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Inmate Time Utilization And Well-Being

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INMATE TIME UTILIZATION AND WELL-BEING

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DEDICATION

To my parents Mijo and Marija whose unconditional love and endless support inspired me to make dreams come into reality. Without them, I would not be where I am today.

To all men and women under the supervision of South Carolina Department of Corrections, may they use their time wisely, find the right path, and get "*through that sentence like a subject and a predicate*" (Lil Wayne & Cory Gunz, 2010).

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ABSTRACT

Qualitative studies about prison culture and examinations of correctional recreation and programming offer a comprehensive understanding of prisons' social dynamics, including how individuals spend their free time while incarcerated. Theoretical models and the extant research suggest that involvement in structured and prosocial activities is associated with positive behavioral and emotional outcomes in offenders. However, the majority of studies that provide the empirical evidence for these conclusions do not examine all aspects of time utilization explicitly or do not provide statistical evidence of the strength and significance of the associations. Additionally, many of these investigations are dated.

To address these gaps, this study uses quantitative data to examine the relationship between male inmates' subjective perception of using time in prison constructively and objective evaluation of participation in activities and emotional well-being in contemporary correctional institutions in the United States. Specifically, this study aims to determine how male inmates experience their time in prison, what activities they engage in, and what motivates their involvement. In addition, this study explores how inmate time use is associated with depression and anxiety using the stress-coping model developed by Richard Lazarus (1966; Lazarus & Folkman, 1984).

This research was conducted with 503 randomly selected adult male inmates housed in five medium security correctional institutions under the supervision of the

South Carolina Department of Corrections. Data were collected at a single time-point using self-administered questionnaires. The results show that many male inmates are idle and a large portion of time in prison is spent in unstructured leisure activities. Idleness was associated with higher levels of depression and anxiety. However, greater participation in structured activities was not associated with more positive emotional outcomes. Furthermore, the findings demonstrate that different activities have different functions of coping with stress and that personal characteristics are associated with the type of coping inmates adopted. Finally, many incarcerated men are concerned with spending their time in activities for self-improvement; however, many still employ passive techniques such as escaping reality in their daily routines. Implications for policy makers and prison administrators are discussed.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1: INTRODUCTION

This study seeks to address an area which has been neglected in corrections research for the past several decades—inmate time utilization. Specifically, this study aims to determine how male inmates experience their time in prison, what activities they engage in, and what motivates their involvement. Broadly, I want to understand whether male prison inmates serve their time by *passing through it* or by *using it.* In addition, this study explores how inmate time utilization is associated with psychological well-being (anxiety and depression). For instance, do inmates engage in certain activities in order to cope with the stress of incarceration, and how successful are they in their coping efforts?

Current knowledge about time utilization in prisons comes from ethnographic studies about inmate culture and experiences of incarceration (Clemmer, 1940; Giallombardo, 1966; Sykes, 1958; Toch, 1977), other qualitative studies on specific activities inmates engage in (Dye, Aday, Farney, & Raley, 2014; Gallant, Sherry, & Nicholson, 2015; Winfree, Newbold, & Tubb III, 2002), and studies that examine inmate participation in programing (Batchelder & Pippert, 2002; Courtenay & Sabo, 2001). Early inquiries about the inmate social world focused on identifying key characteristics of a male inmate subculture and its normative properties (i.e. the inmate code) (Clemmer, 1940; Sykes, 1958). More recent studies examine the utility of the inmate code identified by the early researchers within modern prisons (e.g. Grosholz, 2014; Sexton, 2012). Other authors have attempted to draw parallels between early ethnographies and modern experiences in prisons by providing a personal, phenomenological, dimension of

confinement (e.g. Hassine, Bernard, & Wright, 1996; Irwin, 1980). However, these qualitative studies do not examine time utilization explicitly; rather, the aspects of formal (programing) and informal (leisure) time utilization must be extrapolated from the context of the inmate culture.

The researchers who examined the aspects of formal time utilization—activities scheduled by prison administration—focused on availability of programs and on inmate participation in work, educational, vocational, and treatment programs. Correctional recreation/leisure is also a component of time utilization, but studies on the effects of leisure on offender behavior are rare (Andrews & Bonta, 2010b; Link & Williams, 2015). It is important to investigate these effects because despite of the "tough-on-crime" movement that led to a reduction in many recreational opportunities, the majority of the public supports allowing inmates to access many amenities and resources for spending their time constructively (Applegate, 2001; Johnson, Bennet, & Flangan, 1997; Wozniak, 2016).

Additionally, inmates spend a larger portion of time in leisure and other informal activities compared to the general U.S. population (Kelly, 2012; Wooldredge, 1999; Zamble & Porporino, 1988). Therefore, exploring how engagement in these informal pursuits is associated with inmates' emotional well-being is crucial. Even though criminologists recognize the importance of investigating conditions of confinement and their effects on well-being and recidivism (see Andrews & Bonta, 2010b; Cullen & Gendreau, 2001), it is not clear why they remained largely uninterested in the effects of inmate time use.

The importance of engaging in structured and prosocial activities has been recognized by Hirschi (1969) in his development of social bonds theory and by Andrews and Bonta's (2010b) psychology of criminal conduct, where they introduced the Risk-Need-Responsivity (RNR) model of offender classification and rehabilitation. While these two frameworks were developed to explain offender behavior in the community, they can also explicate how involvement in prosocial and structured activities can prevent offenders from engaging in deviant behavior while incarcerated. Specifically, Hirschi (1969) suggests that when a person invests time and energy in prosocial activities, he or she will avoid deviant behavior because of the risk of losing the opportunity of enjoying products of that prosocial activity. In addition, individuals who are involved in prosocial activities lack time and opportunities to engage in misconduct (Hirschi, 1969).

Similarly, the RNR model identifies the lack of involvement in prosocial recreational/leisure activities as one of the criminogenic risks/needs associated with criminal behavior (Andrews, Bonta, & Hoge, 1990). Rewards and satisfaction with leisure/recreation promote prosocial outcomes over antisocial behavior (Andrews & Bonta, 2010b). However, even within these two frameworks, engagement of inmates in leisure activities has not been studied to a large extent.

Although social bonds theory and the RNR model address how prosocial engagement affects one's behavior, they cannot explain how engagement in different activities is associated with emotional outcomes. For this reason, this study uses the stress-coping framework developed by Lazarus to explain the relationship between inmate time utilization and psychological well-being (Lazarus, 1966; Lazarus & Folkman, 1984). The stress-coping framework posits that negative emotional and

behavioral outcomes are responses to stressors in the environment, and individuals cope with these stressors by utilizing various coping methods (Lazarus & Folkman, 1984).

Pertinent to this study, inmates engage in various formal, leisure, and informal activities to cope with idleness and other stressors of incarceration. Lazarus (1966) argues that not every individual will react the same way to the same stressor; rather, stress is contingent upon the extent to which an individual perceives the situation as threatening. Therefore, individuals vary in how they perceive their prison experience, and this perception influences their choice of coping strategies. For this reason, this approach promises the most comprehensive model to explain the relationship between male inmate time utilization and well-being.

In this study, I examine two domains of time utilization: inmates' evaluation of using time productively and their objective assessment of time spent in different activities. The first domain includes the examination of inmates' experience of idleness, future orientation, and preparation for release. All of these dimensions indicate inmates' subjective awareness of time and perception of constructive time use. I also examine how these elements relate to inmate well-being. The second domain includes objective measures of time utilization and motivation for engagement in activities, serving as coping mechanisms in dealing with perceived stress.

This research contributes to the current literature in four distinct ways. First, due to changes in policies, laws, and needs of the prison population, the way prisons are managed today is different from several decades ago when first accounts of inmates' routines were provided. Therefore, this study adds to the extant body of literature by placing time utilization into the context of modern corrections. Second, by treating

engagement in different activities as coping methods, this study examines what meaning male inmates attribute to various activities and how this function of coping relates to well-being.

Third, this study examines the motivation for engagement in activities as an element of the stress-coping process. For example, it is important to understand whether inmates spend their free time isolated because they are afraid for their safety or because solitude provides them with an emotional retreat. Finally, knowing what time utilization patterns are associated with positive outcomes can help administrators and policy makers make decisions about investing in programs and services that facilitate these time use patterns. Therefore, based on the findings of this study, prison administration can implement evidence-based practices and advance prison management.

Given a renewed interest in criminal justice reforms that has emerged among policy makers (U.S. House of Representatives, 2016), it is important to examine all aspects of confinement in order to understand what effect idleness and time use have on male inmates and their prospects for rehabilitation and well-being. This study adds evidence to the literature that can be utilized to inform the public, policy makers, and subsequently correctional personnel of the benefits of "human service" in modern corrections (Johnson & Price, 1981). It helps to propagate an understanding that providing services and resources that normalize the prison environment not only humanizes the entire prison experience but also contributes to public safety (Andrews & Bonta, 2010a; Van Voorhis & Salisbury, 2014).

In the chapters that follow, I outline the plan for my study. In Chapter 2, I provide a review of relevant literature regarding well-being, inmate time utilization, and the

relationship between the two. More specifically, in section 2.1., I focus on defining well-being with an emphasis on negative affect. This includes an overview of a range of individual- and institution-level correlates of well-being and a discussion on how the stress-coping model can explain how inmates deal with the stress of incarceration. In section 2.2., I describe inmate time utilization in prisons. I focus on how inmates experience time and what activities they engage in and why. In section 2.3., I address the relationship between several elements of inmate time utilization and emotional well-being. In Chapter 3, I discuss the data and methods used to complete this study. First, I describe the sample, the location where the study was conducted, and the procedures used to collect the data. Second, I introduce readers to the survey instrument and measures used in this study. Finally, I lay out a plan for testing the hypotheses. In Chapter 4, I present the findings of the data analysis and address each of the hypotheses. In Chapter 5, I highlight the key discoveries and discuss them in the context of previous studies. Finally, in Chapter 6, I summarize the findings and conclude with a discussion of study implications for correctional policies.

CHAPTER 2: LITERATURE REVIEW

2.1. Inmate Well-Being

2.1.1. Introduction

In this section, I focus on how scholars define and operationalize well-being, with an emphasis on research within institutional corrections. Further, I review individual- and institution-level factors that are associated with the well-being of prison inmates. Next, I introduce a stress-coping model that explains how the environment interacts with an individual and how this interaction relates to well-being. Here I also provide evidence of these associations for prison populations. Finally, I identify gaps in the current literature and limitations of the studies reviewed.

Researchers, policy makers, and prison administrators have long recognized the importance of inmate well-being for inmate management (Adams, 1992; Cullen, Johnson, & Nagin, 2011; Toch, 1977). Specifically, by identifying how psychological factors interact with inmate environment, practitioners can benefit from understanding what psychological needs inmates have when making decisions about classification and rehabilitation. For example, some inmates manifest positive emotional outcomes in a stimulating environment, but for others, such environment can be stressful and amplify emotional and behavioral issues (Toch, 1977). Moreover, acknowledging the rehabilitative aspects of prisons promotes public safety because emotional well-being is a key factor for successful reentry (Begun, Rose, & LeBel, 2011; Petersilia, 2003; Pogorzelski, Wolff, Pan, & Blitz, 2005). Rehabilitative efforts, however, are hampered if

inmates are experiencing stress or manifest other psychologically detrimental outcomes (Adams, 1992; Cullen et al., 2011). For this reason, in order to plan rehabilitation and release effectively, it is crucial to understand the underlying emotional and personality factors that drive inmate behavior.

In the psychology literature, well-being is often defined based on Bradburn's (1969) operationalization using two separate dimensions: positive and negative affect (Bradburn, 1969; Ryff & Keyes, 1995; Thoits, 1983). Positive affect includes an individuals' self-evaluation of emotions of happiness, life satisfaction, accomplishment, and optimism. Negative affect includes feelings of loneliness, depression, anger, anxiety, and unhappiness (Bradburn, 1969; Davis, 1965; Ryff & Keyes, 1995). An individual is considered high with regards to their well-being when the intensity and frequency of positive affect *outweighs* the intensity and frequency of negative affect. In other words, the level of well-being depends on the degree to which an individual's experience of pleasure predominates over pain (Bradburn, 1969).

In addition to these affective states, some authors include physical symptoms (e.g. high blood pressure, stomachaches, and headaches) as indicators of poor well-being (e.g. Davis, 1965; Lazarus & Folkman, 1984). Other conceptualizations of well-being include measurement of satisfaction with one's work, income, social relationships, and neighborhood, or measurement of minor psychiatric problems, including depression and anxiety (e.g. Cooper & Berwick, 200; Ryff & Keyes, 1995). In the correctional literature, the most common way to operationalize well-being is by using some measure of negative affect, usually depression and anxiety/stress but without any measure of positive affect

(e.g. Boothby & Durham, 1999; Gullone, Jones, & Commins, 2000; Parisi, 1982; Wooldredge, 1999).

For example, in his study of Ohio inmates, Wooldredge (1999) conceptualized psychological well-being as inmate perceptions of insecurity, stress, depression, anger, low self-esteem, and loneliness. Similarly, Maitland and Sluder (1996) measured well-being of inmates using items that address worries, energy level, life satisfaction, depression, the extent of emotional-behavioral control, and anxiety. Listwan, Colvin, Hanley, and Flannery (2010) utilized measures of posttraumatic cognitions and symptoms of trauma as indicators of well-being. Researchers who did not exclusively focus on negative affect investigated the effects of incarceration on personality (e.g. Castellano & Sodestrom, 1997; Edinger, Reuterfors, & Logue, 1982; Silverman & Vega; 1990; Van Voorhis, 1993). Other authors focused on symptoms of severe mental health issues such as self-mutilation, suicide, or psychological breakdowns (e.g. Bootby & Durham, 1999; Harding & Zimmerman, 1989; Smith & Kaminski, 2010; Steadman, Fabisiak, Dvoskin, & Holohean, 1987; Toch, 1975; Toch et al., 1989).

