensured that the questions were able to measure what it was supposed to measure.

Demographic questionnaire, Depression Anxiety Stress Scale (DASS 42), COPE Inventory and Modified Scale for Suicidal Ideation (MSSI) were administered to the participants.

Quantitative Aspects

Demographic Questionnaire

This questionnaire was used to assess the following variables; gender, age, religion, highest level of education, marital status, occupation, length of stay in prison, number of years convicted and reason for imprisonment.

Depression Anxiety Stress Scale (DASS 42) (Lovibond & Lovibond, 1995)

The DASS (Lovibond & Lovibond, 1995) is “a 42 item self-reporting inventory that yields three factors, that is, Depression, Anxiety and Stress” and is made up of 14 items each. The measure proposes that physical anxiety (fear symptomatology) and mental stress (nervous tension and nervous energy) factor out as two distinct domains. The screening and outcome measure reflect the past seven days. Examples of items include, “I found myself getting upset over quite trivial things”, “I found it difficult to relax”, “I feel sad and depressed and “I was close to panic”. Each

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question is rated using 0 which indicates "did not apply to me at all", 1 indicates "applied to me to some degree or some of the time", 2 indicates "applied to me a considerable degree or a good part of the time" and 3 indicated "applied to me very much or most of the time". A total score of 0 - 9 for depression, 0 - 7 for anxiety and 0 - 14 for stress is indicative of a normal level of either three of the factors. A mild level of either three has a total score of 10 - 13 for depression, 8 - 9 for anxiety and 15 - 18 for stress. A score of 14 - 20 for depression, 10 - 15 for anxiety and 19 - 25 for stress indicates a moderate level of either three. Severe levels of depression, anxiety and stress show a score of 21 - 27, 15 - 19 and 26 - 33 respectively. A total score of 28 and above for depression, 20 and above for anxiety and 34 and above for stress is indicative of an extremely severe level of either three of the factors being measured.

Reliability of the three scales (depression, anxiety and stress) is considered adequate and test-retest reliability is also considered adequate with ".71 for depression, .79 for anxiety and .81 for stress" as used by Brown et al (1997). Internal consistency is shown to be high with Cronbach alpha values of .90 for depression, .80 for anxiety and .82 for stress (Brown et al. 1997).

COPE Inventory (Carver et al, 1989)

The COPE inventory (Carver et al, 1989) is a multidimensional coping inventory to assess the different ways in which people respond to stress. Five scales of four items each measure conceptually distinct aspects of problem focused coping (active coping planning, suppression of competing activities, restraint coping, seeking of instrumental social support). Five scales also measure aspects of what may be described as emotion-focused coping (seeking of emotional social support, positive reinterpretation, acceptance, denial, turning to religion) and three other scales which are argued to be less important measure coping responses on focus on and venting of emotions, behavioural disengagement and mental disengagement. Examples of items on the

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questionnaire include "I try to grow as a person as a result of the experience", "I discuss my feelings with someone", "I seek God's help" etc. Each item is answered on a four - point Likert scale ranging from 1 indicating "I usually don't do this at all", 2 which indicates "I usually do this a little bit", 3 indicating "I usually do this a medium amount" and 4 which indicates "I usually do this a lot".

Cronbach alpha for the 15 scales of COPE "range from .37 to .93 with the exception of mental disengagement," the remaining alphas are "all above .59 with the majority above .70 and the average being .79" (Carver et al, 1989).

Modified Scale for Suicidal Ideation (Miller et al 1986)

Modified Scale for Suicidal Ideation by Miller et al (1986) is an 18 item self-report measure used in measuring suicidal ideations of an individual. The purpose of this scale is to "assess the presence and absence of suicide ideation and the degree of severity of suicidal ideas." It has 13 items form the original Scale for Suicidal Ideation (SSI) and five (5) new items. Response on this scale is scored from 0 – 3. The total score ranges from 0 – 54. The MSSI has a Cronbach's alpha of .94. The scale measures three main factors, which are suicidal desires, preparation for attempt and perceived capability of making an attempt. Examples of items on the scale include, "over the past day or two have you thought about wanting to die?", "right now would you deliberately ignore taking care of your health?", "can you think of anything that would keep you from killing yourself?", "over the past day or two have you thought methods are available to you to commit suicide?" The scale is measured on a 4 point likert scale ranging from 0 (none) to 3 (strong).

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PROCEDURE

Introduction letter was taken from the Department of Psychology to the Prison Headquarters in Cantoments, Accra. Another introduction letter was given which was sent to the Nsawam Medium Security Male and Female Prison.

Prisoners Aged eighteen (18) years and above who met the inclusion criteria for the qualitative aspect of the study were selected, the purpose of the study was explained to them and their consent sought before discussion commenced. The discussion for one group took between forty-five (45) minutes to one hour.

For the quantitative study, there were two research assistants who were briefed about research and taken through the procedure and what was expected from them as research assistants. Participants who met the inclusion criteria were approached, the purpose of the study was explained and their consent to participate in the study was sought. Participants were assured of confidentiality by informing them that they were not required to write their names on the questionnaires. They were also assured of their ability to withdraw from the study at any point and that this would not be held against them in any way. After consent was given by signing or thumb printing, the questionnaires were administered to them to answer at their own pace. For those who could not read, the researcher explained each question to them in languages they understood and they ticked appropriate responses after the responses were also explained.

Collection of the data for both qualitative and quantitative was done within three (3) weeks. The data collected were then scored and analysed.

ETHICAL ISSUES

Ethical clearance was sought from the Ethics Committee for Humanities of the University of Ghana, Legon. Ethical issues are a very important consideration in conducting psychological research. These are moral codes that a researcher must ensure are observed when conducting

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research. A researcher is expected to follow these codes irrespective of the situation they find themselves in. In conducting this study, the ethical codes specified in the American Psychological Association (APA, 2010) were adhered to. These include informed consent, right to withdrawal, and confidentiality among others.

The researcher ensured that all participants understood the ethical considerations. The feasibility of the research design and the methodology were seriously considered. The ethical acceptability of the study in terms of ensuring that the benefits of conducting the research outweighed that costs of not as well as the possible harm it may cause to the prison population. It is important to note that no amount of coercion was used. In situations where a participant who had begun the study wanted to leave the incentive of a cake of carbolic soap was still given to that participant. The questionnaires stated the purpose of the study and promised participants that there were no risks to them for participating in this study. Participants of the study were assured of anonymity and confidentiality. With regards to this, participants were informed that the results of the study will remain strictly confidential and solely academic and as such their names will not be required. Consent from participants was sort before the collection of data and other ethical issues were explained.

PILOT STUDY

Piloting of the study was carried out three weeks prior to the real data collection so as to assess the feasibility of the data collection process. It was intended to test the reliability of the Depression Anxiety Stress Scale, Cope Inventory and the Modified Scale for Suicidal Ideation on a prison population. This pilot study took place in the Nsawam prisons. Thirty (30) participants were conveniently sampled from the Nsawam male and female prisons. In the end, the sample for the piloting included 18 males and 12 females. Ethical principles were adhered to in doing this

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piloting, especially, the ethics of informed consent. To ensure there was no overlap, participants for the pilot study were selected from prisoners who were not part of the educational unit in the prison.

The 42 item Depression Anxiety Stress Scale which was measured on a 4-point likert scale ranging from 0 (did not apply to me at all) to 3 (applied to me very much, or most of the time) yielded an overall cronbach alpha of .96 among the prison population. When the reliability of the various subscales were analysed, the Depression scale which is a 14-item scale yielded a Crobach alpha of .93, the Anxiety scale which is also a 14-itme scale yielded a Cronbach alpha of .97, and the Stress scale which is a 14-item scale yielded a Crobach alpha of .97.

Furthermore, the 60 item Cope Inventory which was measured on a 4-point Likert scale from 1 (I usually don't do this at all) to 4 (I usually do this a lot) produced an overall Cronbach alpha of .90. Again, the Modified scale for suicidal ideation which was also measured on a 4-point likert scale from 0 (none) to 3 (strong) has 18 items.

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CHAPTER FOUR

RESULTS

Quantitative Data Analysis

The statistical package for social sciences (version 20) has been used for quantitative analysis and thematic analysis for the qualitative findings. Hypothesis 1 made use of the independent *t* test since it sought to find a difference between one independent variable (gender) with two level – males and females – that is being measured on psychopathological symptoms – the dependent variable. The One-Way ANOVA was used to test hypothesis 2 since there is one independent variable (age) with seven levels – 18 – 24 years, 25 – 32 years, 33 – 40 years, 41 – 49 years, 50 – 58 years, 59 – 66 years, and 67 75 years – that is being measured on psychopathological symptoms – the dependent variable.

Similarly, hypothesis 3 was tested using the One-Way ANOVA since it tests one independent variable (education) with six levels – middle school, primary, JHS, SHS, Tertiary, and none – that is being measured on psychopathological symptoms – the dependent variable. Concerning hypothesis 4 the Two-Way ANOVA was used since it tests the effect of two independent variables (crime type and duration of sentence) on psychopathological symptoms – the dependent variable. Hypothesis 5 was tested using the Repeated Measures ANOVA since the hypothesis aimed at ranking the psychopathologies experienced by prisoners by severity.

Furthermore, hypothesis 6 was tested using the Pearson Product Moment Correlation since it seeks to establish a correlation between depression, anxiety, stress and problem focused coping and emotion focused coping.

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Qualitative Data Analysis

The qualitative measures were analysed based on Hycner's five steps for thematic analysis which includes *Step 1*: transcription; *Step 2*: bracketing and the phenomenological reduction; *Step 3*: Listening to the interview for a sense of the whole; *Step 4*: delineating units of general meaning; and *Step 5*: delineating units of meaning relevant to the research question (Hycner, 1985). It was used because it presents a detailed methodological procedure of making meaning out of qualitative data. It also allows for the presentation of concise themes that are relevant for summary of key ideas and recommendations.

PRELIMINARY ANALYSIS

To ensure that the data obtained from the study is feasible and good for analysis which would include ANOVA, MANOVA, correlation and regression analysis. According to Wells and Wollack (2003), essential preliminary tests to carry out should include but not limited to reliability, normality of data such as skewness and kurtosis.

Table 1: Cronbach Alpha's for Scales Used

Scale	**α**	**No. of Items**
Depression	.88	14
Anxiety	.85	14
Stress	.85	14
Cope Inventory	.86	60
Modified Scale for Suicidal Ideation	.85	18

From table 1 above, it can be observed that the reliability coefficients for the depression scale, anxiety scale, stress scale, cope inventory, and modified scale for suicide ideation scale as used for

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the analysis are beyond .80. This means that they are very high or good in reliability and for that matter could be used for testing the various hypotheses.

Table 2: Summary of the Means, Standard Deviation, Skewness and Kurtosis (N = 150)

Scale	Min	Max	Mean	SD	Skewness	Kurtosis
Depression	.00	40.00	17.95	9.90	.15	-.62
Anxiety	.00	41.00	16.87	9.27	.21	-.53
Stress	1.00	42.00	17.99	9.20	.21	-.48
Cope Inventory	89.0	218.0	153.36	22.59	-.06	.56
Modified Scale for Suicidal Ideation	.00	48.00	21.29	9.47	-.32	.97

Table 2 above shows results of the descriptive statistics for scales used. The skewness and kurtosis scores above shows that all the scores fall within the acceptable range of +1 and -1 which shows that they are normally distributed and thus satisfy the condition for the use of parametric tests. In addition to that, they do not deviate from the normality required for parametric testing.

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GENDER AND PSYCHOPATHOLOGICAL SYMPTOMS AMONG PRISONERS

Hypothesis 1 stated that, "Female prisoners would have significantly higher psychopathological symptoms than male prisoners."

Table 3 contains a summary of the independent *t* test

Table 3: Summary of Independent t test for gender and psychopathological symptoms among prisoners

Gender	N	Means	SD	*t*	df	*p*
Male	103	53.77	23.69	-1.89	148	.03*
Female	47	61.23	19.18			

* Significant at the .05 level of significance

An independent t test analysis indicates that a significant difference exist between male and female prisoners on their levels of psychopathological symptoms [t (148) = 1.89, p < .05]. The mean scores show that female (M = 61.23; SD = 19.18) inmates experience higher psychopathological symptoms than male inmates (M = 53.77; SD = 23.69). Therefore, hypothesis 1 which stated that, "Female prisoners would have significantly higher psychopathological symptoms than male prisoners" was supported

From table 3 above, it can be observed that the mean differences in psychopathological symptoms among Female (M = 61.23; SD = 19.18) and Male (M = 53.77; SD = 23.69) prisoners is significant since the *p* value (.03; df = 148) < .05 level of significance. Therefore, hypothesis 1 which stated that, "Female prisoners would have significantly higher psychopathological symptoms than male prisoners" is supported. This means that

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AGE AND PSYCHOPATHOLOGICAL SYMPTOMS AMONG PRISONERS

Hypothesis 2 stated that, "There would be a significant relationship between age and psychopathological symptoms among inmates." Table 4 contains a summary of the One-Way ANOVA.

Table 4: Summary of One-Way ANOVA for age differences in psychopathological symptoms among prisoners

Age	N	Means	SD	*F*	df	*p*
18 – 24 years	14	77.14	14.92	3.16	6,143	.006*
25 – 32 years	40	58.30	19.79			
33 – 40 years	49	49.82	24.30			
41 – 49 years	25	52.76	22.28			
50 – 58 years	15	57.20	19.58			
59 – 66 years	4	50.00	23.62			
67 – 75 years	3	62.00	28.35			
Total	150	56.11	22.58			

* Significant at the .05 level of significance

From table 4 – One-Way ANOVA table above, it can be observed that the mean differences among the various age groups for prisoners on their psychopathological symptoms was significant [$F(6, 143) = 3.16$, $p < .05$], thus confirming the hypothesis.

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Table 5: Summary of Post-Hoc Analyses for age differences in psychopathological symptoms among prisoners

Age	1	2	3	4	5	6	7
1. 18 – 24 years	-						
2. 25 – 32 years	-18.84	-					
3. 33 – 40 years	-24.33*	-8.48	-				
4. 41 – 49 years	-24.38*	-5.54	2.94	-			
5. 50 – 58 years	-19.94	-1.10	7.38	4.44	-		
6. 59 – 66 years	-27.14	-8.30	.18	-2.76	-7.20	-	
7. 67 – 75 years	-15.14	3.70	12.18	9.24	4.80	12.00	-

* Significant at the .05 level of significance

A follow up post-hoc analysis using bonferroni comparisons noted that the mean differences between prisoners aged 33 – 40 years and 18 – 24 years is significant with a mean difference of -24.33. This means that, prisoners who were aged 18 – 24 had significantly higher psychopathological symptoms compared to prisoners aged 33 – 40 years. Furthermore, the mean differences between prisoners aged 41 – 49 years and 18 – 24 years is significant with a mean difference of -24.38. This means that, prisoners who were aged 18 – 24 had significantly higher psychopathological symptoms compared to prisoners aged 41 – 49 years. However, the mean differences among other age groups were not significant. On the whole, it could be said that younger prisoners (18-24 years) in Ghana suffer more psychopathological symptoms than inmates within 33 and 49 years.

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EDUCATION AND PSYCHOPATHOLOGICAL SYMPTOMS AMONG PRISONERS

Hypothesis 3 stated that, "Inmates with higher level of education would have significantly lower psychopathological symptoms than those with other levels of education." Table 6 presents a summary of the One-Way ANOVA results for level of education of inmates and psychopathological symptoms.

Table 6: Summary of One-Way ANOVA for Educational differences in psychopathological symptoms among prisoners

Education	N	Means	SD	*F*	df	*p*
Middle School	8	42.75	27.11	2.75	5,144	.021*
Primary	18	61.50	23.49			
JHS	43	63.35	18.27			
SHS	42	54.90	22.99			
Tertiary	23	46.04	18.45			
No Formal Education	16	54.88	27.83			
Total	150	56.11	22.58			

* Significant at the .05 level of significance

From table 6 – One-Way ANOVA table – above, it can be observed that the mean differences among educational levels of prisoners who completed Middle School (M = 42.75; SD = 27.11), Primary (M = 61.50; SD = 23.49), JHS (M = 63.35; SD = 18.27), SHS (M = 54.90; SD = 22.99), Tertiary (M = 46.04; SD = 18.45), and No Formal Education (M = 54.88; SD = 27.83) on psychopathological symptoms is significant since P (.021; F = 2.75) < .05 level of significance. This means that the mean differences between at least two of the educational groups is significant.

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On this note, a Bonferonnic analysis was used for the Post-Hoc analyses among educational groups.

Table 7: Summary of Post-Hoc analyses among educational groups

Education	1	2	3	4	5	6
1. Middle School	-					
2. Primary	18.75	-				
3. JHS	20.60	1.85	-			
4. SHS	12.15	-6.60	-8.44	-		
5. Tertiary	3.29	-15.46	-17.31*	-8.86	-	
6. No Formal Education	12.13	--6.63	-8.47	-.03	8.83	-

* Significant at the .05 level of significance

From the Post-Hoc analysis – table 7 – it can be observed that the mean differences in psychopathological symptoms among prisoners who completed tertiary and JHS is -17.31 which is significant at the .05 level of significance. This means that, prisoners who completed only JHS suffer more psychopathological symptoms than prisoners who completed tertiary education. The differences in means of prisoners with other levels of education was not significant, because, their *p* values was greater than the .05 alpha levels.

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CRIME AND DURATION OF SENTENCE ON PSYCHOPATHOLOGICAL SYMPTOMS AMONG PRISONERS

Hypothesis 4 stated that, "There will be significant differences in psychopathological symptoms among inmates based on the type of crime committed and duration of sentence." Table 8 presents a summary of the Two-Way ANOVA results.

Table 8: Summary of Two-Way ANOVA for differences in psychopathological symptoms among prisoners based on the Crime committed and Duration of sentence (N = 150)

Source	**Sum of Squares**	***df***	**Mean**	**MS**	***F***	***P***	η^2
Psychological Symp.	168982.35	1	411.07	168982.35	360.13	.000*	.753
Crime Type	1472.47	5	17.16	294.494	.628	.679	.026
Duration of Sentence	3107.18	8	19.71	388.40	.828	.580	.053
Crime*Duration	13647.276	18	27.54	758.18	1.616	.067	.198
Error	55368.88	118	21.66	469.23			
Total	75944.29	150					

* Significant at the .05 level of significance

From table 8 above, it can be observed that the type of crime committed by inmates does not significantly predict their psychopathological symptoms (*MS* = 294.494, *P* = .679, η^2 = *.026*). Again, Duration of Sentence for inmates does not significantly predict their psychopathological symptoms (*MS* = 388.40, *P* = .580, η^2 = .053). Furthermore, the interaction between the type of crime committed by inmates and their duration of sentence was not significant (*MS* = 758.18, *P* =

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.067, η^2 =.198). This means that the hypothesis 4 which stated that, "There will be significant differences in psychopathological symptoms among inmates based on the type of crime committed and duration of sentence" is not supported.

PSYCHOPATHOLOGICAL SYMPTOMS AMONG PRISONERS

Hypothesis 5 stated that, "The inmates would report more depressive symptoms than the other psychopathological symptoms." A significant omnibus result level of .000 was computed which permitted the use of the Repeated Measures ANOVA result as presented in Table 9.