One reason why the correctional literature largely focuses exclusively on negative affect may be that the goal of data collection on inmate populations is to predict negative behavioral and emotional outcomes to identify treatment needs and prevent reoffending. Given this focus, researchers' access to data on positive affect of inmates is limited. However, there is another reason why research on inmate well-being is more oriented towards negative affect. Factors associated with positive affect include a high degree of social participation, sociability, companionship with significant others, exposure to life situations that introduce a degree of variability and autonomy, and adoption of multiple

social roles (Bradburn, 1969; Thoits, 1983). Because prison experience includes limited satisfaction, pleasure, social participation, and autonomy, the argument can be made that there is little variability in positive affect among prison inmates. Besides, negative affect, including anxiety and depression, is associated with social isolation and limited social identities, both present in the prison environment (Thoits, 1983). This argument is supported by the fact that negative affect is more prevalent in the offender population than in the general population (Boothby & Durham, 1999; Castellano & Sodestrom, 1997).

Finally, some scholars used multidimensional measures of well-being. For example, in their study of Dutch inmates, Van Harreveld, Van der Pligt, Claassen, and Van Dijk (2007) measured both psychological and physical well-being, where they examined psychological well-being on dimensions of optimism, stress, and depression, and physical well-being by measuring the frequency of fatigue, headaches, and pain at the chest, back, or stomach. To measure psychological outcomes, Van Tongeren and Klebe (2010) used Wright's (1985; 1991) framework which includes evaluation of subjective perceptions of problems in relating to other people in prison, assessment of coping with incarceration, and measures of severe physical problems.

In summary, there is no clear consensus among researchers about the best measurement of psychological outcomes of an incarcerated population. Overall, we can conclude that some scholars examine well-being as a psychological response to incarceration, while making an assumption that well-being is constant throughout the sentence (e.g. Gullone et al., 2000; Van Tonren & Klebe, 2010; Wooldrege, 1999). These

studies use a cross-sectional design, while trying to control for potential confounding factors statistically.

Other studies, especially those that examine long-term effects of confinement, examine psychological outcomes as they change over time during one's prison term (e.g. Andersen, Sestoft, Lillebaek, Gabrielsen, & Hemmingsen, 2003; O'Keefe, Klebe, Stucker, Sturm, & Leggett, 2010). These studies use longitudinal designs and assume that psychological outcomes are not constant. When studied in the context of how they vary over time, these psychological outcomes are often referred to as adaptation or adjustment to incarceration (Adams, 1992). They are based on the deprivation model that asserts that the prison environment causes negative psychological outcomes (Goodstein & Wright, 1989).

Regardless of how the psychological outcomes are conceptualized, it is important to note that many inmates suffer from preexisting mental conditions and that separating the effects of incarceration from prior conditions may be challenging (James & Glaze, 2006). Unlike the deportation model, the importation model explains that these preexisting psychological issues are one of the many personal and social characteristics brought into the institution that influence inmates' behavior (Irwin & Cressey, 1962). The fact of the matter is that the prison population is characterized by a higher prevalence of mental disorders than that found in the general U.S. population. Specifically, about 56% of state inmates have a mental health problem, with about 23% of state inmates meeting the criteria for major depression and 15% having symptoms of a psychotic disorder (James & Glaze, 2006).

Compared to the prevalence of serious mental illnesses in general U.S. population where only 1% to 7% suffers from such disorders, researchers maintain that in general, the inmate population suffers from mild depression and anxiety (Boothby & Durham, 1999; Castellano & Sodestrom, 1997; Chiles, Von Cleve, Jemelka, & Trupin, 1990; Gullone et al., 2000; NAMI, 2015). It is important to remember, however, that some inmates show more pronounced psychological problems than others. There are individual-level characteristics and features of the prison environment that are correlated with these elevated levels of negative psychological outcomes. The next two sections provide a review of these factors and their relationship with inmate well-being.

2.1.2. Individual-Level Correlates

The importation model not only suggests where negative emotional responses originate from, but it also provides a classification scheme for possible correlates of negative emotional and behavioral outcomes (Gaes & McGuire, 1985; Gullone et al., 2000; Irwin & Cressey, 1962; Kruttschnitt, Gartner, & Miller, 2000). These correlates include gender, age, race, marital status, education, and personality features. Studies have consistently confirmed that women are more likely to have psychological issues. In fact, female inmates report they are more likely to be depressed than men and twice as likely to have serious mental conditions overall (Binswanger et al., 2010; Boothby & Durham, 1999; James & Glaze, 2006). One of the explanations for this finding is that women are more likely to come to prison with many psychological and substance abuse issues resulting from physical or sexual abuse in the past (Browne, Miller, & Maguin, 1999; Islam-Zwart & Vik, 2004; Owen, 1998). The deprivation model provides an alternative explanation that negative psychological issues result from the separation of female

inmates from their children and family (Foster, 2012; Kruttschnitt et al., 2000; Kruttschnitt & Gartner, 2003; Lord, 2008).

Age is also associated with well-being. Specifically, young offenders are more likely to be suicidal (Adams, 1992), depressed, and anxious (Boothby & Durham, 1999; MacKenzie, 1987). Although some of these conditions may be chronic mental illnesses that will extend into adulthood, there is reason to believe that young inmates perceive stress differently and cope with their problems less effectively. This has been shown to lead to negative emotional and behavioral outcomes (Feld, 1999; Piaget, 1971).

Furthermore, levels of depression, anxiety, and stress are greater among white inmates, married inmates, those with higher levels of education, and those with less criminal history (Adams, 1992; Linquist, 2000; Vuolo & Kruttschnitt, 2008; Wooldredge, 1999). Race may be important because whites are a numerical minority in many prisons so they feel threatened and anticipate victimization causing more stress (Carroll, 1990). Similarly, Wooldredge (1999) argued that inmates with these characteristics manifest poor well-being because they are less similar to the mainstream prison population. Because they are socially removed from other inmates, these inmates are less likely to be integrated into an inmate social system, which contributes to negative psychological outcomes (Wooldredge, 1999).

Social integration is associated with positive outcomes because while belonging to a social group, individuals can obtain social support (Gibbs, 1982; Thoits, 1995; Wooldredge, 1999). Social support can be defined as instrumental and/or emotional assistance provided for the individual by significant others (e.g. family, friends, coworkers) (Thoits, 1995). Inmates can seek social support by maintaining contact with

their family and friends on the outside or they can develop supportive relationships inside the prison by participating in group activities such as programing and recreation.

Wooldredge (1999) found that inmates who spent more hours in programs (education, vocational training, counseling, work, recreation) and have more visits experience better psychological well-being. Unwillingness to engage in recreational and educational programs and a lack of friends outside the prison was associated with higher depression and anxiety in English inmates as well (Cooper & Berwick, 2001). Social support appears to be especially important in promoting the well-being of inmates at the beginning of a prison term because it helps with transition and adaptation to prison norms (Gibbs, 1982).

While these studies support universal notions that social support promotes well-being, Lindquist (2000) found that maintaining social ties (both inside and outside jail) did not promote well-being; rather it resulted in higher levels of depression and anxiety. Additionally, she found that inmates who have greater social support inside the jail have higher levels of hostility (Lindquist, 2000). Because these findings suggest that under certain circumstances, social integration can provoke negative outcomes, the effects of social support may depend on who provides it. Hochstetler, Murphy, and Simons (2004) also failed to find evidence of the relationship between social support and distress.

Whereas some studies report that prior incarceration and violent offending are related to self-injurious behavior and serious mental health issues (Gibbs, 1982; Toch et al., 1989), others confirm that first time offenders are more likely to be depressed (Boothby & Durham, 1999). However, it is not clear whether the elevated depressive

symptoms fade as time passes. It may be that the initial depression is a result of an initial shock due to loss of freedom and unfamiliarity with the prison social settings.

Other individual-level characteristics, including higher self-esteem, internal locus of control, and perception of having autonomy are associated with better psychological outcomes (Greve & Enzmann, 2003; Toch, et al., 1989; Van Tongeren & Klebe, 2010; Vuolo & Kruttschnitt, 2008). However, inmate well-being can be compromised when experiencing or anticipating victimization (Maitland & Sluder, 1996; McCorkle, 1993). Specifically, inmates who are more fearful for their safety are more likely to be anxious and depressed (McCorkle, 1993; Hochstetler et al., 2004). In addition, experience of victimization is also associated with PTSD and trauma symptoms (Listwan et al., 2010).

In summary, the empirical evidence demonstrates that individual-level factors such as age, sex, race, marital status, education, criminal history, and personality factors are associated with psychological well-being (e.g. Boothby & Durham, 1999; Carroll, 1990; James & Glaze, 2006; Wooldredge, 1999). Some of these associations can be explained by social factors such as levels of social integration and social support (Carroll, 1990; Cooper & Berwick, 2001; Wooldredge, 1999). The literature, therefore, suggests that inmates' well-being is a result of interactions of their personal characteristics and social factors in their immediate environment. A detailed discussion about other factors external to the inmates' personal characteristics follows below.

2.1.3. Institution-Level Correlates

From the deprivation perspective, researchers have investigated the role of the prison environment in psychological adjustment (Goodstein & Wright, 1989). Specifically, they analyzed the effects of housing in different security levels, time served,

management style, and inmate perception of housing conditions on various emotional and behavioral outcomes. However, I first review the studies that examined the overall effects of incarceration on well-being over time, which did not focus specifically on institution-level variables.

Longitudinal studies show that overall psychological well-being is not influenced by sentence length (Gullone et al., 2000; Hurley & Dunne, 1991; Zamble & Porporino, 1988; Zamble, 1992). In fact, in their overview of the literature on the psychological effects of incarceration, Bonta and Gendreau (1990) concluded that there is no conclusive evidence that imprisonment is psychologically detrimental for all inmates over time. When long-term inmates displayed psychological issues, they usually precede incarceration (Wormith, 1984). While longer sentences do not appear to be stressful for the majority of inmates, the beginning of the sentence is associated with distress and pathological symptoms (MacKenzie & Goodstein, 1985; Parisi, 1982; Toch & Adams 1986; Wormith, 1984). Self-mutilations, suicide attempts, and prison misconduct are most common during the early phases of incarceration (Adams, 1992; Kalinich & Klofas, 1986). This initial distress later recedes in relation to the use of more successful coping methods (MacKenzie & Goodstein, 1985).

Other studies also showed that time served was associated with an improvement on personality and psychopathology measures, including a reduction in symptoms of depression and anxiety as well as increase in self-esteem (Brown & Ireland, 2006; Ireland, Brown, & Ireland, 2005; MacKenzie & Goodstein, 1985; Wormith, 1984; Zamble & Porporino, 1988). The reduction in symptoms of depression, anxiety, and other negative outcomes over three time periods was documented for Portuguese inmates as

well, but the decline was not evident for inmates with a history of mental illness (Gonçalves, Endrass, Rossegger, & Dirkzwager, 2016). Because research shows that older age is associated with better well-being (Boothby & Durham, 1999; MacKenzie, 1987), an alternative explanation of this association could be that passage of time leads to better well-being due to the process of maturation.

On the other hand, Toch and his colleagues (Toch et al., 1989; Toch & Adams, 1986) argue that for long-term inmates, psychopathic symptoms are low at the beginning but they steadily increase as their time passes in prison. This deterioration in well-being when occurring closer to release has been documented by other researchers as well and has been attributed to anxiety of an anticipated release from prison (Castellano & Sodestrom, 1997; Cormier, Kennedy, & Sendbuehler 1967; Kruttschnitt et al., 2000). Paulus and Dzindolet (1993) conducted a longitudinal study on 106 male and female federal inmates, housed in a minimum-security institution. They measured stress-related reactions at the beginning of the sentence and then 4 months after. Although they found that anger, depression, anxiety, coping styles, and sense of autonomy did not differ between the two time points, reported perceptions of environmental problems (crowding, comfort, and noisiness) increased. In addition, inmates who reported high levels of environmental problems tended to be more depressed, anxious, and angry (Paulus & Dzindolet, 1993).

Other studies that directly examined environmental conditions found that, characterized by rigid control and strict monitoring, the environment of maximum-security prisons is conducive to various negative psychological responses (Grassian, 1983; Kupers & Toch, 1999). For example, Zamble and Porporino (1988) found that

inmates in higher security units reported a higher level of hopelessness, although security level was not associated with anxiety, depression, medical problems, or disciplinary incidents. However, other studies showed that higher security levels are associated with higher levels of officially reported misconduct, even after controlling for characteristics of the inmate population (Huebner, 2003; Jiang & Fisher-Giorlando, 2002; Jiang & Winfree, 2006; Steiner & Wooldredge, 2008).

Studies on solitary confinement yielded mixed results. In their longitudinal study, Zinger, Wichmann, and Andrews (2001) found no evidence that over a period of 60 days the mental health and psychological functioning of inmates in administrative segregation significantly deteriorated. Similarly, Labrecque, Wooldredge, Cullen, and Latessa (2015) and Morrris (2015) found that short-term solitary confinement does not have a significant effect on inmate violence. However, these studies do not use comparison groups to control for potential confounding variables.