Table 9: Summary of Repeated Measures ANOVA for differences in psychopathological symptoms among prisoners

Psychopathologies	**N**	**Means**	**SD**	***F***	**df**	***p***	η^2
Depression	150	17.95	9.90	4.85	3,146	.003	.900
Anxiety	150	16.87	9.27				
Stress	150	17.99	9.20				
Suicidal Ideation	150	21.29	9.47				

Wilk's Lambda value = .906; α = .05

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Table 10: Summary of Post hoc Results for rank order and differences in psychopathological symptoms among prisoners

Psychopathologies	Depression	Anxiety	Stress	Suicidal Ideation
1. Depression	-			
2. Anxiety	-.43	-		
3. Stress	.68	1.12	-	
4. Suicidal Ideation	5.14*	5.57*	4.45*	-

* Significant at the .05 level of significance

From tables 10 of the Repeated Measures ANOVA and LSD Comparisons, it can be observed that the Repeated Measures analysis of variance on the psychopathological symptoms reported by inmates resulted in a significant F ratio $F\ (3,146) = 4.85$, $p < .003$, $\eta^2 = .900$. Since the results were statistically significant, the conservative LSD post hoc test was used to further examine the findings. The post hoc test comparisons show that the inmates reported higher levels of depression and this was followed in descending order by anxiety, stress and finally suicidal ideation. The effect size of $\eta 2 = .900$ is moderate. Based on that, the hypothesis 5 which stated that, “The inmates would report more depressive symptoms than the other psychopathological symptoms” is supported.

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RELATIONSHIP BETWEEN COPING STRATEGIES AND PSYCHOPATHOLOGICAL SYMPTOMS

Hypothesis 6 stated that, "Coping strategies would moderate the relationship between depression, anxiety and suicidal ideation." Table 11 presents a summary of the Hierarchical Multiple Regression results.

Table 11: Multiple Regression Analysis of the moderation role of Coping Strategies used by prisoners on the relationship between Depression and Suicidal ideation

Model	B	SEB	β	t	*p*-value
Step1					
Constant	17.586	1.57		11.183	.000*
Depression	.206	.077	.216	2.686	.008*
Anxiety	.219	.082	.214	2.666	.009*
Step 2					
Constant	11.494	5.326		2.16	.033*
Depression	.202	.077	.211	2.625	.010*
Anxiety	.214	.082	.209	2.610	.010*
Coping	.040	.034	.096	1.19	.236
Anxiety*Suicide	.342	.089	.361	3.88	.003*
Depression*Suicide	.366	.091	.380	3.97	.002*

Step 1: R = .216, R^2= .046, Adjusted R^2= .040, R^2 change= .046, $F_{(1, 148)}$ = 7.213, *p*= .008; Step 2: R = .236 R^2= .056, Adjusted R^2= .043, R^2 change= .009, $F_{(1\ 147)}$ = 1.433, *p*= .233. Significant at .05 level of significance

From table 11 above, the main effects of depression, anxiety and coping significantly accounted for 4.6% of variance in suicidal ideation (R^2 change = .043; p = .008). The interaction between coping and depression and anxiety insignificantly accounted for .9% variance in suicidal ideation

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(R^2 change = .009; p = .233). In step 1, we have coping and depression whereby coping positively affected depression (β= .216, p= .008) and anxiety (β= .214, p= .009) among prisoners.

In step 2, depression remained a significant predictor of suicide ideation (β= .211, p= .010) and anxiety remained a significant predictor of suicidal ideation (β= .209, p= .010) but coping remained insignificant (β= .096, p= .236). When the interaction effects of anxiety and suicidal ideation were compared, it was realized that there was a significant interaction effect (β= .361, p= .003). Again, the interaction effect between depression and suicidal ideation among prisoners is significant (β= .380, p= .002). This means that depression and anxiety are predictors of suicidal ideation whether or not the person uses coping techniques or not. Again, depression and anxiety independently predict suicidal ideations among inmates. In view of that, hypothesis 8 which stated that, "Coping strategies would moderate the relationship between depression and anxiety and suicidal ideation" is not supported.

SOURCES OF ANXIETY AND DEPRESSION AMONG THE PRISON POPULATION

The first research question asked, "What are the various causes of anxiety and depression among the prison population?" It aimed at exploring the various causes of anxiety and depression for both male and female prisoners. Below is a thematic analysis of 20 prisoners who constituted 4 focus groups with a group of 5 each for ten (10) males and ten (10) females. Participants were not less than 18 years with varying age, educational levels, marital status, religious backgrounds, years of stay in prison and reasons for imprisonment.

***Sleep Patterns*:** from the thematic analysis of data, it became evident that one of the causes of anxiety and depression was the ways the prisoners sleep. Below are the excerpts of the responses from the prisoners of the focus group discussion.

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"*…the way we sleep is terrible because there are plenty people in one cell, there is too much heat, some people too are sleeping on the floor, and in fact we are packed like sardines.*" (41-49 year old male, tertiary, married, Christian, , skilled, , 11-15 years, narcotics,)

"*…if we are sleeping now before some people will be preaching. The TV too will be making noise, other people too will be chatting and you cannot tell them to stop. If you try to tell them to stop they will shout on you and they will ask you if you are in your house…hhhhmmm.*" (67-75 year old male, unemployed, Christian, married, 6-10 years of stay, robbery, middle school leaver)

"*…here people steal a lot, so even if you are sleeping then you are thinking about how to keep your things so that no one can steal it, my sister if you are thinking like this how you can sleep? Also, when you are sleeping then people will be passing, some can step on you so you have to always be alert. My sister it is not easy oooo*. (25-32 year old male, unemployed, Muslim, single, 6-10 years of stay, defilement, JHS)

"*… and sometimes when we are sleeping, the officers could mount an emergency search. We all will have to wake up and [comply] with their [demands]. Because of my health condition, I can't sleep again when that happens and by the next day, my asthma would start.*" (Female, 50 – 58 years, skilled, Christian, Married, spent 16 – 20 years in prison, convicted for murder)

It can be realized from the excerpts that sleeping patterns in the prisons is a major cause of anxiety and depression among prisoners. Some claim it worries them psychologically while others attribute it to health problems. This comes as a result of heat from the cells, distortions from other inmates, interferences from prison officers among others, insecurity of possessions.

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Relationship with Others**:** findings from the data showed relationships with others as one of the causes of anxiety and depression among the prison population. Below are the excerpts of the responses of the respondents.

"*…here people don't have good intentions so you cannot make friends, if you have a problem and you tell somebody by the time you see everyone has heard of your problem. So it is better to just keep your problems to yourself*."(Female, 33-40 years, skilled, Christian, single, 1-5 years of stay, assault, JHS)

"*…the officers here too don't treat us with respect kraa, though some of them are good others too see us as chickens*." (Male, 25-32 years, student, Christian, single, 1-5 years of stay, assault, JHS)

"*…some of the prisoners who have been here for long or those who are free with some of the officers or those who don't respect anything will be bullying you, sometimes at the place we fetch the water, they can just come and cross the line or throw your water away and you can't say anything……hhhmmm*." (Male, 41-46, skilled, Christian, married, 16-20 years of stay, murder, tertiary)

"*…me I know what brought me here and so I try to mind my own business, people here don't want what is best for you so I also try to be in my corner. Some people don't also respect talk to people anyhow, so I try not to step on them because if they talk to me anyhow I will feel sad*." (Female, 50-58, skilled, Christian, married, spent 11-15 years in prison, murder, tertiary)

From the excerpts it can be seen that relationship with other prisoners and officers that causes some form of psychopathological distress to the prisoners. This distress stems from the way the officers treat them and how the prisoners treat each other. Prisoners who perceive themselves to be stronger bully the "weaker" ones , some officers do not also treat some prisoners with respect and

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this at the end of the day reduces their self-esteem which is likely to increase their levels of anxiety and/depression.

Limited Resources**:** from the thematic analysis of the data gathered from the focus group discussion, it became apparent that another cause of anxiety and depression of the prisoners was the limited resources available to them.

"*…my sister here the food is not good at all, I don't think dogs will even eat the food they give to us human beings. One day I saw the wing of a cockroach in the banku, I felt so sad for myself.*" (Male, 33-40 years, unemployed, Christian, single, 6-10 years of stay, defilement, SHS)

"*…the food is not enough, and it is not good, there isn't enough water for all of us, when you are sick and you go to the sick bay they don't have any proper medicines to give to you, some of the medicines they give to you have already expired mpo.*" (Male, 41-49, unemployed, Christian, single, 11-15 of stay, defilement, tertiary)

"*Here there is nothing to do, all they say on the TV they are doing is not true, if you come here your life is just wasted, during the day you are idle. The only active place is the school. If you are idle all you do is to think about your problem and this can also make you develop mental problems.*" (Male, 25 – 32 years, unskilled, Christian, Single, stayed in prison for 6 – 10 years, convicted for robbery)

Limited resources are also another cause of distress to the prison population. The inadequacy of food and certain basic amenities causes some psychopathological distress. As seen from the

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excerpts from the thematic analysis it can be seen that some prisoners face high levels of distress because of the unavailability or inadequacy of some of these resources.

***Worry about things left behind*:** from the thematic analysis of the data gathered from the focus group discussion, it became apparent that another cause of anxiety and depression of the prisoners was their worry about things left behind.

"*I haven't seen my children since I came to prison. I especially miss my daughter who was 1 year old when I was being sent to prison. She is growing without knowing [whom] her mother is. I don't even know who is caring for my children and I don't even know even if she would care for them very well*" (Female, 33 – 40 years, skilled, Christian, stayed in prison for 1 – 5 years, convicted for assault)

"*When I came here, first I was on remand, I thought I would not stay in prison, but I was convicted for 7 years so I had to leave the business for one friend of mine. Now I learnt he has [squandered] all my money and he use them to take care of his girlfriends. Sometimes I feel like all is over for me*" (Male, 50 – 58 years, skilled, Christian, Married, stayed in prison for 6 – 10 years, convicted for defilement)

"*… and what pains me so much is what my driver is doing now, he doesn't bring anything home for my wife but comes with complaints. He tells all his friends that the car belongs to him*" (Male, 33 – 40 years, unemployed, Christian, Single, 6 – 10 years, convicted for defilement)

"*I am the only child taking care of my mom. She will be 78 years next two months. She [is paralyzed from] stroke and I don't know who is caring for her now, even if she is still alive. My*

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condition now will make her cry to death. (Female, 41 – 49 years, unemployed, Christian, divorced/separated, spent 6 – 11 months in prison, convicted for robbery)

Worry about things left behind was a theme derived after the analysis. It can be realized that when the prisoners think or try to take stock of the things they may have left they usually go through so psychological distress, things left behind may include family, businesses, relationships, school among others. These may account for high levels of anxiety and depression and in some situations suicidal ideations.

How Conditions in Prisons affect Psychological Wellbeing of Prisoners

The second research question asked, "How does the conditions in the prison affect their psychological well-being?" It aimed at exploring from the prisoners' perspective Below is a thematic analysis of 20 prisoners who constituted 4 focus groups with a group of 5 each for ten (10) males and ten (10) females who were not less than 18 years with varying age, educational levels, marital status, religious backgrounds, years of stay in prison and reasons for imprisonment.

Insecurity: from the thematic analysis of the data gathered from the focus group discussion, it became apparent that insecurity is one of the ways by which the conditions of prisons affect the psychological wellbeing of prisoners. Below are the excerpts of the responses of the participants.

"*... whenever an airplane is flying over, my heart beats because I feel that if it should fall on us it will kill us all and I will not live to see my family again.*" (Female, 41-49 years, unemployed, Christian, divorced/separated, spent 6-11 months in prison, convicted for assault)

"*I always pray that there should be no fire outbreak. If such a thing should happen we may all die in here because before a cell is opened there should be over thirty (30) prison wardens. It would*

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keep long before such a number is gotten and by the time the thirty wardens come the fire will kill us all." (Male, 18-24 years, student, Christian, single, spent 1-5 years in prison, convicted for assault)

"Sometimes, I feel like killing myself before something dangerous like some deadly disease comes to affect us all. I became [insecure] during the Ebola [outbreak]." (Female, 25 – 32 years, skilled, Christian, single, spent 1-5 years in prison, convicted for robbery)

"*I only look up to God, if He doesn't do something, I might die before my time [to be released comes."* (Female, 33-40 years, unemployed, Christian, single, spent 1-5 years in prison, convicted for robbery)

From the excerpt above derived from the thematic analysis, it can be realized that, the prisoners feel or think that they are insure behind the walls of the prisons. These feelings and thoughts cause some panic or make them feel helpless about their condition.

Dependence: from the thematic analysis of the data gathered from the focus group discussion, it became apparent that dependence is one of the ways by which the conditions of prisons affect the psychological wellbeing of prisoners. Below are the excerpts of the responses of the participants.

"*I can't do anything of my own here. I only do what I'm asked to do. Even when you don't like it, you still have to do what the officers ask you to do because they are the ones who take care of you.*" (Female, 18-25 years, student, Christian, single, spent below 6 months in prison, convicted for robbery)

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"*… even the food we eat is determined by the prison officers. Sometimes, I become so tired of the food they bring, yet, I have to depend on what they give me to survive*" (Female, 25-32 years, unskilled, Christian, single, spent 6-11 months in prison, convicted for robbery)

"*I am allergic to certain foods, yet, they usually bring me what I don't like. I have no option than to accept what they offer me. We are not on our own here …*" (Female, 50-58 years, skilled, Christian, married, spent 11-15 years in prison, convicted for murder)

Depending on other people for daily activities causes psychological problems to some inmates. This condition may make some of them feel useless and helpless causing them to give up on doing anything.

Loss of Initiative and Purpose: from the thematic analysis of the data gathered from the focus group discussion, it became apparent that loss of initiative and purpose is one of the ways by which the conditions of prisons affect the psychological wellbeing of prisoners. Below are the excerpts of the responses of the participants.

"*All my life, I wanted to be an engineer. So I was working hard and doing some courses to get there until I was accused of murder at my work place because we had a quarrel. Now I have given up on that, I don't even know what to do again.*" (Male, 41-49 years, skilled, Christian, married, spent 16 -20 years in prison, convicted for murder)

"When I was teaching, I used to tell my students to plan their activities very well. Now, I can't even plan the day. I don't teach any longer; I am only taught what to do and what not to do. We

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wake up only to look up to the officers for what to do for the day. My only purpose is to wait for commands." (Male, 50 – 58 years, skilled, Christian, Married, stayed in prison for 6 – 10 years, convicted for defilement)

"*…I have come to realize that in life, prison and sickness are man's greatest enemies. When you are imprisoned, all your dreams shut down, you can't pursue them again, a similar thing happens when you are sick. Only God knows when it will all end."* (Male, 25-32 years, student, Christian, single, 1-5 years of stay, assault, JHS)

It can be realized from the excerpts that loss of initiative and purpose in the prisons is a condition that causes anxiety and depression among prisoners. Some claim it worries them psychologically while others attribute it to health problems. This comes as a result of not being able to do what one wants to do and at a particular time or certain hindrances that are in place due to the system or structure of the prison.

Lack of Self-Acceptance: from the thematic analysis of the data gathered from the focus group discussion, it became apparent that lack of self-acceptance is one of the ways by which the conditions of prisons affect the psychological wellbeing of prisoners. Below are the excerpts of the responses of the participants.

"*… when I look back at things, sometimes I laugh and burst into tears. Today, I am nobody because everyone is nobody here. I live my life like a slave for my own good*". (Female, 41 – 49 years, unemployed, Christian, divorced/separated, spent 6 – 11 months in prison, convicted for robbery)

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"*I still can't believe that I am here with all these restrictions. We can't even keep phones for ourselves and there are many things we can't possess. We can't even be with our friends and the things we care about. ... Sometimes I wonder if we are humans or animals.*" (Male, 25 – 32 years, unskilled, Christian, Single, stayed in prison for 6 – 10 years, convicted for robbery)

"*... a friend came to visit me the last time. She just couldn't say a word for the first five minutes. She watched me sadly and said, Oh! You of all people, this is how life has treated you. Now I can see that I've grown lean, and I'm not the happy person I once was. I spent all my money on this case at first but now I wonder if I am capable to start life all again.*" (Female, 50 -58 years, skilled Christian, divorce/separated, spent 6-10 years in prison, convicted for robbery)

"*I can't believe I found myself here. People have said all sort of bad things to me. I don't know if I am any good. ... I keep asking God if he has forgiven me of my sins. One mistake can cause your whole life to change over here....*" (Female, 25-32 years, unskilled, Christian, single, spent 6-11 months in prison, convicted for robbery)

Lack of self-acceptance was a theme derived after the analysis. It can be realized that when the prisoners try to look at themselves through their previous lenses they usually go through so psychological distress. They sometimes look back and cannot believe they have ended up in a place where it looks like there is no hope. These may account for high levels of anxiety and depression and in some situations suicidal ideations.

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SUMMARY OF RESULTS/FINDINGS

Key findings of this study are:

- Female prisoners experience significantly higher psychopathological symptoms than male prisoners.
- There are age differences in psychopathological symptoms among prisoners such that, prisoners who were aged 18 – 24 had significantly higher psychopathological symptoms compared to prisoners aged 33 – 40 years. Again, prisoners who were aged 18 – 24 had significantly higher psychopathological symptoms compared to prisoners aged 41 – 49 years.
- There are differences between prisoners of various educational levels and their psychopathological symptoms, such that, prisoners who completed only JHS suffer more psychopathological symptoms than prisoners who completed tertiary education.
- Duration of sentence and crime type does not predict significant differences in psychopathological symptoms among prisoners.
- Among the symptoms of psychopathology, prisoners experienced more of depression than any other.
- Coping strategies used by prisoners does not moderate the relationship between depression levels of prisoners and suicidal ideation.
- The causes of anxiety and depression among the prison population include poor or frequently disturbed sleep patterns; negative relationships among fellow inmates and

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prison officers; limited resources such as water, food, health-care facilities; and worry over things left behind such as family, friends, and material resources.

- The prison conditions make the prisoners insecure and dependent rather than self-reliant. More to that, it has contributed to prisoners' loss of initiative and purpose as well as a lack of self-acceptance.

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CHAPTER FIVE

DISCUSSION, RECOMMENDATION AND CONCLUSION

INTRODUCTION

The present study investigated anxiety, depression and suicidal ideation among prisoners in Ghana using the sequential mixed method. To achieve the objectives of the study, measures such as the depression anxiety stress scale, Cope scale and suicidal ideation scale were used to measure depression, anxiety, stress, emotion-focused coping, problem-focused coping, and suicidal ideation among male and female prisoners. Four independent focus groups were used from the male and female prisons to investigate the causes of depression and anxiety among prisoners as well as how the prison environment affects the psychological wellbeing of prisoners. This qualitative aspect was achieved through open-ended questions pertaining to anxiety, depression and psychological wellbeing among prisoners.

PSYCHOPATHOLOGICAL SYMPTOMS AMONG PRISONERS

In this regard, earlier work by Senol-Durak and Gencoz (2010) who examined factors associated with the symptoms of depression and anxiety among male Turkish prisoners by emphasizing a life crisis and personal growth model perspective reported that both symptoms of depression and anxiety had significant positive correlations with experienced stress and locus of control for both symptoms of depression and anxiety. These researchers were critiqued for not examing differences in gender since in prisons males and females are housed differently with possible different situations; one of the challenges the present study sought to address. The finding from the present study indicated that female prisoners experience significantly higher psychopathological symptoms than male prisoners. This finding, however, contradicts previous work by Shinkfield et al. (2009) who reported that there was no significant main effect for gender with respect to the

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number of physical ill- health conditions or mental ill-health conditions. This definitely is not supported by the current findings. One interesting finding from this study in this regard that fills the gap in knowledge in this regard is the fact that, female prisoners experience significantly higher psychopathological symptoms than male prisoners. This suggests that, interventions to remedy psychopathological symptoms among prison populations must be very keen on females to achieve success. In the course of the study, it was found that a positive correlation exists between depression and anxiety levels as Senol-Durak and Gencoz (2010) reported.