Andersen and colleagues (2003), on the other hand, examined the effects of solitary confinement compared to general housing using a longitudinal design and by randomly assigning inmates to both housing conditions. They found that over time inmates in solitary confinement did not experience a change in level of their psychiatric symptoms, but when they were transferred to the general population, their symptomology decreased (Andersen et al., 2003). In another study of the same design, Andersen et al. (2000) found that solitary confinement increases the risk of developing non-psychotic psychiatric disorders. Notably, Kaba and colleagues (2014), in their analysis of inmate medical records, found that, after controlling for different individual factors including serious mental illness, solitary confinement was positively associated with self-harm.

Furthermore, Grassian (2006) evaluated forty-nine inmates housed in solitary confinement at Pelican Bay State Prison and found that many inmates exhibited severe psychiatric symptoms and in some cases, they were not indicative of preexisting conditions. These disturbances included psychotic symptoms, suicidality, hallucinations, impulsivity, anxiety, hypersensitivity, cognitive dysfunction, loss of control, irritability, aggression, paranoia, and self-mutilation (Grassian, 2006). Similar symptomology was reported in other studies on solitary confinement as well (e.g. Brodsky & Scogin, 1988; Grassian, 1983; Haney, 1993).

While based on these studies one might conclude that solitary confinement has either no effect or a negative effect on inmate well-being, some researchers found that solitary confinement actually had positive effects on inmates' psychological adjustment. O'Keefe et al. (2010) examined inmates housed in both the general population and administrative segregation. They examined levels of different psychological outcomes including anxiety, depression, anger, and psychosis among mentally ill inmates and inmates without mental illness, housed in both the general population and administrative segregation. Controlling for pre-existing conditions, they found that all groups demonstrated improvement in their psychological distress over five time points, separated by three-month intervals. Therefore, not only did inmates with mental illness not deteriorate while in administrative segregation, but also their overall functioning improved (O'Keefe et al., 2010).

Similarly, Harding and Zimmerman (1989) found that after 60 days of detention, psychiatric symptoms of inmates declined relative to the level of symptoms at admission. However, the authors did not control for any pre-existing conditions. It is also important

to note that inmates could be placed in solitary confinement for administrative, disciplinary, or protective reasons and criteria for placement often vary from one prison system to another.

Conditions of confinement are shaped by the operational philosophy of prison administration, and substandard conditions that result from poor management can contribute to psychological distress. For example, qualitative examinations of inmate well-being show that inmate perceptions of arbitrary use of discipline could lead to higher stress regardless of inmates' individual characteristics (Toch, 1977; Vuolo & Kruttschnitt, 2008). In addition, violence in prison also leads to an increased sensitivity to threats, hypervigilance, and anxiety. This is especially evident for inmates who anticipate or experience victimization (Parisi, 1982; Toch, 1977; Toch et al., 1989). Moreover, uncertainty of release was also found to be associated with stress (Crewe, 2015; Goodstein, 1982; Irwin, 1980; Meisenhelder, 1985). Specifically, inmates who are serving indeterminate sentences experience more stress than inmates who are serving determinate sentences (Parisi, 1982). On the other hand, while some authors suggested that inmates are more likely to experience psychological and physiological stress in more crowded prisons (Bonta & Gendreau, 1990), there is no conclusive evidence that overcrowding is directly associated with negative behavioral outcomes (Steiner & Wooldredge, 2009).

The empirical studies on inmate well-being yield inconclusive findings regarding institution-level factors such as time spent in prison and types of housing. While strong evidence exists that inmates' emotional well-being changes over time, different studies showed conflicting evidence about the direction of the associations and rate of that

change (Gullone et al., 2000; Ireland et al., 2005). Likewise, studies have shown that housing in high security units does not have uniform effects on well-being across different inmate samples (Andersen et al., 2003; Grassian, 1983; O'Keefe et al., 2010). In conclusion, research reveals that institution-level factors exhibit different effects on different individuals, suggesting, again, that inmates' emotional outcomes are a result of both the environmental factors and personal characteristics.

2.1.4. Stress-Coping Model

One of the most utilized approaches to studying stress and the carceral experience is the stress-coping model developed by Lazarus (1966; Lazarus & Folkman, 1984). This perspective explains interactions between individuals and their subjective reality. Specifically, Lazarus (1966) maintains that the environment affects one's personality, emotions, and behavior, and if there is incongruence between individual characteristics and demands of the environment, the person is more likely to manifest negative behavioral and emotional responses (Lazarus & Folkman, 1984; Zamble & Porporino, 1988). Therefore, poor well-being results from coping ineffectively with the demands of the environment. Researchers whose studies are based on this framework used assessments of anxiety and depression as indicators of stress and assessments of coping as mediators of the relationship between the stressors and emotional responses (e.g. Brown & Ireland, 2006; Gullone et al., 2000; Zamble & Porporino, 1989).

The process of coping with stress starts with an environmental variable that represents a stressor that an individual perceives as threatening (Figure 2.1). In the context of prisons, the stressor can be incarceration itself, or various aspects of incarceration: violence, victimization, crowding, idleness, or daily hassles (food,

cellmates). Next, the individual assesses the level of threat and his or her personal capability to deal with the stressor. These assessments of threat and capability of handling the stressors are called primary and secondary appraisal, respectively (Lazarus & Folkman, 1984). Depending on personal characteristics (e.g. age, sex, race, education, family), different individuals may evaluate the situation as threatening or not and based on this evaluation they may predict if they can handle the situation or not. This cognitive evaluation of the situation is a critical variable in stress research because the way people perceive the environment will affect how they react to it (Lazarus & Folkman, 1984).

The relationship between the appraisal and the outcome is mediated by coping—a process through which the individual deals with stress (Lazarus & Folkman, 1984). Specifically, the choice of coping methods depends on how individuals perceive the situation. For example, individuals who perceive that they cannot handle a stressful situation may cope with it by using drugs, which may lead to reduced anxiety. Contrary, individuals who feel like they can control the situation may want to reduce the stress levels by working out, meditating, or seeking social support. If the perceived threat surpasses the coping abilities of the individual, or his/her coping skills are poor and ineffective, the individual will experience stress. Consequently, the final stage of the process includes the individual's response to such stress (Lazarus & Folkman, 1984).

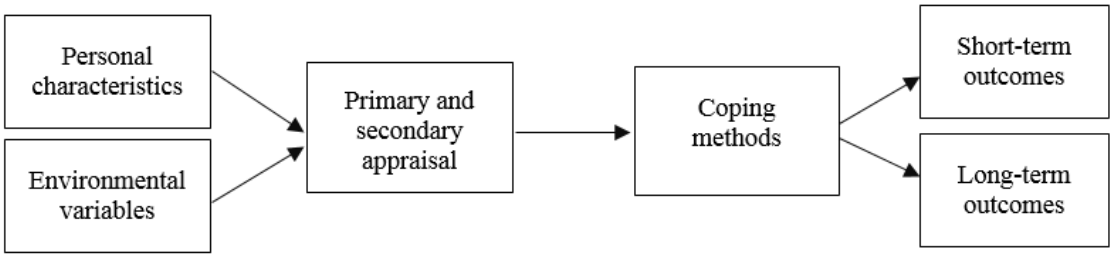

Figure 2.1. Stress-coping model (Lazarus & Folkman, 1984)

The end result of the process can be short-term or long-term outcomes. The short-term outcome is an affect or state of anxiety, and long-term outcomes include those related to psychological well-being, physical health, and social functioning (Lazarus & Folkman, 1984; Lazarus, DeLongis, Folkman, & Gruen, 1985). Therefore, stress is not a result of environmental conditions alone; rather it is a product of the individuals' assessment of "threatening" conditions and their ability to cope with such stress (Lazarus & Folkman, 1984; Lazarus et al., 1985).

Depending on the function of coping, coping with a stressful situation can be problem-focused and emotion-focused (Lazarus & Folkman, 1984). Coping methods are not necessarily healthy or pathological; in fact, the effectiveness of a particular coping method will depend on the type of the stressor, personal characteristics, and what outcome is being measured (Lazarus, 1993). Individuals can employ different coping strategies depending on the functions these strategies have. Therefore, coping functions are the goals a coping strategy aims to achieve (Lazarus & Folkman, 1984). For example, coping functions can include avoidance or escape from reality, reducing tension, or maintaining autonomy, but individuals can apply different coping methods in pursuit of any of these functions (Lazarus & Folkman, 1984).

While problem-focused and emotion-focused coping are general categories of coping strategies, Lazarus and Folkman (1984) argue that there are coping functions that are situation-specific. In that regard, Toch, Adams, and Grant (1989) describe different goals of behavior of incarcerated individuals: gratifying impulses, seeking refuge, enhancing esteem, pursuing autonomy, and maintaining sanity. A more detailed discussion of these and other goals is provided later in this chapter as part of the

discussion of inmate engagement in activities. For now, it is important to discuss problem-focused and emotion-focused coping as broader concepts applicable both inside and outside the prison walls.

The goal of problem-focused coping is to solve the issue that caused the stress (Lazarus & Folkman, 1984). For example, stress associated with taking an exam could be alleviated by studying for the exam. The goal of emotion-focused coping is to alleviate negative emotions that result from a stressful situation (Lazarus & Folkman, 1984). Van Harreveld and colleagues (2007) distinguished two different types of emotion-focused coping of inmates: 1) sharing one's negative feelings with others, i.e. seeking social support; and 2) cognitive emotion-focused coping where an individual tries to redefine the situation. Other methods of emotion-focused coping include avoidance of problem situations, venting anger, drug/alcohol abuse, and engaging in activities to get one's mind off a problem (Lazarus & Folkman, 1984).

While problem-oriented coping is often perceived as superior to emotion-focused coping because it addresses the source of stress, application of problem-focused coping is limited within settings like prisons where individuals have little autonomy (Thoits, 1995). More specifically, incarceration–the direct cause of stress for inmates–cannot be avoided and inmates often have little or no control over situations that may be stressful. Escape from prison or filing appeals in hopes of release or to alter the conditions of confinement would be examples of problem-solving attempts (Van Harreveld et al., 2007). On the other hand, we could consider indirect aspects of incarceration, such as deprivations of goods, services, security, and privacy, as stressors. In that case, inmates may engage in prosocial behavior and avoid misconduct to earn privileges or transfers to lower security

housing in order to reduce these deprivations. Nevertheless, inmates overall have little autonomy, resources, and opportunities to deal with their stressors directly. Therefore, we can argue that emotion-focused coping will be more prevalent in institutional corrections (Lazarus, 1993; Thoits, 1995).

In fact, Van Harreveld and colleagues (2007) found that half of the respondents in their study reported that they engaged in passive emotion-focused coping including wanting to be left alone, trying to shut out any thoughts, and watching television. Similarly, Zamble and Porporino (1988) found that more than half of the inmates they interviewed used problem avoidance, physical removal from situations, or not thinking about the problem, to cope with stress. However, only 18% of inmates reported that they use filling time as a coping mechanism and only 16% of inmates reported that they use problem-oriented coping. Surprisingly, more than 60% of inmates reported use of palliative coping (e.g. using drugs) (Zamble & Porporino, 1988). Leban, Cardwell, Copes, and Brezina (2016) similarly found that around 10% of the inmates in their study used avoidance of stressful situations or emotion-focused coping such as spending time alone, writing, drawing, or meditating, and physical activity.

The fact that so many inmates use palliative coping may be problematic because there is evidence that passive, avoidant, emotion-focused coping is associated with poor well-being (Van Harreveld et al., 2007; Ireland, Boustead, & Ireland, 2005; Gullone et al., 2000). In fact, compared to other methods, passive emotion-coping in inmates was found to be associated with poorer psychological and physical well-being, with feelings of guilt, fear, regret, depression, low self-esteem, anxiety, and overall distress (Ireland et al., 2005; Van Harreveld et al., 2007; Gullone et al., 2000).

An active type of emotion-focused coping is seeking social support from others. Having a limited social network and social isolation are associated with poor psychological and physical well-being (Thoits, 1995). When Maschi, Viola, and Koskinen (2015) interviewed a sample of elderly inmates, they found that the majority reported using social coping such as interactions with family or other inmates to deal with stress. This finding varies from the results of Zamble and Porporino's (1988) study and Leban and colleagues' (2016) study where only around 20% and 28% of inmates, respectively, sought help from others to cope with stress. Perhaps, seeking social support is more prevalent among elderly inmates who were in the minority in Zamble and Porporino's (1988) and Leban and colleagues' (2016) sample. Other researchers also found that seeking social support is associated with positive psychological and physical outcomes (Maschi, Viola, & Morgen, 2014; Van Harreveld et al., 2007).

In addition to social support, many inmates in Maschi et al.'s (2015) study reported that they use cognitive and spiritual coping (yoga, meditation, prayer). Cognitive-based coping such as emphasizing positive aspects of the situation was associated with better well-being and lower trauma and stress symptoms (Maschi et al., 2014; Van Harreveld et al., 2007). Spiritual coping was also associated with better overall well-being in elderly inmates (Maschi et al., 2014). Similarly, problem-oriented coping, although rare in prisons, was associated with lower levels of stress, depression, and anxiety, and high self-esteem and prosocial attitudes (Ireland et al., 2005, Gullone et al., 2000; Toch, 1977; Zamble, 1992). Cognitive and problem-focused coping are effective in dealing with stress for non-offender samples as well, while avoidance is related to negative psychological outcomes (Lazarus, 1993).

When individuals encounter situations that are perceived to be more severe, they employ multiple coping methods (Lazarus & Folkman, 1984). In fact, Maschi and colleagues (2015) found that almost two thirds of inmates reported using two coping methods and nearly one quarter reported using as many as nine coping methods. Furthermore, some authors observed how coping methods change over time (Brown & Ireland, 2006; Gullone et al., 2000). For example, Brown and Ireland (2006) attributed the improvement in psychological outcomes over time to reduced use of emotion-focused coping and an increase in the use of avoidance-focused coping. Specifically, qualitative properties associated with avoidance-focused coping—detachment and low emotional expression—helped inmates adapt to the stress of incarceration (Brown & Ireland, 2006).