Furthermore, it was also found that, there are age differences in psychopathological symptoms among prisoners such that, prisoners who were aged 18 – 24 had significantly higher psychopathological symptoms compared to prisoners aged 33 – 40 years. Again, prisoners who were aged 18 – 24 had significantly higher psychopathological symptoms compared to prisoners aged 41 – 49 years. Comparing the findings of this study to that of Shinkfield et al. (2009) who reported that 52% of participants had received physical health treatment in prison and 68% of participants had received mental health treatment in prison yet mental ill-health conditions were high among inmates irrespective of their previous educational status or age differences.

Moreover, in the course of this present study, it was observed that there are differences between prisoners of various educational levels and their psychopathological symptoms, such that, prisoners who completed only JHS suffer more psychopathological symptoms than prisoners who completed tertiary education. This does not support the findings of Shinkfield et al (2009) who examined co-morbidity of conditions of ill-health and substance use with depression and anxiety among prisoners. These researchers found that, mental ill-health conditions were common among prisoners, with one in three prisoners reporting at least one current diagnosed mental ill-health

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conditionAmong these, they found that mental ill-health conditions were high among inmates irrespective of their previous educational status. It is so alarming to know that conditions in the prisons allow for medical services weekly, with no concerns to psychological interventions. This is especially worse since this study found suicidal ideation among prisoners.

This is as a result of the psychopathological symptoms such as depression that exists among them. For a fact, prisons are meant to be reformative not "deformative," so finding that mental health issues are not priorities for prisoners in Ghana unlike Shinkfield et al.'s findings could be unbecoming. It even becomes alarming when Shinkfield et al.'s report that pre-release period is, potentially, a time of heightened depression and anxiety for some prisoners and not necessarily the time spent in jail is brought to the fore. In support of Shinkfield et al.'s findings, factors such as duration of sentence and crime type did not produce significantly different impact on psychopathologies. Thus, attempts to provide psychological interventions for prisoners should also target inmates who are yet to be released and rejoin the community.

Results from this study also indicated that, duration of sentence and crime type did not predict significant differences in psychopathological symptoms among prisoners. This means that, inmates suffer psychopathological symptoms irrespective of whether the crime they committed. Again, these inmates suffer psychopathological symptoms irrespective of how long they would be in the prisons. In this regard, Senol-Durak and Gencoz (2010) reported that, prison type was significantly related to anxiety symptoms and crime type. Again, prison-life stress was significantly related to locus of control, crime type, and time spent in prison indicating higher level of stress experienced by the organized crime prisoners having external locus of control and living in maximum security prisons. But this present study in Ghana revealed that, duration of sentence

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and crime type did not predict significant differences in psychopathological symptoms among prisoners. Why could this be so? The qualitative findings discussed later would dilate more on this. However, it must be noted that, this finding is not claiming that duration of sentence and crime type does not affect psychopathological symptoms that prisoners face. Instead, the measures of these variables and analysis reveals that, the various levels of duration of sentence (such as remand prisoners, below 6 months, 6-11 months, 1-5 years, 6-10 years, 11-15 years, 16-20 years, 21-25 years, 26 years and above) and crime type (such as assault, defilement, fraud, murder, narcotics, and robbery) does not determine that an individual would experience more psychopathological symptoms than other prisoners. Simply put, these are not categorical basis for determining which inmates would suffer more or less of psychopathological symptoms.

Again, this therefore suggest that among the prisoners, irrespective of whether the prisoner or Ghanaian society classifies some crimes as bigger or smaller, some duration as long or short, the psychopathological symptoms experienced by relatively all inmates is similar. The reason for this therefore as would be discussed under prison conditions and psychological wellbeing could be due to the relatively similar conditions experienced by inmates in prisons.

Theoretically, the transactional model of stress claims that the person (which in this case is the inmate) and the environment in which they find themselves play a transactional role in stress experience. According to this model, the person and the environment joins together, to form new meanings through cognitive appraisal processes - evaluation of the significance of what is happening in the person-environment relationship. In this wise, a situation in the prison can be appraised as irrelevant, benign-positive, or stressful, as the result of primary appraisal, while in terms of the stake a person has in a stressful encounter, the situation can be appraised as

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challenging, threatening, or as a harm/loss. Due to this appraisal, prisoners' appraise their relationship with fellow inmates, relationship with prison officers/wardens, limited resources and things left behind in a negative light, and that accounts for the depression, anxiety and stress they experience.

In this regard, Schwarzer (2001) highlighted that the prisoner evaluates whether he or she has the competences, the social support, and any other kind or resources to deal with stressors and to re-establish equilibrium between person and environment. This assessment determines whether they would experience psychopathological symptoms or not.

COPING STRATEGIES AND SUICIDAL IDEATION AMONG PRISONERS

This study found among the inmates that, depression was the most experienced psychopathological symptoms. This suggests that any intervention should target depression more seriously. However, coping strategies used by prisoners does not moderate the relationship between depression levels of prisoners and suicidal ideation. This is because the coping strategies used by inmates are ineffective to help them deal constructively with their problems.

Kirchner et al. (2008) in this regard showed that, during imprisonment the appearance of deliberate self-harming (DSH) behaviours is frequent among prisoners. According to Brooker et al. (2002), nearly 30% of offenders have engaged in some form of DSH during their incarceration which is highly attributable to the high degree of stress that imprisonment generates (Paulus & Dzindolet, 1993). In the course of the study, it was found that depression, anxiety and stress symptoms are high among prisoners in the Ghanaian sample. Further on that, depression levels influenced suicidal ideation. Liebling (1992) explained that, the high degree of stress experienced by prisoners is reflected in a visible increase in self-harming behaviours and attempts to commit

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suicide. In view of this, Kirchner et al. (2008) who found an important association between coping style and self-harm risk during imprisonment explained that prisoners at higher risk were the ones that used both avoidance coping over the average and approach coping below the average.

Punamaki et al. (2008) who contributed to our understanding of the unique and universal coping characteristics and function, and mental health among former political prisoners highlighted that, the fate of these political prisoners communicates a dilemma of committed and active persons ending up in prison where survival may demand passive and submissive coping strategies, and refrain from using active coping. Indeed, this supports the present study since the Ghanaian sample prisoners actually used more of emotion-focused coping than problem-focused coping or active coping. The qualitative analysis revealed that, these prisoners even become dependent on others in the prison yard and that could account for their failure to use problem-focused or active coping. In this regard, Ayers et al. (1996) pointed that, active coping is successfully used by individuals who are independent and self-efficacious.

Refraining from using active or problem-focused coping but depending on others could aptly explain the presence of suicidal ideation among the prison population as this was supported by Larney et al. (2012) who surveyed the prevalence and correlates of suicidal ideation and suicide attempts among prisoners. According to these researchers, lower education levels, childhood experiences of out-of-home care, harmful alcohol use and regular illicit drug use in the 12 months prior to incarceration were significantly associated with increased probabilities of lifetime suicidal ideation. In support of that, the present study found that there are differences between prisoners of various educational levels and their psychopathological symptoms, such that, prisoners who completed only JHS suffer more psychopathological symptoms than prisoners who completed

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tertiary education. It could be that inmates who completed tertiary education have developed better strategies of coping than those with lower forms of education as Larney et al. (2012) postulated.

Moreover, this study found no moderating effect of coping strategies on suicidal ideation in the face of depression. In support of this, Punamaki et al. (2008) accounted that, none of the coping styles and strategies could protect prisoners' mental health from negative impact of trauma, whether imprisonment or other military trauma. This suggests therefore that the coping strategies used by the prison population are not good enough to help them deal with their psychopathologies. It would therefore require psychological intervention to help them relive a better experience of psychological wellbeing.

These findings fit with coping theories, which postulates that avoidance coping is related to worse psychological adjustment than that of approach coping with better adjustment (Seiffge-Krenke, 2000). This findings fits in with explanation of the transactional stress model as explained above. Using the transactional stress model to explain the coping strategies and suicide among prisoners, it was evident that prisoners do not usually rely on active problem solving due to the fact that (with this theory in view) they do not see themselves as having the requisite capabilities for it.

Reasons for this could be due to the fact that, problem- focused coping has been associated with reduced depression and the reduction in concurrent distress (Menaghan, 1982; Mitchell, Cronkite, & Moos, 1983). On the contrary, emotionally- focused coping, which often entails avoidance-oriented coping (e.g., denial) has been generally associated with general distress, more depression, and the increase of future problems. Similarly, Holahan et al. (1996), on the adaptive function of approach versus avoidance oriented coping in human adaptation, remarked that, clinical

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depression was related to the use of avoidance-oriented coping, such as emotional discharge, self-consolation, and distraction. In the context of physical illness, they even explained as was found in this study that avoidant forms of coping, such as denial, have been found to be detrimental in the longer term after a health crisis.

Furthermore, the three-step theory highlights that development of suicide ideation and progression from ideation to suicide attempts should be viewed as distinct processes with distinct explanations. The theory is relatively parsimonious in that, suicide ideation and attempts are explained in terms of just four factors: "pain, hopelessness, connectedness, and suicide capacity." From the study, it was apparent that most of the prisoners expressed pain and hopelessness being in the prison environment.

According to the development phase of the three-step theory, if someone's day-to-day experience of living is characterized by pain, this individual is essentially being punished for living, which may decrease the desire to live and, in turn, initiate thoughts about suicide. Different sources of pain can all lead to a decreased desire to live. These may include "physical suffering" (Ratcliffe, Enns, Belik, & Sareen, 2008), "social isolation" (Durkheim, 1897/1951), "burdensomeness and low belongingness" (Joiner, 2005), "defeat and entrapment" (O'Connor, 2011), "negative self-perceptions" (Baumeister, 1990), and myriad other aversive thoughts, emotions, sensations, and experiences. Since prisoners suffer physical isolation, dependence, entrapment and stress, coupled with depression, they become inclined toward suicidal ideation.

According to the three-step theory, connectedness is another factor to consider about suicide. Connectedness in this regard refers to one's attachment to a job, project, role, interest, or any sense of perceived purpose or meaning that keeps one invested in living. Connectedness matters,

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because even if someone feels pain and hopelessness and considers suicide, the suicidal ideation will remain moderate (e.g., "sometimes I think I might be better off dead") rather than strong (e.g., "I would kill myself if I had the chance") as long as one's connectedness to life is greater than one's pain. In this case, once a prisoner's connectedness is destroyed in the face of pain, loneliness, frustration, isolation and the like, they become highly inclined towards suicide.

Furthermore, Joiner (2005) argues that, people are biologically and evolutionarily wired to avoid pain, injury, and death. It is therefore very difficult for people to attempt suicide, even in the presence of strong suicidal ideation. Yet, when prisoners for example have crossed the first step of pain and hopelessness and the second step of connectedness, they can only commit suicide when they come to realize that they are in a capacity to do so. The assessment of capacity in this case includes the fact that they have available means of committing suicide and a willingness to do so. In the prison yard, it was observed that the prisoners have some access to working instruments like knives, water, fire, hammer, needles, scissors and the like. Having crossed the first two steps of the theory, the prisoners in this wise can attempt suicide if they see these working instruments as opportunities to do away with their life and have the willingness to do so.

PRISON CONDITIONS AND PSYCHOLOGICAL WELLBEING

The qualitative analysis revealed that the causes of anxiety and depression among the prison population include poor or frequently disturbed sleep patterns in the prison wards; negative relationships among fellow inmates and prison officers; limited resources such as water, food, health-care facilities; and account of things left behind such as family, friends, and material resources. On how conditions in the prisons affect the psychological wellbeing of inmates, the qualitative analysis revealed that these conditions make the prisoners insecure and dependent

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rather than self-reliant. More to that, it has contributed to prisoners' loss of initiative and purpose, as well as a lack of self-acceptance.

In relation to this, Berto (2014) reported that, physical settings has an influence on coping with stress and psychological wellbeing in that, exposure to natural environments aid recovery from physiological stress and mental fatigue" since it produces a calming response in us. The poor or frequently disturbed sleep patterns in the prison wards; negative relationships among fellow inmates and prison officers; limited resources such as water, food, and health-care facilities that was discovered in the study among the prison population are effects of prisoners being taking out of a natural environment. This indeed explains their depression, anxiety and stress levels including psychological wellbeing. During this study, it became obvious that, the restorative values of natural and outdoor centers are aspects of life that prisoners in Ghana do not get. They are deprived of natural environment and outdoor activities but put in an area of high walls and medium or high security measures with limited resources. This in Berto's view contributes immensely to "psycho-physiological stress" which is an impediment to psychological wellbeing.

As an addition to knowledge in the field of prison life and psychological wellbeing, the qualitative aspect of this study has revealed the various factors or aspects of natural living which are necessary for stress-reduction and psychological wellbeing. This can be discerned by reversing the factors from the thematic themes obtained from prisoners which then would include good sleep patterns, good relationship with others, available resources such as water, food, and health-care facilities as well as security of things that belongs to the individual (example, family and properties).

Comparatively, these findings support the findings of Picken (2012, p.12) who investigated "the coping strategies, adjustment and well-being of male inmates in the prison environment" that

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conditions in the prisons really have a dichotomous effect on the psychological wellbeing of prisoners. It also supports McNulty and Huey's (2005, p.490) findings that the "depriving conditions in the prisons such as overcrowding and conflicts over limited resources makes the inmates feel psychologically deprived from the outside world, lonely and dependent on others even with suicidal tendencies."

However, this finding from the present study partly supports Yang et al.'s (2009) claim that the most damaging factor to an inmate is the loss of their life in the outside world and relations with family, rather than the actual regime or conditions of imprisonment. To Yang et al., impediments of psychological wellbeing to inmates is not significantly due to the conditions of prison service but to external factors or anxieties. Indeed, this study found that one paramount cause of psychopathological symptoms among inmates is the account of things lost such as loss of contact or good relationship with family and friends who are external of the prison environment. But, the findings of this present study point to the fact that the conditions in the prison yard such as conflicts over limited resources such as water, inadequate availability of food and health-care facilities are indeed problematic to the inmates and significantly influences their psychopathological symptoms.

LIMITATIONS OF THE STUDY

Like many researches, this study was not without limitations. Many steps were taken to avoid some apparent factors that could have compromised the findings of the study. Nevertheless, some situations were encountered in the course of the study that needs to be identified or pointed out in order to guide future studies. These limitations however do not undermine the validity of the findings of this study. First of all, the researcher used purposive sampling technique instead of random sampling. By that, not all prisoners especially the males had equal chances of being

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selected to take part in the study. The purposive sampling technique became appropriate however, because the prison had certain restriction as to the movement of visitors within the prison yard, thus the researcher could only target prisoners within the educational unit of the prisons.

Secondly, some respondents grew tired in the course of the study. Though they were permitted to drop at any point in the study, some grew reluctant along the line but continued to respond to the end. They felt that they were obligated to finish responding to the questionnaire else they may be punished. Others also thought that depending on the answers given help with their various cases would be received, so some responses were exaggerated than what the reality was.

Also this research was limited as it failed to take into account the various prisons across the country and only looked at the Nsawam prisons. The environment was also another limiting factor to the study. The presence of the prison wardens intimidated some of the prisoners and so they felt reluctant to respond to certain issues such as suicide, as it was said that should the prison officers hear them they wold be punished for conceiving such a thought.

RECOMMENDATIONS FOR RESEARCH AND THEORY

Researches about prison services in Ghana from psychologists are very scanty. Yet, psychologists play an invaluable role in prison reformative service. It is imperative that more researches be carried out to boost the services of the prison service that appears to have been neglected by psychologists in Ghana. It would be a wake-up call if researchers investigate factors and effective ways to make prison services reformative to inmates. Furthermore, it would be necessary to carry out research in the area of the depression, anxiety, stress and coping among wardens in Ghana.

This research is very vital to do since the effectiveness of the prison service depends on the activeness of these officials. The officials have to stay with, monitor, protect and discipline

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inmates who have come with a variety of personality issues, personal and interpersonal issues. Besides, these wardens are not permitted to maintain contact with the social world while on duty; for example, they are not permitted to possess or use cellular phones while at work. These are factors that could impact on the zeal and effectiveness of wardens and would need to be addressed through empirical study.

Recommendations for Policy and Practice

This research has found that the prisoners experience a great deal of psychopathological symptoms such as depression, anxiety, and stress and this contributes to their suicidal ideation. It therefore means that the prisoners need psychological intervention in that regard. It is really unbecoming to note that the prisoners have a medical team that sees to their physical health at regular intervals, yet they have no psychologists to help with their psychological wellbeing to promote their mental health. For a fact, this move is so essential since our livelihood depends on an interaction between our mental health and physical health; thus neglecting one aspect of the health process makes living incomplete.

Another reason that makes this vital move necessary is due to the fact that the prison environment is meant to be a “reformative process,” not “deformative process.” For that matter, it is expected of the prison service that persons who pass through it come out better than how they used to be. This goal would not be realized if the service provides only for the physical needs of prisoners. Indeed, such an activity would even derail the purpose of the prison since the inmates are there not because they cannot provide for their own physical needs but they are there because they need a reformation. Reformation is a factor of mental processes, emotional and behavioural changes – elements that are best dealt by psychologists.

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What is more, Shinkfield et al. (2010) reported that attempts to provide psychological interventions for prisoners should also target inmates who are yet to be released and rejoin the community. This is so necessary because such ones are going to embark on tested reformative process in the natural environment and could be doing so with mixed feelings, trepidation, anxiety, and as Shinkfield et al. highlighted, stigma from the social world. This intervention from the study also has to include better means of coping such as strengthening their use of problem-focused or active coping. This has been demonstrated to be usually better than emotion-focused coping which even worsens the psychopathologies and suicidal ideation experienced by the prisoners. This would further prevent the prisoners from rising through the stages of the three-step theory of suicide. After all, a good reformative process should result in life and not death of a person. For a fact, this process would not only benefit the prisoners but help the prison service achieve its goal and contribute to vicarious learning from people in the social world.

The findings of this study indicate that, psychologists are not the only professionals who are needed to make the reformative process complete. It appears that every person has a role to play in the success of the process: tailors, electricians, educationists, social workers, and many others are all needed. It is therefore the role of everyone to make this process effective for the betterment of the nation.

CONCLUSION

By this far, the present study has investigated anxiety, depression and suicide among prisoners in Ghana. Fundamental findings from this study include the fact that, high levels of depression, anxiety, stress and suicidal ideation exists among prisoners in Ghana. Of the male and female inmates, females experience greater proportions of psychopathologies than males. Besides, the coping mechanisms used by prisoners do not help them deal effectively with their

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psychopathological issues. Remarkably, the causes of these psychopathological issues among prisoners are partly due to internal conditions in the prisons such as relationship with inmates and officers, inadequate resources such as water, food, and health-care facilities, and external conditions such as account of things lost or left behind such as family, friends, and properties.

In the course of the study, these findings were discussed in relation to literature reviewed and most were supported and explained in terms of local conditions. Furthermore, the findings were supported and were explained by the transactional stress model and the three-step theory of suicide. Another thing worth reckoning is the fact that, this study indeed filled in gaps in knowledge pertaining to studies about prison services in the lens of psychology. Despite the few limitations of the study such as weariness on the side of some participants and the non-probability technique of sampling, this study has immeasurable implications to the prison service and research fields.