This finding supports the norm of the inmate culture that "doing easy time" can be achieved by "minding one's own business" and "staying out of trouble." Similarly, Zamble and Porporino (1988) found that over time, the choice of coping methods does not vary, except for palliative coping, which increased between the first and the third interview over a period of 16 months. Moreover, Lazarus (1993) maintains that the choice of some coping methods (e.g. seeking social support) varies across different situations while the choice of other methods was consistent over different situations (e.g. cognitive reassessment).

The measurement of coping varies across studies. Zamble and Porporino (1988) identified and classified coping patterns from their interview data. The researchers presented three problems to each respondent and asked a series of questions about how the respondent manages the problematic situation. Aiming at non situation-specific coping behavior, Van Harreveld and colleagues (2007) asked their respondents what they

do to deal with negative feelings. Brown and Ireland (2006) used a Coping Styles Questionnaire (CSQ-3), which is designed to assess respondents' reactions to stress, including items such as "Try to forget the whole thing has happened" and "Try to find out more information to help make a decision about things." Similarly, Gullone et al. (2000) used the Coping Inventory for Stressful Situations (CISS) where the respondents had to report how much they engage in certain behaviors and reactions in stressful situations, for example "seek out a friend" and "get away from the situation."

2.1.5. Limitations and Gaps in the Literature

Some of the studies that examine psychological outcomes of inmate populations are limited in their methodology. First, some rely on rather small samples (e.g. Gonçalves et al., 2016; Hurley & Dunne, 1991; Van Harreveld et al., 2007; Zinger et al., 2001) or short follow-up periods when measuring effects of incarceration (e.g. Hurley & Dunne, 1991). Therefore, it is not clear whether the outcomes they identified are short-term effects, or they persist over the entire length of the sentence, or even after release. Moreover, different studies measured psychological outcomes at different time intervals, although there is no empirical evidence about the appropriate time lag—time necessary for a change in behavior to occur.

Furthermore, some studies (e.g. Harding & Zimmerman, 1989) did not control for any institution-level factors, or they controlled only for type of custody (e.g. Andersen et al., 2000; Zinger et al., 2001). It is important to account for other institution-level factors, such as access to treatment, recreation, or programing in assessments of the effects of incarceration on inmate well-being. Lastly, Andersen (2004) argues that most psychometric instruments used to evaluate the mental health of inmates are designed for

clinical settings or for the population outside correctional institutions, and many are not validated within the prison setting.

In addition to evaluating the objective conditions of incarceration, it is important to examine how inmates' perceptions of confinement affect their adaptation, but the number of studies that examine subjective evaluations of the environment is limited (e.g. Parisi, 1982; Wright; 1991). As suggested by Lazarus and Folkman (1984) and discussed above, it may be that the same prison conditions will have a different effect on different individuals. For example, some inmates may regard a lack of programing as stressful, while others will not be affected by it. Thus, there is a need for more research that examines the effects of inmates' perceptions of deprivations and strains of confinement, instead of relying only on objective properties of the environment. In fact, the role of cognition in correctional well-being research is yet to be recognized. As Greek philosopher Epictetus stated: "Men are disturbed, not by things, but by the principles and notions which they form concerning things" (2012, p. 2).

Finally, while some studies that examine the effects of confinement employ the coping framework to explain the mechanisms through which the change is achieved (e.g. Gullone et al., 2000; Zamble & Porporino, 1988), many studies do not examine the underlying processes that lead to poor well-being, rather, they only investigate how time spent in prison is associated with well-being. Coping skills that have been examined, moreover, include a limited number of behaviors (e.g. avoidance, seeking social support), and do not include the full range of activities inmates may undertake in order to cope with incarceration. Therefore, it is important to examine the possible mediating effects of a full range of coping efforts to understand more completely how the environment

interacts with individuals and their well-being. The prison environment is characterized by specific rules and routines that shape how inmates experience their time in prison. I discuss the aspects that are concerned with inmates' routines and experiences in the next section.

2.2. Inmate Time Utilization

2.2.1. Introduction

In this section, I focus on how inmates perceive their time in prison in terms of idleness and boredom, orientation towards the future, and preparing for release. I also review how inmates spend their free time and why they engage in certain activities, with a focus on formal activities such as programing and work as well as informal or leisure activities. Here I examine various individual and environmental factors that are associated with different time utilization patterns. Gaps in the current literature and limitations of these studies are also examined in the last portion of this section.

In anticipation of release, time is an unavoidable component of one's prison experience; it is a subjective and objective measure of one's existence as a prison inmate. Incarcerated individuals perceive time—past, present, and future—differently than free-world citizens. There are several reasons for these incongruities. Based on life-histories of medium security inmates, Meisenhelder (1985) concluded that time is perceived as a burden rather than a resource in prison because it is characterized by constant waiting to be released. Crewe, Hulley and Wright (2016) found that long-term male and female inmates they interviewed in the United Kingdom use fixed points in the future to calculate their time, such as transfers to lower-security institutions, halfway point of the sentence, or having only "single figures" remaining. As a result, many inmates do not

plan their time but instead they live moment-by-moment throughout their entire prison term (Flanagan, 1981; Zamble & Porporino, 1988). Furthermore, constant anticipation of visitors and letters from the free world adds to their strain by subjectively slowing time down (Meisenhelder, 1985).

For some inmates incarceration decelerates time, while for others, it suspends it. When Sexton (2012) interviewed inmates in Ohio state prisons, they reported struggles with "owning time" because they felt that their punishment is stripped from temporality. In other words, inmates felt like they do not have control over their time in prison because objective measurements of the time left to serve in years, months, and days has little meaning for these inmates. Similarly, Crewe and colleagues (2016) found that inmates often lack capacity to conceptualize their own future at the beginning of their sentences. For this reason, inmates engage in various activities and follow institutional routines and personal schedules to "mark time" (Crewe et al., 2016; Meisenhelder, 1985). More specifically, they use the schedule of work, leisure, eating, and sleeping to distinguish one moment from another (Crewe et al., 2016; Meisenhelder, 1985).

While in prison, inmates can engage in various licit and illicit, formal and informal activities. A typical schedule of prison routines starts early in the morning after inmates wake up, make their beds, and have breakfast. After breakfast, general population inmates who do not work or participate in educational or vocational programs stay in their cells or dayrooms, while others spend several hours in programing (Austin & Irwin, 2012; see North Carolina Department of Public Safety, 2012). Although the majority of inmates participate in formally structured programs such as work or education, a large portion of an average day remains unstructured (Austin & Irwin, 2012;

Batchelder & Pippert, 2002; Bureau of Justice Statistics, 2004; Irwin, 1980; Zamble & Proporino, 1988). The amount of time spent in work averages around 3 to 4 hours per day and rarely exceeds 6 hours of a workday (Batchelder & Pippert, 2002; Glaser, 1969; Steiner & Wooldredge, 2008, Zamble & Porporino, 1988).

Work schedules in modern prisons are quite different from those in early penitentiaries. For example, in a 19th century prison the "House of young prisoners in Paris," inmates worked 9 hours per day after which they spent 2 hours in religious instruction (Foucault, 1977). Penal labor was a main characteristic of early prisons of the 18th and 19th centuries because of the belief that idleness and laziness were leading causes of crime—work was corrective (Foucault, 1977; Giallombardo, 1966). The first American prison, the Walnut Street Jail, also included compulsory work in workshops and a strict schedule. The rationale for the principle of work was that men should not waste time that is "counted by God and paid for by men" (Foucault, 1997, p. 152).

Even in the Texas prison system in the 1970s, labor, especially fieldwork, was the main activity inmates participated in (Crouch, Marquart, & Marquart, 2010). Inmates were required to work up to eleven hours a day, sometimes late into the night (Crouch et al., 2010). In fact, work in agriculture has been a characteristic of most institutions in southern states since the early 1800s (McPherson, 2003). Additionally, it was common practice following the civil war for inmate labor to be leased to private business owners (Ayers, 1985). While hard labor and penal servitude today are deemed a violation of contemporary standards of decency, some argue that prolonged idleness and isolation can also be detrimental to inmates' well-being (Haney, 2003). Before examining the effects

of idleness on well-being, it is important to understand to what extent inmates experience idle time and boredom.

2.2.2. Inmate Experience of Time

Idleness. Inmates feel like they do not have control over their time and because of that, they maintain that it is easier to "do time" by passing through it, rather than using it (Sexton, 2012; Zamble & Porporino, 1988). In other words, it is easier to engage in activities that help inmates forget the reality than to be aware of time by trying to use it constructively. While many inmates at the beginning of their sentences report having a goal they want to achieve during their prison term (e.g. obtaining education or behavioral change), this enthusiasm decreases as time passes with the majority reporting that they experience boredom (Zamble & Porporino, 1988). This desire for self-improvement at the beginning of the sentence may be a product of the mindset that does not significantly diverge from the values of the outside world, before fully accepting the antisocial nature of the prison world (Clemmer, 1940). Nevertheless, there are inmates who truly see prison as an opportunity to turn their lives around (Comfort, 2008; Visher & Travis, 2003).

However, even when inmates do engage in formal programing for self-improvement or other reasons, they still have a lot of unstructured time. They have free time on weekends and after their work or programing ends on weekdays (Cope, 2003; Hassine et al., 1996; Irwin, 1980; Owen, 1998). In an average week, around 40% of their waking time is free (North Carolina Department of Public Safety, 2012; Clemmer, 1940). This is twice as long as the average free time free citizens have—around 20% of an average day (Kelly, 2012). During their free time, inmates may engage in semi-structured

recreational activities or spend time idle or in aimless pursuits. Specifically, some inmates socialize, play cards or chess, or watch TV in the dayrooms, some retreat to their cells or cubicles, while others spend their free time in the recreation yard (Austin & Irwin, 2012; Hassine et al., 1996). In fact, inmates engage in these activities for many different reasons but often they do so to avoid "enforced idleness" (Owen, 1998; Selke, 1993).

Enforced idleness is, to a certain extent, a byproduct of institutional policies and availability of resources for leisure, but it is also the subjective experience of an individual. For example, inmates feel that time passes slowly at the beginning of their sentence and this constant consciousness about incarceration is usually experienced as "hard time" (Irwin, 1980; Meisenhelder, 1985; Owen, 1998; Toch, 1977; Trammell, 2009). Because time passes slowly, inmates' awareness about being idle intensifies (Flanagan, 1981; Meisenhelder, 1985). Doing time becomes easier in the middle phase of the sentence when inmates are mostly enmeshed in daily routines and the prison social world (Clemmer, 1940; Irwin, 1980; Wheeler, 1961). This engagement in daily routines alleviates idleness and helps inmates do "easy time," even if these activities are aimless and unstructured.

The experience of doing "hard time" is more prevalent among young offenders (Feld, 1999). Because juveniles do not possess the same cognitive capacity to appreciate future time, they subjectively experience time differently than adults (Piaget, 1971). Additionally, juveniles experience their prison sentences as more severe because, just like adult inmates at the beginning of their sentence, for juveniles the entire sentence seems to pass more slowly (Feld, 1999). Moreover, young offenders are more involved in risk-

taking activities, and the lack of the opportunities for such sensation seeking may enhance their experience of idleness and "hard time" (Zuckerman, Eysenck, & Eysenck, 1978). This notion of doing "easy" or hard "time" was recognized in classical accounts of the social world in prisons and has been attributed to minding one's own business and having one's own routine (e.g. Clemmer, 1940; Irwin, 1980; Toch, 1977).

Future orientation and preparation for release. Experiencing idleness is often accompanied by feelings that an individual is wasting his or her time in prison and that time is futureless (Cope, 2003; Cressey & Galtung, 1961; Meisenhelder, 1985). Because of rigid daily routines in prison, the near future is predictable, and the future in the free world seems too far to be attainable, endless, and without hope (Crewe et al., 2016; Meisenhelder, 1985). Therefore, the schedule of formal routines leads to patterned behavior characterized by certainty in roles and expectations (Cressey & Galtung, 1961). In addition, administrative decisions regarding inmate classification, treatment, and release are largely based on inmates' past and present behavior, so the future appears meaningless (Welch, 1991). Crewe and colleagues (2016) found, however, that inmates who are past the early phase of their sentence start realizing that they should focus on their future, rather than ruminating about the past, a shift that results in perceiving time more as a resource than a burden. Even though many inmates may not attribute much meaning to their future, Zamble and Porporino (1988) found that more than half of the inmates they interviewed think about the future most of the time or all of the time. However, the content of these contemplations about the future is unknown. Similarly, Carvalho, Capelo, and Nuñez (2015) found that Portuguese inmates in their sample

thought about the future constantly, but these thoughts were accompanied by feelings that their lives were suspended.

Not only do inmates think about their future, but they also discuss their plans with other inmates (Irwin, 1970). Still, Irwin (1970) argues that many plans that inmates discuss with one another are not genuine, rather they are clichés or vague. In fact, inmates often have unrealistic expectations about their release because their current prison experience is so different from the free world (Carvalho et al., 2015). Uggen, Manza, and Behrens's (2004) study showed similar findings: offenders who were incarcerated perceived themselves in more idealized roles (model parents, leadership roles in the community) compared to offenders who were under community supervision. They concluded that offenders can be naïvely optimistic about their reintegration (Uggen et al., 2004). While long-term inmates do not tend to develop future plans, for those who do create realistic plans for their future, the key objectives of their re-entry are behavioral change and adherence to conformist values (work, family, social integration) (Carvalho et al., 2015).