To this end, it is so vital to note that the prisoners have a medical team that sees to their physical health at regular intervals, yet they have no psychologists to help with their psychological wellbeing to promote their mental health. Since our livelihood depends on an interaction between our mental health and physical health it is imperative to provide psychological intervention to inmates since the prison environment is meant to be a "reformative process," not a "deformative one." For that matter, it is expected of the prison service that persons who pass through it come out better than how they used to be thus achieving the goals of the prison service. Reformation is a factor of mental processes, emotional and behavioural changes – elements that are best dealt by psychologists. Yet, the betterment of the prison service should not be left in the hands of a few; if professionals of all sought come together to help in a variety of ways including, teaching, research

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and practice, they would benefit not only the inmates, but also the prison service, Ghana, and themselves immensely.

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APPENDICES

Appendix A: Letter of Introduction from Prison Service

In case of reply the number and date of this letter should be quoted

HEADQUARTERS
Ghana Prisons Service
P. O. BOX 129, ACCRA
GHANA WEST AFRICA
TEL: 760093/760094
Fax: 233-302-772865

Email: info@ghanaprisons.gov.gh

Your Ref. No.........................

My Ref. No. OC/1082/V.19/2016/924

Date 25th February, 2016

RE: LETTER OF INTRODUCTION
MS. DZIEDZORM ABRA ADZAM

This is to acknowledge receipt of your letter dated 12th February, 2016 and to inform you that the above mentioned, **M. Phil Clinical Psychology Student of Unuiversity of Ghana** has been granted permission to collect data at the **Nsawam Male and Female Prisons** for her thesis on the topic: **"Anxiety, Depression and Suicidal Ideation Among Prisoners in Ghana".**

2. The student is directed to report to the **Regional Commander and Officer-In-Charge** Nsawam Male Prison and Nsawam Female Prison respectively for directives prior to the commencement of her thesis.

3. She is also required to submit a **copy** of her **project work** to this office for record purposes upon completion.

4. The **Regional Commander** and **Officer-In-Charge** of both **prisons** are to assist the student to enable her obtain the requisite data without compromising security.

5. Find attached a copy of **Ethical Clearance** which expires on **07/05/16** for your **perusal.**

6. Accept for your information.

K K KPELI
DIRECTOR OF PRISONS/HRD
For: AG. DIRECTOR-GENERAL OF PRISONS

THE HEAD OF DEPARTMENT
UNIVERSITY OF GHANA
DEPARTMENT OF PSYCHOLOGY
LEGON

Cc:
1. MS. DZIEDZORM ABRA ADZAM
2. THE REG. COMMANDER/OIC, NSAWAM MALE
3. OFFICER-IN-CHARGE, NSAWAM FEMALE

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Appendix B: Ethical Clearance

UNIVERSITY OF GHANA
ETHICS COMMITTEE FOR THE HUMANITIES (ECH)
P. O. Box LG 74, Legon, Accra, Ghana

My Ref. No ....

3rd December 2015

Ms. Dziedwom Abra Adzam
Department of Psychology
University of Ghana
Legon

Dear Ms. Adzam,

ECH 027/15-16: ANXIETY, DEPRESSION AND SUICIDAL IDEATION AMONG PRISONERS IN GHANA

This is to advise you that the above reference study has been presented to the Ethics Committee for the Humanities for a full board review and the following actions taken subject to the conditions and explanation provided below:

Expiry Date: 7/05/16
On Agenda for: Initial Submission
Date of Submission: 20/08/15
ECH Action: Approved
Reporting: Quarterly

UG/ISSER/ECH VALID UNTIL 07 MAY 2016 APPROVED DOCUMENT

Please accept my congratulations.

Yours Sincerely,

Rev. Prof. J. O. Y. Mante
ECH Chair

CC: Prof. C. C Mate- Kole, Department of Psychology

Tel: +233-303933866 Email: ech@ug.edu.gh | ech@isser.edu.gh

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Appendix C: Quantitative Scales

Appendix C1: Demographic Questionnaire

INITIALS……………… GENDER…………………. AGE………………

RELIGION…………………………………………………

HIGHEST LEVEL OF EDUCATION……………………………………………………………………………………

OCCUPATION……

MARITAL STATUS……………………………………………………………………………………………………….

LENGTH OF STAY IN PRISON SO FAR……………………………………………………………………………....

REASON FOR IMPRISONMENT……………………………………………………………………………………….

HOW MANY YEARS HAVE YOU BEEN SENTENCED…………………………………………………………………

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Appendix C2: Depression, Anxiety and Stress Scale

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DASS

Name: *Date:*

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the s
applied to you *over the past week*. There are no right or wrong answers. Do not spend too muc
any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

1	I found myself getting upset by quite trivial things	0	1
2	I was aware of dryness of my mouth	0	1
3	I couldn't seem to experience any positive feeling at all	0	1
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1
5	I just couldn't seem to get going	0	1
6	I tended to over-react to situations	0	1
7	I had a feeling of shakiness (eg, legs going to give way)	0	1
8	I found it difficult to relax	0	1
9	I found myself in situations that made me so anxious I was most relieved when they ended	0	1
10	I felt that I had nothing to look forward to	0	1
11	I found myself getting upset rather easily	0	1
12	I felt that I was using a lot of nervous energy	0	1
13	I felt sad and depressed	0	1
14	I found myself getting impatient when I was delayed in any way (eg, lifts, traffic lights, being kept waiting)	0	1
15	I had a feeling of faintness	0	1
16	I felt that I had lost interest in just about everything	0	1
17	I felt I wasn't worth much as a person	0	1
18	I felt that I was rather touchy	0	1
19	I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion	0	1

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20	I felt scared without any good reason	0	1	2	3
21	I felt that life wasn't worthwhile	0	1	2	3

Reminder of rating scale:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

22	I found it hard to wind down	0	1	2	3
23	I had difficulty in swallowing	0	1	2	3
24	I couldn't seem to get any enjoyment out of the things I did	0	1	2	3
25	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
26	I felt down-hearted and blue	0	1	2	3
27	I found that I was very irritable	0	1	2	3
28	I felt I was close to panic	0	1	2	3
29	I found it hard to calm down after something upset me	0	1	2	3
30	I feared that I would be "thrown" by some trivial but unfamiliar task	0	1	2	3
31	I was unable to become enthusiastic about anything	0	1	2	3
32	I found it difficult to tolerate interruptions to what I was doing	0	1	2	3
33	I was in a state of nervous tension	0	1	2	3
34	I felt I was pretty worthless	0	1	2	3
35	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
36	I felt terrified	0	1	2	3
37	I could see nothing in the future to be hopeful about	0	1	2	3
38	I felt that life was meaningless	0	1	2	3
39	I found myself getting agitated	0	1	2	3
40	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
41	I experienced trembling (eg, in the hands)	0	1	2	3

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42	I found it difficult to work up the initiative to do things	0	1	2	3

Appendix C3: Cope Inventory

NAME: DATE:

COPE INVENTORY

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress.

Then respond to each of the following items by blackening one number on your answer sheet for each, using the response choices listed just below. Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer every item. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.

1 = I usually don't do this at all 2 = I usually do this a little bit 3 = I usually do this a medium amount 4 = I usually do this a lot

1. I try to grow as a person as a result of the experience.
2. I turn to work or other substitute activities to take my mind off things.
3. I get upset and let my emotions out.
4. I try to get advice from someone about what to do.
5. I concentrate my efforts on doing something about it.
6. I say to myself "this isn't real."
7. I put my trust in God.
8. I laugh about the situation.
9. I admit to myself that I can't deal with it, and quit trying.
10. I restrain myself from doing anything too quickly.
11. I discuss my feelings with someone.
12. I use alcohol or drugs to make myself feel better.

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13. I get used to the idea that it happened.
14. I talk to someone to find out more about the situation.
15. I keep myself from getting distracted by other thoughts or activities.
16. I daydream about things other than this.
17. I get upset, and am really aware of it.
18. I seek God's help.
19. I make a plan of action.
20. I make jokes about it.
21. I accept that this has happened and that it can't be changed.
22. I hold off doing anything about it until the situation permits.
23. I try to get emotional support from friends or relatives.
24. I just give up trying to reach my goal.
25. I take additional action to try to get rid of the problem.
26. I try to lose myself for a while by drinking alcohol or taking drugs.
27. I refuse to believe that it has happened.
28. I let my feelings out.
29. I try to see it in a different light, to make it seem more positive.
30. I talk to someone who could do something concrete about the problem.
31. I sleep more than usual.
32. I try to come up with a strategy about what to do.
33. I focus on dealing with this problem, and if necessary let other things slide a little.
34. I get sympathy and understanding from someone.
35. I drink alcohol or take drugs, in order to think about it less.
36. I kid around about it.
37. I give up the attempt to get what I want.
38. I look for something good in what is happening.
39. I think about how I might best handle the problem.
40. I pretend that it hasn't really happened.

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41. I make sure not to make matters worse by acting too soon.
42. I try hard to prevent other things from interfering with my efforts at dealing with this.
43. I go to movies or watch TV, to think about it less.
44. I accept the reality of the fact that it happened.
45. I ask people who have had similar experiences what they did.
46. I feel a lot of emotional distress and I find myself expressing those feelings a lot.
47. I take direct action to get around the problem.
48. I try to find comfort in my religion.
49. I force myself to wait for the right time to do something.
50. I make fun of the situation.
51. I reduce the amount of effort I'm putting into solving the problem.
52. I talk to someone about how I feel.
53. I use alcohol or drugs to help me get through it.
54. I learn to live with it.
55. I put aside other activities in order to concentrate on this.
56. I think hard about what steps to take.
57. I act as though it hasn't even happened.
58. I do what has to be done, one step at a time.
59. I learn something from the experience.
60. I pray more than usual.

INTEGRI PROCEDAMUS

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Appendix C4: Modified Scale for Suicidal Ideation

Instructions

The purpose of this scale is to assess the presence or absence of suicide ideation and the degree of severity of suicidal ideas. The time frame is from the point of interview and the previous 48 hours.

1. Wish to die

Over the past day or two have you thought about wanting to die?