Although commitment to planning for the future varies with the length of the sentence, it also varies over one's prison term (Carvalho et al., 2015). Because they are mentally the closest to the outside world at the beginning and close to the end of their prison sentence, inmates are more eager to make concrete plans about release during these two time periods (Irwin, 1970; Seim, 2016). This planning corresponds to the U-shaped curve of prisonization indicating that when inmates are closer to release, they gradually abandon the antisocial values of the inmate culture and start adopting the conformist values characteristic of the free world (Cormier et al., 1967; Wheeler, 1961).

In addition, this finding is in agreement with Zamble and Porporino's (1988) discovery that at the beginning of a sentence, inmates have the greatest desire for self-improvement, indicating a greater adherence to free-world values.

Many inmates have concerns about life after release, especially at the beginning of the prison term (Zamble & Porporino, 1988). Studies have shown that these concerns are usually associated with finding stable housing and employment, especially for those without social support (Castellano & Soderstrom, 1997; Nelson, Deess, & Allen, 1999; Seim, 2016; Visher & Travis, 2003). Even though many inmates experience some level of pre-release planning during their imprisonment, rarely are pre-release plans tailored based on each individual's needs (La Vigne, Davies, Palmer, & Halberstadt, 2008; Nelson et al., 1999). Even without having formal support in release planning while incarcerated, some inmates will act strategically and engage in whatever activities necessary to be released as soon as possible, such as participating only in programs that count towards earning good time credits (Irwin, 1970; Seim, 2016).

In addition to these concerns, inmates also have worries about their reoffending. Nelson and colleagues (1999) maintain that many offenders believe they do not have enough control over their behavior, and therefore, they are not sure if they will be successful in desisting from offending. Schaefer (2016), on the other hand, found that more than 80% of inmates reported that it would be easy to stay out of prison or avoid technical violations. Overall, however, inmates report that they do not want to go back to prison (Irwin, 1970; Nelson et al., 1999). When Comfort (2008) interviewed California inmates, she also found that they want to desist, but they attribute their rehabilitative efforts to individual self-improvement, rather than to programing or professional

assistance. A greater self-reported likelihood of recidivism is present among inmates with lower education, single inmates, and those without children (Schaefer, 2016). Inmates, it would appear, are aware they face obstacles during reentry because of not having education and social support.

2.2.3. Inmate Engagement in Activities

Formal activities and programs. The majority of inmates engage in some kind of work while incarcerated (Bureau of Justice Statistics, 2004). Although inmates do not have a right to work, in most cases they are not able to refuse to work because of occasional benefits and privileges it provides (Walens, 1997; see e.g. Washington State Department of Corrections, 2016). Moreover, inmates choose to work because it provides a source of income, a sense of temporary freedom, good time credit, and access to certain items and services (Batchelder & Pippert, 2002; Glaser, 1969). In fact, around 60% of state inmates report having a work assignment, and 37% of state inmates report having paid work (Bureau of Justice Statistics, 2004). The majority choose to work additional hours even if no additional pay is offered, indicating that work serves to relieve idleness for many inmates (Batchelder & Pippert, 2002; Stephan, 2008). Because wages are generally low, however, many inmates do not take pride in work they do (Irwin, 1980). They also argue that the skills developed in prison often have low value in the free world (Clemmer, 1940; Meisenhelder, 1985; Selke, 1993).

Prison work is organized in three areas: institutional maintenance/service tasks, prison industry, and agriculture (Flanagan, 1989). The most common job opportunities are prison facility support in maintenance which include work assignments in laundry services, outdoor maintenance, food preparation, cleaning, painting, plumbing, electric

repair, and other areas (Flanagan, 1989). Around three quarters of state and federal institutions offer such employment (Stephan, 2008). Allowing inmates to work on maintenance tasks not only saves on costs of operating prisons, but it also teaches inmates skills, promotes their self-worth, and provides them with a sense of responsibility (Flanagan, 1989).

Inmates employed in prison industry programs in state facilities work in manufacturing of various types of products such as furniture, clothing, license plates, and printed materials, or in areas such as data entry, agriculture, construction, electronics, vehicle repair, and dog training (Corrections Compendium, 2002). Similarly, UNICOR, the prison industry program available in federal institutions, provides many vocational and employment opportunities for federal inmates, including working in logistics, data entry, electronics, food preparation, production of office furniture, supplies, and other areas (UNICOR, 2016). Approximately 1 in 3 of state and federal institutions offer prison industry programs (Corrections Compendium, 2002) and 16% of facilities offer work in agriculture (Stephen, 2008). In addition, some state and federal facilities offer work-release programs and public works programs (Stephan, 2008; Washington State Department of Corrections, 2016).

Inmates not assigned a job are enrolled in educational or vocational classes, unless medical reasons or disabilities prevent them from doing so (Batchelder & Pippert, 2002). Inmates who refuse to work or to participate in education or training have reduced access to amenities and privileges (see e.g. SCDC, 2013). Providing educational programs for inmates is important because almost 70% of state inmates are high school dropouts (Batchelder & Pippert, 2002). Therefore, inmates who have not finished

elementary or high school have an opportunity to obtain their education in prison, and in some institutions, inmates are paid while they attend mandatory educational classes (Batchelder & Pippert, 2002). The majority of states offer GED classes, almost all offer adult basic education, and all federal and approximately half of state prisons offer various vocational programs (Harlow, 2003; Hill, 2008). Despite the availability of basic education programs, only around half of state inmates reported participating in at least one education course during their incarceration (Harlow, 2003).

Outside their time in work or education, inmates can enroll in other administration-sponsored programs. For example, they can participate in religious and spiritual practices including yoga and meditation (Courtenay & Sabo, 2001; Perelman et al., 2012; Thomas & Zaitzow, 2006; Walens, 1997). Virtually all federal prisons incorporate some religious programs for various faiths. In state prisons, 70% of women and 54% of men reported participating in religious activities such as worship service, Bible study, or prayer and they spend on average 30 minutes a day in these activities (Bureau of Justice Statistics, 2004; Crittenden, 2013; Camp, Daggett, Kwon, & Klein-Saffran, 2008; Vuk & Sevigny, 2016).

Other administration-sponsored activities offered to inmates include arts and hobby craft (e.g. ceramics, knitting, and woodworking), music programs, intramural sports activities, social and cultural organizations, and movie screenings (Bureau of Prisons, 2008; Walens, 1997). Psychological and treatment programing is also available, including programs for substance abuse, skill-based programs, behavior management programs, family therapy, therapeutic communities, and re-entry preparation programs (Silva & Hartney, 2012; Walens, 1997). The highest proportion of inmates participate in

self-help or peer-counseling groups, but the percentage is low for both males and females (25% and 28%, respectively) (Crittenden, 2013).

The "tough-on-crime" movement led to a reduction in spending on treatment programs, correctional amenities, services, and inmate privileges, in addition to other reforms that hindered rehabilitative efforts of prisons (Johnson et al., 1997; Wunder, 1995). Consequently, due to overcrowding and budget constraints following from this punitive approach, spending on security was prioritized over investment in rehabilitation programs, including correctional recreation (Cullen, Fisher, & Applegate, 2000; Wunder, 1995). The lack of emphasis on rehabilitation mirrored a decline in the number of programs and services, and in the number of inmates who participated in various programs, a situation that is still evident today (Grattet, Petersilia, Lin, & Beckman, 2009; Petersilia, 2003).

Informal activities and routines. From the discussions about idleness and limited availability of correctional programs, it is apparent that inmates have to spend a significant amount of time participating in informal and unstructured activities. Glaser's (1969) study of the effectiveness of federal prisons and parole was the first analysis that quantified time spent in different pursuits. Glaser (1969) found that inmates spent between 2 and 5 hours a day in recreation and leisure, including arts, hobbies, physical exercise, playing sports and games, watching TV, and listening to the radio. Additionally, federal inmates spent up to 2 hours in reading and writing and up to one hour talking to other inmates (Glaser, 1969).

More recently, in their study of coping and adaptation of inmates in Canada, Zamble and Porporino (1988), found that inmates mostly spent their free time in

unstructured activities such as socializing (3.7 hours/day), and watching TV and listening to the radio or music (2.9 hours/day) (Zamble & Porporino, 1988). Overall, inmates spend more than 6 hours a day in these largely unstructured activities and the rest of their time was spent participating in semi-structured activities such as hobbies and sports (1.7 hours/day), writing letters and visitation (0.8 hours/day), and other activities (Zamble & Porporino, 1988). Similarly, using the Bureau of Justice Statistics (2004) Survey of Inmates in State and Federal Correctional Facilities, Vuk and Sevigny (2016) found that American inmates reported spending almost 5 hours in leisure such as reading and watching TV, and less than an hour in hobbies, arts, crafts, and playing games.

When they engage in more or less unstructured activities, many inmates choose to be alone in their cells. While the amount of time spent alone increases the longer they are in prison, the choice of activities does not significantly change during one's incarceration (Clemmer, 1940; Hassine et al., 1996; Zamble & Porporino, 1988). Interestingly, these largely unstructured time patterns in prison are not much different from the patterns of idleness and directionless activities before incarceration (Cope, 2003; Zamble & Porporino, 1988). However, even though based on the previous and largely dated literature we know that most inmates have considerable unstructured time, it is not clear to what extent this occurs in American prisons today.

Unlike watching TV or reading, organized physical exercise provides more structure because inmates are, to some extent, monitored by staff when exercising, and group sports activities are scheduled by the administration. Many inmates engage in sports such as basketball, volleyball, bocce, or football or participate in physical activity at the gym and on average, inmates spend around 1 hour in physical exercise a day

(Bureau of Prisons, 2008; Sabo, Kupers, & London, 2001; Vuk & Sevigny, 2016). Physical exercise is an important component of serving time in male prisons (Bureau of Justice Statistics, 2004; Crittenden, 2013; Zamble & Porporino, 1988), but not as much in women's prisons (Crittenden, 2013; Kratcoski & Babb, 1990). In fact, 61% of male inmates reported participating in physical exercise, while only 38% of women in state and federal facilities reported engaging in exercise (Crittenden, 2013; Wooden & Parker, 1982). The fact that males are more likely to engage in physical activities reflects the intense emphasis on strength and machismo in male prisons (Sabo et al., 2001; Wooden & Parker, 1982).

All these activities listed above are commonly referred to as correctional leisure or recreation activities. However, they are not leisure activities by its definition because associated pleasure and free choice of the activity is absent in correctional settings (Link & Williams, 2015). Strictly speaking, leisure is any activity that is "chosen in relative freedom for its qualities of satisfaction" (Kelly, 2012, p. 3). Therefore, if an inmate participates in a certain activity only to pass time, without having free choice and without enjoying the activity, such engagement would not qualify as leisure (Kelly, 2012). Nevertheless, the recreation opportunities inmates have are the closest to leisure there is in correctional settings today.

Although prison administrators recognize inmates' need for leisure (Wunder, 1995), the availability of resources for leisure and recreation has been reduced following the introduction of more punitive practices associated with "tough-on-crime" reforms. Specifically, in the early 1990s, more than 60% of inmate privileges and recreational opportunities were eliminated across the country (Wunder, 1995). Many states, including

South Carolina, passed laws that restricted inmate access to recreational activities (Johnson et al., 1997). The so-called "no frills" laws eliminated many recreational opportunities including free weights and movie rentals, while access to TVs and radios was limited (Wunder, 1995). In addition, many institutions abolished holiday and family events, organizations and clubs, or they offered fewer programs and less contact with the outside world (Wunder, 1995). Simultaneously, recreational opportunities were restricted in federal institutions. The Zimmer Amendment, which passed in 1996, restricted inmate access to movies, training for martial arts, bodybuilding or weightlifting equipment, and musical instruments (Bureau of Prisons, 2008).

The lack of leisure opportunities often drives inmates to seek other ways to pass their time and prevent idleness, sometimes by engaging in the underground economy (Beauregard & Brochu, 2013). The underground economy in prison includes production, use, and sale of legal and illegal drugs, food, alcohol, appliances, cell phones, clothing, weapons, commissary, and other items (Bui & Zapotsky, 2015; California Council on Science and Technology, 2012; Kalinich, 1986; Shaffer, 2014). It can also include sale of services such as transfers to other housing units and providing protection to vulnerable inmates, or doing laundry and ironing in women's prisons (Grosholz, 2014; Kalinich, 1986; Owen, 1998).

The proliferation of gangs in contemporary prisons changed the dynamics of the underground economy (Grosholz, 2014; Hunt, Reigel, Morales, & Waldorf, 1993; Trammell, 2009). In California prisons, for example, gangs control drugs, pornography, cigarettes, and prostitution (Trammell, 2009). The increase in the number of gang members is in part caused by recruitment of inmates who need protection or money

(Grosholz, 2014; Hunt et al., 1993). Improvement in security measures in contemporary prisons did not slow down the spread of gangs. In fact, modern technology facilitates the activities of the underground market. For example, the use of cell phones and civilian drones not only helps street gangs conduct illegal business, but also contributes to illegal activities within prisons (Bui & Zapotsky, 2015; California Council on Science and Technology, 2012; Shaffer, 2014). Cell phones are contraband, but many inmates use cell phones to communicate with family and friends outside of prison or for entertainment. Cell phones have also been used for activities such as drug dealing, gang operations, victim harassment, and organizing other criminal activities (California Council on Science and Technology, 2012; U.S. Government Accountability Office, 2011).