Do you want to die now?(If the patient wants to die ask: Over the past day or two how often have you had the thought that you wanted to die? A little? Quite often? a lot? When you have wished for death, how strong has the desire been? Weak?Moderately strong? Very strong?)

0. None - no current wish to die, hasn't had any thought about wanting to die.

1. Weak - unsure about whether he/she wants to die, seldom thinks about death, or intensity seems low.

2. Moderate - current desire to die, may be preoccupied with ideas about death, or intensity seems greater than a rating of 1.

3. Strong - current death wish, high frequency or high intensity during the past day or two.

2. Wish to live

Over the past day or two have you thought that you want to live?

Do you care if you live or die? (If the patient wants to live ask: Over the past day or two how often have you thought about wanting to live? A little? Quite often? A lot? How sure are you that you really want to live?)

0. Strong - current desire to live, high frequency or high intensity.

1. Moderate - current desire to live, thinks about wanting to live quite often, can easily turn his/her thoughts away from death or intensity seems more than a rating of 2.

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2. Weak - unsure about whether he/she wants to live, occasional thoughts about living or intensity seems low.

3. None - patient has no wish to live.

3. Desire to make an active suicide attempt

Over the past day or two when you have thought about suicide did you want to kill yourself? How often? A little? Quite often? A lot?

Do you want to kill yourself now?

0. None - patient may have had thoughts but does not want to make an attempt.

1. Weak - patient isn't sure whether he/she wants to make an attempt.

2. Moderate - wanted to act on thoughts at least once in the last 48 hours.

3. Strong - wanted to act on thoughts several times and/or almost certain he wants to kill self.

4. Passive suicide attempt

Right now would you deliberately ignore taking care of your health?Do you feel like trying to die by eating too much (too little), drinking too much (too little), or by not taking needed medications? Have you felt like doing any of these things over the past day or two? Over the past day or two, have you thought it might be good to leave life or death to chance, for example, carelessly crossing a busy street, driving recklessly, or even walking alone at night in a rough part of town?

0. None - would take precautions to maintain life.

1. Weak - not sure whether he/she would leave life/death to chance, or has thought about gambling with fate at least once in the last two days.

2. Moderate - would leave life/death to chance, almost sure he/she would gamble.

3. Strong - avoided steps necessary to maintain or save life, e.g., stopped taking needed medications.

5. Duration of thoughts

Over the past day or two when you have thought about suicide how long did the thoughts last? Were they fleeting, e.g., a few seconds? Did they occur for a while, then stop, e.g., a few minutes? Did they occur for longer periods, e.g., an hour at a time? Is it to the point where you can't seem to get them out of your mind?

0. Brief - fleeting periods.

1. Short duration - several minutes.

2. Longer - an hour of more.

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3. Almost continuous - patient finds it hard to turn attention away from suicidal thoughts, can't seem to get them out of his/her mind.

6. Frequency of ideation

Over the last day or two how often have you thought about suicide? Once a day? Once an hour? More than that? All the time?

0. Rare - once in the past 48 hours.

1. Low frequency - twice or more over the last 48 hours.

2. Intermittent -approximately every hour

3. Persistent - several times an hour.

7. Intensity of thoughts

Over the past day or two, when you have thought about suicide, have they been intense (powerful)? How intense have they been? Weak? Somewhat strong? Moderately strong? Very strong?

0. Very weak.

1. Weak.

2. Moderate.

3. Strong.

8. Deterrent to active attempt

Can you think of anything that would keep you from killing yourself? (Your religion, consequences for your family, chance that you may injure yourself seriously if unsuccessful).

0. Definite deterrent - wouldn't attempt suicide because of deterrents.

Patient must name one deterrent.

1. Probable deterrent -can name at least one deterrent, but does not definitely rule out suicide.

2. Questionable deterrent - patient has trouble naming any deterrents, seems focused on the advantages to suicide, minimal concern over deterrents.

3. No deterrents - no concern over consequences to self or others.

9. Reasons for living and dying

Right now can you think of any reasons why you should stay alive? What about over the past day or two? Over the past day or two have you thought that there are things happening in your life that make you want to die?

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(If the patient says there are clear reasons for living and dying, ask what they are and write them verbatim in the section provided. Ask the remaining questions

Living Dying

Do you think that your reasons for dying are better than your reasons for living? Would you say that your reasons for living are better than your reasons for dying? Are your reasons for living and dying about equal in strength, 50-50?

0. Patient has no reasons for dying, never occurred to him/her to weigh reasons.

1. Has reasons for living and occasionally has thought about reasons for dying.

2. Not sure about which reasons are more powerful, living and dying are about equal, or those for dying slightly outweigh those for living.

3. Reasons for dying strongly outweigh those for living, can't think of any reasons for living.

Method:

Over the last day or two have you been thinking about a way to kill yourself, the method you might use? Do you know where to get these materials? Have you thought about jumping from a high place? Where would you jump? Have you thought about using a car to kill yourself? Your own? Someone else's? What highway or road would you use? When would you try to kill yourself? Is there a special event (e.g., anniversary, birthday with which you would like to associate your suicide? Have you thought of any other ways you might kill yourself? (note details verbatim). (The interviewer should try to get as detailed a description as possible about the patient's plan and degree of specificity - Record this information in narrativefashion below and then rate item 10)

____
____
____
____
____
____

10. Degree of specificity/planning

0. Not considered, method not thought about.

1. Minimal consideration.

2. Moderate consideration.

3. Details worked out, plans well formulated.

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11. Method: Availability/opportunity

Over the past day or two have you thought methods are available to you to commit suicide? Would it take time/effort to create an opportunity to kill yourself? Do you foresee opportunities being available to you in the near future (e.g., leaving hospital)?

0. Method not available, no opportunity.

1. Method would take time/effort, opportunity not readily available, e.g.,would have to purchase poisons, get prescription, borrow or buy a gun.

2. Future opportunity or availability anticipated - if in hospital when patient got home, pills or gun available.

3. Method/opportunity available – pills, gun, car available, patient mayhave selected a specific time.

12. Sense of courage to carry out attempt

Do you think you have the courage to commit suicide?

0. No courage, too weak, afraid.

1. Unsure of courage.

2. Quite sure.

3. Very sure.

13. Competence

Do you think you have the ability to carry out your suicide? Can you carry out the necessary steps to insure a successful suicide? How convinced are you that you would be effective in bringing an end to your life?

0. Not competent.

1. Unsure.

2. Somewhat sure.

3. Convinced that he/she can do it.

14. Expectancy of actual attempt

Over the last day or two have you thought that suicide is something you really might do sometime? Right now what are the chances you would try to kill yourself if left alone to your own devices? Would you say the chances are less than 50%? About equal? More than 50%?

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0. Patient says he/she definitely would not make an attempt.

1. Unsure - might make an attempt but chances are less than 50% or about equal, 50-50.

2. Almost certain - chances are greater than 50% that he/she would try to commit suicide?

3. Certain - patient will make an attempt if left by self (i.e., if not in hospital or not watched).

15. Talk about death/suicide

Over the last day or two have you noticed yourself talking about death more than usual? Can you recall whether or not you spoke to anybody, even jokingly, that you might welcome death or try to kill yourself? Have you confided in a close friend, religious person, or professional helper that you intend to commit suicide?

0. No talk of death/suicide.

1. Probably talked about death more than usual but no specific mention of death wish. May have alluded to suicide using humour.

2. Specifically said that he/she wants to die.

3. Confided that he/she plans to commit suicide.

16. Writing about death/suicide

Have you written about death/suicide e.g. poetry, in a personal diary?

0. No written material.

1. General comments regarding death.

2. Specific reference to death wish.

3. Specific reference to plans for suicide.

17. Suicide note

Over the last day or two have you thought about leaving a note or writing a letter to somebody about your suicide? Do you know what you'd say? Who would you leave it for? Have you written it out yet?

Where did you leave it?

0. None - hasn't thought about a suicide note.

1. "Mental note" - has thought about a suicide note, those he/she might give it to, possibly worked out general themes which would be put in the note (e.g., being a burden to others, etc.)

2. Started - suicide note partially written, may have misplaced it.

3. Completed note - written out, definite plans about content, addressee.

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18. Actual preparation

Over the past day or two have you actually done anything to prepare for your suicide, e.g., collected material, pills, guns, etc.?

0. None - no preparation.

1. Probable preparation - patient not sure, may have started to collect materials.

2. Partial preparation - definitely started to organize method of suicide.

3. Complete - has pills, gun, or other devices that he needs to kill self.

Appendix D: Qualitative Scales

Appendix D1: Interview Guide

- How long have you been in prison?
- How did your family/friends react when they realized you were going to be imprisoned for some time?
- How has your relationship been with your friends and family since you came here?
    - *What are your relationship with other prisoners like?*
    - *What about with staff members? (Personal officer)*
    - *Have you had any positive relationship here?*
    - *Have you encountered any difficulties with relationships here? (Examples)*
    - *Has this always been the case?*
    - *How do you/would you cope with difficult relationships here?*
    - *What do you think could be done to improve relationships with staff and the other prisoners?*

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- As a prisoner what support do you feel other prisoners need?
    - *Are you able to get this support? (If not, why not?)*
    - *Who do you get support from? (In prison – staff, prisoners, counsellors etc., out of prison – family/friends)*
    - *What type of support do you get from these people? (emotional/practical)*
    - *What support do you find most helpful?*
    - *What do you think could be done to improve support available to prisoners?*
- Would you say this prison is a safe place to be?
    - *Has this always been the case?*
    - *What did you think/had heard before you came here?*
    - *Do you think other prisoners would agree with you?*
    - *What helps you feel safe? (Services available, certain staff or prisoners)*
    - *What makes you feel unsafe?*
    - *Would you say bullying happens here?*
    - *Tell me about the type of bully that happens here? (Types of behaviors, types of prisoners involved)*
    - *What do you think could be done to improve prisoners' feelings of safety?*