Gambling is another common illegal activity. Gambling can involve betting on a wide variety of matters, such as sporting events, card games, or even physical challenges that inmates impose on one another (Williams & Hinton, 2006). The currency used in gambling are commissary or other goods (e.g. money, cigarettes, food), or services (e.g. cleaning another inmate's cell) (Clemmer, 1940; Kalinich, 1986). Individuals who are intensely involved in underground activities tend to organize their entire prison experience around securing goods while cutting off any ties with the outside world. Irwin (1980) refers to these inmates as "jailers." Just like gang members who continue with their illegal business in prison without being restricted by the lack of freedom, for "jailers," incarceration is a part of their ordinary life (Irwin, 1980; Sexton, 2012).

Environmental factors. Inmate time utilization depends on various personal and environmental factors. While individual characteristics shape motivational factors for engagement in different activities, the way inmates use their time will be contingent upon

the resources available in their immediate environment and the level of control exerted on them. Specifically, inmate time use depends on the security level of the institution, facility design, custody level of the housing unit, and the associated level of privileges inmates have. Prisons vary greatly in the extent to which inmates are allowed to leave and enter cells freely or have access to dayrooms or other group facilities (Glaser, 1969; see Washington State Department of Corrections, 2014). To identify periods of time when inmates are allowed to move freely from one location to another; staff members use callout systems (e.g. Michigan Department of Corrections, 2016; Washington State Department of Corrections, 2014). In addition, in order to monitor inmate movement and account for their whereabouts, head counts of inmates are administered throughout the day, often interrupting inmates in their activities (Austin & Irwin, 2012).

Overall, inmates housed in institutions and units of lower security have more freedom of movement, and they are allowed to participate in more recreational activities compared to inmates housed in higher custody units (Austin & Irwin, 2012; Glaser, 1969; Haney, 2003). For example, in the five federal prisons that Glaser (1969) examined, the greatest amount of leisure time was available in "honor" or minimum-security units, and time was largely spent in watching TV, listening to the radio, or playing cards. While Glaser's (1969) findings may be valid for federal prisons of the 1960s, Crittenden (2013) found that differences in participation in recreational activities across different security levels are not that obvious. She found that inmates in medium security prisons are more likely to participate in watching TV and other recreational activities (other than physical exercise), compared to inmates in minimum or maximum-security prisons (Crittenden,

2013). Participation in physical exercise was similar across prisons of different security levels (Crittenden, 2013).

The percentage of inmates participating in different activities is not the most efficient indicator of how inmates structure their time because the overall availability of programs and leisure activities is unknown. It may be that the choice of recreational programs is limited in higher security prisons, but because these programs are the only avenues for passing time, more inmates use them to avoid being idle. Whereas in lower security prisons, where freedom of movement itself provides inmates with a sufficient amount of leisure, inmates are not pressured to use facility-sponsored activities so the percentage of participating inmates is lower.

It is also unknown what proportion of free time inmates spend in structured leisure compared to unstructured aimless activities depending on different security levels. In other words, does greater freedom in lower security prisons mean more time in unstructured and aimless pursuits? Or is idle and unstructured time more prevalent in higher security prisons because of restricted access of inmates to programs or services? Therefore, the question about how a full spectrum of activities varies across different security levels remains unresolved.

This discussion about the structure of free time applies to inmates in general population housing. Inmates in segregated housing (especially in administrative and disciplinary), however, are usually excluded from much of the normal programing, recreation, resources, visitation, and group activities that are available in general housing (Haney, 2003; Shames, Wilcox, & Subramanian, 2015). Therefore, they are exposed to long periods of idle time (Haney, 2003; Labrecque et al., 2015). They may not even be

required to wake up at a given time, and their contact with other inmates and correctional officers is limited or almost non-existent (Owen, 1998; Selke, 1993). Furthermore, they may spend their day occupied only with items they are allowed to have in their cell, e.g. writing letters or reading books (Labrecque et al., 2015; Owen, 1998).

Inmates housed in jail and classification/diagnostic units are often idle because their pre-adjudication or classification status prevents them from having full access to correctional resources and programing (Hassine et al., 1996). Time utilization can vary depending on jurisdiction as well. For example, compared to state prisons, federal prisons usually have more funding and recreational resources to occupy inmate time (Glaser, 1969; Johnson, 2001; Johnson et al., 1997). Nevertheless, each institution is unique and in those that are lacking resources for recreation, inmates tend to spend their time in passive and unstructured activities (Aguilar & Asmussen, 1990; Frey & Delaney, 1996).

Individual-level factors. In addition to the institutional features that are associated with time use, people of different ages, gender, class, family status, and criminal histories choose to engage in different activities. Motivation for engagement in different activities has not been explicitly investigated in correctional research; rather, researchers tapped into some motivational factors while examining other aspects of incarceration. For example, the researchers of the inmate code tried to understand the inmate social world as a manifestation of an inmate (sub) culture (e.g. Clemmer 1940; Grosholz, 2014; Hunt et al., 1993; McGuire, 2011; Sykes, 1958). Furthermore, some scholars tried to identify key concerns inmates have regarding their environment which guide their behaviors (Flanagan, 1981; Toch, 1977; Toch, Adams, & Grant, 1986). Lastly, others indirectly examined these behavioral patterns when investigating how

inmates cope with incarceration (e.g. Gullone et al., 2000; Maschi et al., 2015; Van Harreveld et al., 2007).

Since I believe that these three perspectives (i.e. the inmate social world, the environmental concerns, and the coping research) are complimentary, I integrate them in this overview in order to provide a more complete picture of both social and psychological factors that are associated with time utilization. Therefore, I examine the relationship between individual characteristics of inmates and time use as mediated by inmate culture and various motivational stimuli. These motivational factors include maintaining privacy, escaping from reality, ensuring safety, enhancing peer status, maintaining autonomy, self-improvement, and seeking social feedback (Flanagan, 1981; Toch, 1977; Toch et al., 1986). I treat these seven aspects as main functions of coping with the stress of incarceration. In other words, these concepts refer to the purpose that engagement in a certain activity serves (Lazarus & Folkman, 1984). For example, some individuals may engage in physical activity to enhance their self-esteem, while others may exercise because they want to socialize with other inmates while doing so. It is important to examine these motivational aspects of time utilization, i.e. coping functions, because they may have different influence on one's well-being (Lazarus & Folkman, 1984).

Privacy. Maintaining privacy is important for both male and female inmates (Giallombardo, 1966; Toch et al., 1986; Owen, 1998; Toch, 1977). In order to secure privacy, many inmates opt out of the public life by not spending time on the yard, dining area, or other areas of prison where they are the most exposed to the scrutiny of other inmates and prison personnel (Glaser, 1969; Owen, 1998). Some inmates avoid public

exposure by not participating in programs or even by avoiding illicit activities (Owen, 1998). Therefore, to maintain privacy often means to evade social and physical stimulation. Housing in single cells can help maintain privacy by minimizing contact with other inmates and correctional officers. In the context of coping, these strategies either have a function to avoid stressors or to alleviate negative emotions associated with stress (Ireland et al., 2005; Van Harrveld et al., 2007).

By staying in their cells while reading, studying, or partaking in hobbies, inmates seek refuge in their solitude and limit social stimulation (Toch & Adams, 1986). Some even isolate themselves by using earphones and listening to music (Owen, 1998). Inmates who request to be housed in protective custody because of prior or anticipated experiences with victimization will experience more isolation (Parisi, 1982). As contemporary prisons are more crowded as a result of "tough-on-crime" policies, maintaining privacy has become more challenging, especially where double celling and dormitory housing is more common (Newman & Scott, 2012).

Withdrawal into privacy does not have to be entirely an asocial strategy. Inmates can withdraw from the public arena into niches: the worlds they create for themselves (Toch, 1977). Niches can be physical spaces or they can include a small number of friends who manifest the same level of concern for privacy (McCorkle, 1992; Parisi, 1982; Toch, 1977). Niches serve as social or physical sanctuaries where inmates can relax from stress and establish mental balance (Farber, 1944; Toch, 1975; 1977). Having a niche means avoiding unsafe environments and individuals (Toch, 1977). Inmates who have prior prison experience, inmates who serve long sentences, older, white inmates, and inmates with limited verbal and social skills are in greater need for privacy and are

more likely to secure niches (Farber, 1944; Flanagan, 1981; Johnson, 2001; McCorkle, 1992; Toch et al., 1986; Zamble, 1992). Perhaps these groups of inmates choose private environments because, compared to younger inmates, the older inmates and inmates with limited cognitive skills process external stimuli differently. For them, long-term stimulation may result in agitation (Feld, 1999).

Escape. While some create physical and social niches in prisons, other inmates escape prison reality by using drugs or alcohol or by spending their free time sleeping (Cope, 2003). This passive coping method usually reflects the individual's behavior before incarceration that was geared towards anesthetizing pain (Gullone et al., 2000; Ireland et al., 2005; Toch, 1977). However, such escapism also suspends time and one's "free world" identity (Cope, 2003; Sexton, 2012). In fact, Sexton (2012) found that some inmates not only suspend their own identity, but their entire lives. For them, life outside the prison operates in real "reality," while their lives in prison are on pause. Their real lives will then resume when they are released (Sexton, 2012).

Having mental illness or taking prescription drugs for mental illness can also detach inmates from reality. Lord (2008) found that many mentally ill females often fall asleep in classrooms due to their medication, while those who are un-medicated or under-medicated are sometimes unable to distinguish reality because of their illness. Nevertheless, escaping reality in this case is rooted in mental illness and inmates do not willingly choose mental illness as a method of escape. Therefore, one might argue that it cannot be considered a motivational factor because it is not a volitional catalyzer of the inmate's behavior.

Another passive, yet effective, way to escape reality is daydreaming (Hassine et al., 1996; Meisenhelder, 1985). Daydreaming provides a sense of future and freedom from constrains and challenges of confinement. Inmates fantasize about a better life, sex, or the future (Clemmer, 1940). In fact, daydreaming is the closest thing to an activity that is virtually always leisure (Kelly, 2012). Those who are fully engaged in daydreaming serve their sentence in a stupor-like state (Clemmer, 1940; Meisenhelder, 1985). Although inmates who daydream are more likely to do so in isolation, group fantasies are not rare (Irwin, 1980).

In addition to daydreaming, other activities can provide a diversion from reality. For example, reading newspapers and books, gambling, watching sporting events or movies can all serve as an escape mechanism (Clemmer, 1940). In fact, inmates often report that they engage in different routines and leisure activities simply to pass their time (Flanagan, 1981; Owen, 1998). Actually, the quality or type of activity is not important as long as the activity reduces the tension caused by idleness. Csikszentmihalyi (2008), a psychologist who studies creativity and intrinsic motivation, argues that under certain circumstances, individuals enter a state of "flow" while engaging in an activity (e.g. watching TV), and they can be so immersed and absorbed by the activity that they ignore the other aspects of the reality (e.g. time or being hungry) (Csikszentmihalyi, 2008; Kubey & Csikszentmihalyi, 1990). This notion reflects the key characteristic of passive emotion-focused coping (Lazarus & Folkman, 1984).

Therefore, inmates do not participate in these activities because of their intrinsic worth or to gain skills or knowledge, rather, they participate in these pursuits to make the current situation more tolerable (Meisenhelder, 1985). Time passes more quickly when

an individual is exposed to a stimulating environment because engagement in engrossing routines relieves stress (Cressey & Galtung, 1961; McCorkle, 1992; Toch, 1977). Younger inmates are more likely to pass their time by spending hours in mindless activities such as watching television, whereas long-term inmates pass their time in more goal-oriented activities such as crafts, reading, or writing (Flanagan, 1981). Inmates with a history of violent offenses, older, and those with longer sentences particularly value routines and stability of the prison environment (Toch, 1977). Perhaps the need for stability and structure in older inmates is a consequence of the same properties in which the need for privacy and reduced stimulation are rooted.

Safety. The concern about safety is a crucial motive for many behaviors inmates manifest (Grosholz, 2014; Hunt et al., 1993; Toch, 1977). Toch (1977) observes that seeking safety can be an extreme version of seeking privacy. However, the key difference between seeking privacy and looking for safety is that privacy is triggered by a need to avoid stimulation and establish mental balance, while seeking safety is a result of fear due to an objective threat or an inmate's perception of threat. Inmates who are decidedly concerned with their safety are more vigilant and do not trust their environment, and they are often perceived as weak or as cowards (Toch, 1977).

While some inmates will address the threats to their safety by using violence, or by choosing to "fight" (Grosholz, 2014; Hunt et al., 1993; Silberman, 1995), others will use the "flight" option (Toch, 1977). The flight option includes avoiding unsafe environments such as showers and dining rooms, avoiding walking from one unit to another, or otherwise modifying routes and lifestyles to prevent victimization (O'Donnell & Edgar, 1990). These patterns of dealing with stressors correspond to problem-solving

coping (Lazarus, 1993; Lazarus & Folkman, 1984). Safety is the greatest concern of male, young, physically weak, inexperienced, and white inmates (Tewksbury, 1989; Toch, 1977). What inmates with these characteristics fear most is sexual victimization.

As gangs penetrated American prisons and established their role as the main agents of the underground economy, violence in prisons increased (Grosholz, 2014; Hunt et al., 1993; Trammell, 2009). One of the reasons for high levels of violence is that consequences for violating the inmate code are more severe today than early researchers of prisons reported (Clemmer, 1940; Grosholz, 2014; Hunt et al., 1993; Irwin, 1980; Sykes, 1958). As a result, inmates are likely to join gangs that provide them with protection from violence (Grosholz, 2014; Trammell, 2009). Paradoxically, while providing protection from violence, gangs actually contribute to more violence (Grosholz, 2014; Hunt et al., 1993; Trammell, 2009). Besides joining gangs, some inmates will join religious groups in order to earn protection from affiliated inmates (Groholz, 2014). In fact, group affiliation for protection appears so prevalent that it is becoming a new norm of the inmate code (Grosholz, 2014).

Enhancing Peer Status. One of the norms of the male inmate code is that one should act tough and not to show his weakness (Clemmer, 1940; Sabo et al., 2001; Silberman, 1995; Trammell, 2009). Inmates with low self-esteem engage in various activities in order to gain peer admiration and demonstrate adherence to the inmate code (Toch et al., 1986). These individuals may involve themselves in violent behavior and participate in the underground economy, gambling, physical activity, or getting tattoos (Clemmer, 1940; Hunt et al., 1993; Kalinich, 1986; Sabo et al., 2001; Trammell, 2009; Zamble & Porporino, 1988; Williams & Hinton, 2006; Wooden & Parker, 1982). Taking

part in these activities strengthens the inmates' perception of their manhood (Sabo et al., 2001). Young inmates are more likely to participate in violence to enhance their self-esteem and peer status (Silberman, 1995; Trammell, 2009).

In the early studies of inmate culture, researchers identified the importance of peer status based on their observations, rather than on direct verbalizations by the inmates (Clemmer, 1940; Sykes, 1958; Toch, 1977). In other words, inmates would rarely be explicit that they acted in a certain way to increase their status among peers. Instead, scholars applied this interpretation to what they observed. In more recent studies of the inmate code (e.g. Edgar O'Donnell, Martin, & Martin, 2003; Grosholz, 2014; Hunt et al., 1993; Trammell, 2009) and studies about the "code of the street" (e.g. Anderson, 2000), however, offenders unequivocally voice that they acted in a certain way to earn respect or because they were disrespected. Respect and disrespect are main themes discussed by inmates regarding prison social dynamics.

The most common way of earning and maintaining respect is violence (Grosholz, 2014). Demonstrating violence not only ensures respect, but also has a deterrent effect on other inmates, thus having a protective factor (Grosholz, 2014; Trammell, 2009). Inmates who are serving long sentences report that with an increased number of younger inmates in today's prisons, older inmates are more likely to experience being disrespected by them, thus leading to more violent altercations (Grosholz, 2014). Women are less likely to resort to violence as a vehicle to earn respect, but they also value respect and may respond with violence when disrespected (Alarid, 1997; McGuire, 2011).

Maintaining Autonomy. Because the rigid institutional climate of prison creates feelings of helplessness among inmates, people who are incarcerated seek a subjective

sense of control over their environment (Toch, 1977). As a result, inmates participate in various activities in order to obtain and maintain autonomy and a feeling of agency over their prison life (Toch, 1977). At the beginning of their sentence, inmates often feel like they have no control over their lives (Crewe et al., 2016). There are different avenues of achieving autonomy in prison. Maintaining autonomy can be achieved by working in prison. Inmates who work in prison have more freedom of movement and they are exposed to items, other inmates, and areas that they otherwise would not be exposed (Sykes, 1958).

Participating in sports and dealing with contraband can also make inmates feel they have some control over their prison experience (Kalinich, 1986; Sabo et al., 2001). In addition, inmates can achieve a sense of autonomy by using humor. Humor allows them to express their feelings without being perceived as weak or vulnerable (Courtenay & Sabo, 2001; Terry, 1997). Humor is also one of the few ways of expression that cannot be controlled by authorities (Terry, 1997). In fact, long-term inmates are more likely to attribute control they have over their identities and behavior to intrinsic factors than to factors in their environment (Crewe et al., 2016). Another method of obtaining control is litigation (Parisi, 1982). Writing appeals, writs, and filing grievances can both occupy inmates' time and directly address the main stressors of inmates' imprisonment. The concern about autonomy is particularly great for young, inexperienced, and minority inmates (Toch, 1977).

Inmates who seek to obtain control over their prison environment by engaging in violence often do so because prison authorities fail to intervene and ensure safety for all inmates (Grosholz, 2014). For example, gangs may try to control and retaliate against

rule violators because the official response of prison staff to rule violation is lacking (Hunt et al., 1993; Grosholz, 2014; Trammell, 2009). Taking control is, therefore, a direct consequence of ineffective formal control. It is interesting that even though gang members appear to be most committed to the inmate code, gangs and prison administration have the same goal: order maintenance. The means they use to achieve that goal, however, are very distinct.

On the other hand, having autonomy over one's prison experience can stem from a subjective feeling of control over the immediate environment. Therefore, the subjective evaluation of one's autonomy is precursor for other coping methods. For example, if inmates perceive that they are unable to achieve control over important aspects of their lives in prison, they may cope with incarceration by escaping from reality. Nevertheless, even having the option of a mental escape from reality may provide inmates with some sense of autonomy. Therefore, it appears that inmates can achieve some sense of autonomy by engaging in any activity as long as their choice is free and the activity is not restricted or monitored by staff.

Self-Improvement. Self-improvement is another reason why some inmates engage in certain activities while avoiding others. Irwin (1970) identified a type of inmates who use the prison experience to better themselves. He called them "gleaners." Crewe and colleagues (2016) found that most inmates they interviewed wanted to achieve improvement in their lives through participation in education and skills training programs. Self-improvement by developing personal, educational, and vocational skills is particularly important for female inmates (Lord, 2008; Owen, 1998; Sexton, 2012). Women frequently express a desire to change their behavior and to lead less destructive

lives so they often advocate for more programs that would provide them with life skills (Lord, 2008; Owen, 1998; Sexton, 2012).

For this reason, women are more likely to participate in programs than male inmates are (Bureau of Justice Statistics, 2004; Crittenden, 2013). Despite their interest in programing, women often have fewer educational and vocational programs, recreational opportunities, and fewer medical and legal resources (Rafter, 1989). In addition to participating in formal programing, self-improvement can include seeking support from other inmates or religious involvement (Crittenden, 2013; Toch, 1977). Moreover, we can argue that staying out of trouble and avoiding violence is a way to self-improve as well, especially in inmates for whom violence was an obvious pattern of behavior before their admission to prison.

Because participation in formal programing is against the inmate code of male prisons, if inmates want to participate in these programs, they often need a public "excuse" to do so (Grosholz, 2014; Silberman, 1995). Usually this means arguing in front of other inmates that they want to improve their chances at parole hearings or that they are mandated to join the program (Glaser, 1969; Silberman, 1995). Silberman (1995) argues that chronic offenders are more likely to participate in formal programing because they know they have sufficient respect from other inmates that no one would suspect them of being informants or showing weakness.

It is hard to believe, however, that all inmates who participate in rehabilitative programing do so because they want to improve their behavior. In fact, some actually report that they participate in programs to escape from violence in their housing unit, to "score points" toward early release, or to simply pass time (Grosholz, 2014; Toch, 1977).

It is unclear, therefore, how many inmates participate in programing because of their genuine concern for self-improvement (Toch, 1977). Besides, many inmates may be interested in self-improvement but they are reluctant to participate in programing because of a general distrust of prison staff members (Winfree et al., 2002).

Social Feedback. By engaging in group activities, many inmates seek emotional or social support from others to cope with stress (Maschi et al., 2014; 2015). Many regularly interact with each other by having casual conversations on different topics (Clemmer, 1940). These casual social interactions often include exchange of information about other inmates or correctional officers (Clemmer, 1940). Reflecting upon "good old times," retelling stories and legends, discussing changes and trends in the institution and events in the media are also common (Meisenhelder, 1985; Owen, 1998). Reliving other people's experiences vicariously may only be an indicator of a desire to escape from the reality, rather a desire for socialization itself (Sexton, 2012). Nevertheless, some inmates report that they enjoy a sense of community that exists among inmates in prison (Sexton, 2012).

This sense of community is strengthened by two norms of the inmate code: loyalty to fellow inmates and distrust towards staff (Grosholz, 2014). In fact, inmates who Grosholz (2014) interviewed in Georgia explained that loyalty among inmates and animosity between inmates and staff deepened when the Georgia Department of Corrections shifted its operational philosophy from rehabilitation towards punishment and warehousing. Trammell (2009) argues, however, that inmates are allowed to violate the norm of loyalty towards another inmate in their group if that inmate broke the rules of the group or otherwise jeopardized the underground economy. It appears that in

contemporary prisons, economic concerns override (sub) cultural values, which is, perhaps, just a reflection of the value system of our capitalist society.

More generally, Hunt and colleagues (1993) argue that the inmate population is very fragmented and social cohesion is weaker than reported in earlier studies. They attribute this breakdown in solidarity to an increasing influence of gangs and rivalry among them, but also to staff's attempt to divide inmates and break their camaraderie (Hunt et al., 1993). As a result, many inmates find it challenging to build trust with others, so relationships they develop in prison are often shallow and short-lived (Corley, 2001). Furthermore, inmates identified as gang members in Trammell's (2009) study argued that they refuse to socialize or even to clean after members of other gangs, even if they belong to the same racial group.

Joining other inmates in various illicit activities can also be driven by a desire to socialize, especially when an inmate wants to fit in. In their study of sex offenders in prison, Williams and Hinton (2006) found that because sex offenders are usually one of the most despised inmate groups, they often engage in gambling to be accepted by other inmates. Some also reported that they partake in gambling to gather news and information about what is happening in the institution (Williams & Hinton, 2006). Writing letters, having phone calls, and visiting with significant others is another way of seeking social support (Toch, 1977). Younger inmates and serious offenders who do not have significant others on the outside are usually more embedded in group activities in dayrooms or the recreation yard, and in the prison culture in general (Clemmer, 1940; Glaser, 1969; Parisi, 1982). They have less concern for emotional feedback, but a greater concern for social feedback (Toch, 1977). It is not clear whether this lack of concern for

emotional feedback precedes the disinterest in maintaining relationships with significant others or vice versa.

While social stimulation is important for many inmates of both genders, except for those who seek privacy and seclusion (Toch, 1977; Zamble & Porporino, 1988), emotional feedback is more important for female inmates (Giallombardo, 1966; Owen, 1998). Women often create pseudo-families in order to satisfy their need for emotional connections with others by providing social support and emotional comfort (Owen, 1998; Sexton, 2012). Even though pseudo-families have a protective function against loneliness and isolation, they simultaneously separate inmates from their lives on the outside. In fact, Sexton (2012) found that the women she interviewed often intentionally try to lead a life in prison separate from their lives outside the prison by joining these alternate families.

2.2.4. Limitations and Gaps in the Literature

Although there are vast literatures on the inmate social world and on programing, and a more modest body of literature on inmate recreation and leisure time, there are no studies specifically designed to examine all aspects and intricacies of inmate time utilization. Existing studies significantly contribute to the overall knowledge in field of corrections, but there are several limitations of these studies. First, the majority of previous studies about the social world of prisons are based on field observations and interviews. Even though these qualitative studies provide us with "thick descriptions" of the world of prisons, one should be careful when generalizing the findings of these studies to other correctional settings. Many of the studies have small sample sizes and are conducted in only one institution (e.g. *n*= 25 in Zamble, 1992; *n*= 40 in Grosholz, 2014;

n= 73 in Trammell, 2009: *n*= 80 in Sexton, 2012). Moreover, the sampling procedures often used do not ensure generalizability to the entire inmate population of a given institution (e.g. convenience and snowballing samples in Terry, 1997; Irwin, 1980; Trammell, 2009).

Second, focusing on only one institution can be problematic because conditions of confinement and availability of prison services and programing can vary greatly across different prison systems, institutions, and even housing units. Time utilization patterns identified in one institution may not be present in another. Moreover, characteristics of prison populations differ depending on institutional security level, location (e.g. south vs. north; rural vs. urban), type of the offense, and jurisdiction (federal vs. state inmates). For example, compared to prisons with low-level offenders, prisons with violent, gang involved, and higher-risk populations will differ in terms of time utilization. In fact, there is evidence that inmates in higher security prisons more strongly adhere to the inmate code, suggesting that the level of deprivations can affect time utilization patterns (Grosholz, 2014; Trammell, 2009).

Third, some quantitative studies reviewed above also suffer from a small sample size and fail to use multivariate analyses to control for individual- and institution-level factors that might confound the results (e.g. Batchelder & Pippert, 2002; Zamble, 1992). Only three studies that consider time utilization variables are designed with statistical prediction of outcomes in mind (Vuk & Sevigny, 2016; Wooldredge, 1999; Zamble & Porporino, 1988). Even so, only two studies use sophisticated predictive methodology (Vuk & Sevigny; 2016; Wooldredge, 1999). For this reason, most of the associations of personal and environmental factors and time use discussed above are not statistical

correlates; rather, they stem from qualitative observations. Consequently, it is unknown what the strength of these associations is and what is their contribution in predicting various behavioral and emotional outcomes.

Fourth, the measures used in existing quantitative studies do not address all nuances of inmate routines, including motivation for engagement, location where activities are undertaken, and other participants involved. This information is important because inmates engage in different activities for different reasons (e.g. gambling to be accepted by others vs. gambling for profit). Even if the goals of participating in different pursuits are the same, different inmates may achieve these goals in a different way (seeking safety by joining gangs vs. seeking safety by avoiding gang involvement). It is especially important to distinguish these behavioral and motivational nuances when trying to explain how engagement in different activities serves as a coping mechanism.

Fifth, studies that use large national data on state and federal inmates (e.g. Bureau of Justice Statistics, 2004; Crittenden, 2013) were not specifically designed to address time utilization. To be specific, the items that were intended to measure leisure activities focus on only a few administration-sponsored activities (e.g. religious activities) and even fewer unstructured activities (e.g. reading). A large portion of inmate time utilization (e.g. socialization, daydreaming, writing letters, studying) remains unexamined. Furthermore, several substantively distinct activities are often collapsed into one question. For example, in the Vuk and Sevigny's (2016) study on time utilization and prison misconduct, the question about participation in "other recreational activities" aggregates arts, crafts, playing cards, or other games. Making conclusions using such a

measure would be problematic because, for example, motivation for engagement in arts and crafts may be self-improvement, while motivation for playing cards may be social.

Finally, a large portion of research on time utilization is based on seminal but dated work. Even though Winfree and colleagues (2002) argue that the inmate culture has remained relatively stable regardless of changes in prison management and populations, there are several reasons to believe that the ways inmates spend time has changed since this earlier influential correctional research. First, a shift from rehabilitation towards punishment in the 1970s introduced mandatory minimums, truth-in-sentencing, and "three-strikes" laws and led to a sharp increase in the prison populations (Garland, 2001; Petersilia, 2003). Moreover, punitive policies introduced in corrections resulted in fewer programs for inmates while creating a more restrictive, more deprived environment (Grosholz, 2014; Wunder, 1995). Even more, new "supermax" units and facilities, characterized by maximum levels of control and high levels of deprivation emerged all across the country (Mears, 2006). An environment characterized by a lower degree of normalcy, further deepening the gap between free-world experiences and incarceration, can pose a threat to safety and security inside prison, thus altering time utilization patterns (Johnson et al., 1997; Wunder, 1995).

Moreover, serving longer sentences provides inmates with more exposure to the inmate code and greater adherence to it, therefore, increasing the existing levels of violence (Grosholz, 2014). In addition, with a reduction in inmate privileges and incentives for good behavior, inmates who serve long sentences, especially younger inmates, are more likely to engage in violence because they believe that they have nothing to lose by misbehaving (Grosholz, 2014). Furthermore, younger inmates often

want peer acceptance and are preoccupied with toughness so they are more likely to engage in violence, thus leading to a more hostile environment (Grosholz, 2014; Hunt et al., 1993).

The "tough-on-crime" movement coincided with two other policy initiatives that caused a radical change in characteristics of the prison population: 1) the "war on drugs" that resulted in an increase in prison inmates addicted to drugs (Austin & Irwin, 2012), and 2) the deinstitutionalization movement that steered many mentally ill into the criminal justice system (Lamb & Bachrach, 2001). In addition to these policies, a punitive approach towards juvenile offenders resulted in an influx of violent, often gang-involved, and minority juveniles in adult prisons (Carson & Golinelli, 2012; Decker & Curry, 2003; Grasholz, 2014; Travis, 2005). Consequently, these changes led to more violence and increased levels of stress for inmates and correctional staff (Hunt et al., 1993). Lastly, the increase in violence can also be attributed to more extreme consequences of breaking the norms of the inmate code than in earlier decades (Grosholz, 2014; Irwin, 1980; Trammell, 2009; Williams & Fish, 1974).

It appears that there is a gap in the literature about how inmates use their free time and why they choose certain activities over others. Moreover, we do not have enough information about the overall involvement of inmates in structured activities compared to unstructured activities. It is also uncertain how inmates' experience of time guides their choices of activities. Finally, it is unclear whether and to what extent time utilization varies across different groups of inmates and different prison conditions. While only a limited number of studies directly examine how inmates use their time in prison, even

fewer studies investigate the relationship between different elements of time utilization and well-being. These studies are reviewed in the next section.

2.3. The Relationship between Time Utilization and Well-being

2.3.1. Inmate Perceptions of Using Time and Well-Being

In this section, I present a review of studies that provide evidence of the relationships between inmate experience of time in terms of idleness, future orientation, and preparation for release, and well-being. Few studies have focused on the effects of idleness on inmate well-being. Classical literature first recognized the negative effects of idleness on psychological functioning (e.g. Clemmer 1940; Sykes, 1958). However, newer studies have also documented that isolation and idleness lead to psychotic symptoms, anxiety, apathy, inability to concentrate, anger, aggression, and frustration, and that the effects are even more detrimental for individuals with preexisting mental health issues (Arrigo & Bullock, 2008; Haney, 2003; Kupers & Toch, 1999; Nurse, Woodcock, & Ormsby, 2003; Zamble & Porporino, 1988).

Some authors have suggested that pervasive idleness leads to increased levels of violence within the institution (Cohen, 1976; Hassine et al., 1996). In fact, one of the contributing factors of riots in prisons in Attica, New York and New Mexico, cited by the inmates themselves, was idleness and a lack of recreational opportunities (Cohen, 1976; Irwin, 1980; Parisi, 1982). These studies did not measure idleness directly; rather, they inferred that conditions of incarceration were conducive to boredom and idleness. Zamble and Porporino (1988) also found that boredom was associated with higher levels of depression, anxiety, and anger, but living day-by-day compared to planning free time was not associated with higher depression or anxiety.

Although time planning did not appear to be associated with well-being in Zamble and Porporino's (1988) study, thinking about the future was related with lower levels of anxiety. This finding is notable since it is contrary to what research on cognition and well-being shows. Specifically, there is evidence that retrospective cognition and rumination is associated with depression and prospective cognition and future-oriented worries are associated with anxiety (Kendall & Ingram, 1989; MacLeod, Tata, Kentish, & Jacobsen, 1997; Surtees, 1995). This suggests that when inmates are exposed to a lot of idle time during which they can ruminate about their past and future lives, it can be expected that such contemplation will increase their levels of distress. Nevertheless, one needs to be careful when interpreting Zamble and Porporino's (1988) conclusions about these associations because they are based on bivariate correlations, so it is unknown if there are other variables that could explain these apparent associations.

Additionally, when inmates are concerned about their release to the community, this can lead to higher levels of stress and anxiety (Castellano & Sodestrom, 1997; Cormier et al., 1967; Kruttschnitt et al., 2000; Nelson et al., 1999). Researchers called this experience "gate fever," and it is characterized by anxiety, restlessness, and irritability resulting from an anticipation of release (Cormier et al., 1967). While incarcerated, inmates often feel powerless because they have limited autonomy and they are dependent on routines and schedules imposed on them (Nelson et al., 1999). As such, an elevated level of anxiety on the part of these inmates is related to a fear of sudden freedom, having full responsibilities, and possible failure (Cormier et al., 1967).

Cormier and colleagues (1967) argue that a degree of anxiety is normal for inmates who are about to be released and for those who have just been released. Renzema

(1982), however, found that inmates experienced stress prior to release but not following release. These concerns about being released are often accompanied by another set of pressures. When they are suffering from anxiety, inmates are aware that if they act out, they may not be granted early release, further putting pressure on them (Cormier et al., 1967).

While earlier studies reported increased anxiety prior to release, more recent research by Castellano and Soderstrom (1997) and Shinkfield and Graffam (2010) found that on average, inmates who were about to be released had elevated levels of depression, but anxiety remained unchanged. Similarly, inmates had higher levels of anger pre-release compared to post-release (Shinkfield & Graffam, 2014). Moreover, anxiety about release is often coupled with pessimism and low expectations about staying out of prison (Howerton, Burnett, Byng, & Campbell, 2009). However, there is evidence that the level of pessimism and optimism varies depending on an inmate's level of social support outside the prison (Carvalho et al., 2015; Visher & O'Connell, 2012).

Surprisingly, participation in programing and working while incarcerated do not significantly affect optimism about release (Visher & O'Connell, 2012). Perhaps this finding reflects the reality that inmates more often attribute their prospects of avoiding reoffending to individual efforts and personal capabilities rather than to services and programs provided to them (Burnett & Maruna, 2004; Comfort, 2008; LeBel, Burnett, Maruna, & Bushway, 2008). Nevertheless, there is some evidence that prosocial leisure/recreation in prison has positive effects on re-entry (Link & Williams, 2015; McMay & Cotronea, 2015). Specifically, Link and Williams (2015) found that greater prosocial engagement in leisure was associated with improvement in risk factors

associated with recidivism (e.g. criminal attitudes, values, and lifestyle, responsibility, drug use, social, emotional, and cognitive skills, self-esteem/self-efficacy). Likewise, participation in religious activities was also found to be associated with more successful re-entry (Higgins & Severson, 2009).

2.3.2. Inmate Time Use and Well-Being

When it comes to research on the effects of correctional leisure on emotional and behavioral outcomes, there is ample evidence about the benefits of these opportunities. In his study of 40 state inmates, Farber (1944) found that inmates who did not engage in structured activities experienced greater distress. In fact, the bivariate correlation coefficient for engagement in structured activities and suffering was high (r= -.62). In addition, Farber (1944) found a negative relationship between recreational and group activities and distress. There is also some evidence that participation in more activities overall is associated with less stress and less misconduct (Cope, 2003; Wright, 1991). Similarly, Ambrose and Rosky (2013) concluded that all leisure activities facilitate coping with incarceration and promote adopting healthy lifestyles.

Furthermore, studies have shown that participation in sports and recreation has positive effects on inmate well-being, including higher self-esteem and reduced anxiety, depression, hopelessness, aggression, and stress (Cashin, Potter, & Butler, 2008; Figueroa, 2011; Gallant et al., 2015; Libbus, Genovese, & Poole, 1994; Martos-Garcia, Devís-Devís, & Sparkes, 2009; Meek & Lewis, 2014; Ozano, 2008; Pedlar, Yuen, & Fortune, 2008). Participation in sports promotes well-being because it provides self-expression and some level of autonomy for inmates (Norman, 2015). Female inmates in

Ozano's (2008) study also recognized that exercise was a coping mechanism that helped them manage stress and promoted their well-being.

In addition to benefits for psychological well-being, Meek and Lewis (2014) found that participation in sports was associated with better preparation for release in young inmates. Specifically, inmates reported that participation in sports offered them new employment options, and helped them to develop new contacts in the community and new interests. It also helped them to stay focused and motivated to desist (Meek & Lewis, 2014). Furthermore, the authors reported that participation in sport/physical activity promoted rehabilitation of young inmates by reducing antisocial attitudes and behaviors (Meek & Lewis, 2014).

Participation in formal activities can also benefit inmates and their well-being. Researchers acknowledge the benefits of prison work as a crucial factor in preventing self-destructive behavior in women's prisons (Figueroa, 2011; Owen, 1998). Conversely, inmates who lack work or other program assignments are more involved in misconduct (Petersilia, Honig, & Hubay, 1980). Participation in educational, vocational, and other prison programs was also associated with better well-being, including lower anxiety and more prosocial attitudes (Carvalho et al., 2015; Genders & Player, 1990; Wooldredge, 1999; Wormith, 1986). Lastly, Fortune, Thompson, Pedlar and Yuen (2010) found that participating in a program where incarcerated women spend time in leisure activities with community members, enhances women's self-esteem.

Involvement in religious programming also has positive effects. Inmates who participated in religious activities had higher self-esteem, lower anxiety and stress, and better mood overall (Dye et al., 2014; Figueroa, 2011; Maschi et al., 2015; Thomas &

Zaitzow, 2006). Ballou (1977) and Bowen et al. (2006) also found significant decreases in psychiatric symptoms and significant increases in optimism and internal locus of control for inmates who participated in meditation. Yoga was also found to be associated with positive outcomes such as lower depression and stress and improved self-esteem (Duncombe, Komorosky, Wong-Kim, & Turner, 2005; Telles & Naveen, 1997).

2.4. The Present Study

The extant research suggests that greater involvement in structured and prosocial activities is associated with better well-being and more successful reintegration upon release (e.g. Carvalho et al., 2015; Cashin et al., 2008; Figueroa, 2011; Fortune et al., 2010; Gallant et al., 2015; Meek & Lewis, 2014). Leisure activities help inmates cope with incarceration, help them practice various skills and exercise autonomy, and introduce a degree of normalcy to prison settings (Meek & Lewis, 2014; Selke, 1993). Even correctional administrators recognize that recreational opportunities have beneficial effects in reducing stress and idleness, reducing violence and misconduct, and promoting inmate responsibility for their own health and wellness (Bureau of Prisons, 2014; Wunder, 1995).

Nonetheless, the majority of studies that provide the empirical evidence that supports these conclusions are qualitative. Therefore, it is not clear what is the strength and significance of the associations of different dimensions of time utilization and well-being. In addition, it is unknown how a full range of formal and informal activities affects well-being of male inmates. Furthermore, there is a gap in the literature regarding how different individual- and institution-level variables affect male inmates' choice of activities and what motivational factors drive these choices. Finally, in order to

understand the nuances of how time utilization patterns related to well-being, we need to understand the underlying processes that operate between inmates and their environment.

To address the gaps outlined above, this study examines the relationship between a range of time utilization elements and well-being of male inmates. Specifically, the objectives of this study are to examine the relationships between: 1) inmates' experience of idleness and well-being; 2) future orientation and well-being; 3) preparation for release and well-being; 4) personal characteristics, stress appraisal, and well-being, mediated by engagement in activities that serve as coping strategies; 5) personal characteristics, stress appraisal, and well-being, mediated by motivation for engagement in activities; and 6) personal characteristics, stress appraisal, motivation for engagement in activities and well-being, mediated by engagement in activities that serve as coping strategies. For the latter three objectives of the study, I framed the investigation using the stress-coping model developed by Lazarus (1966; Lazarus & Folkman, 1984).

The stress-coping model was used in the current study to elucidate how individual characteristics and inmate perceptions of the environment are associated with negative emotional outcomes, and whether various activities that serve as coping mechanisms mediate this relationship. Specifically, the study examined how male inmates' perceptions of the stressfulness of their incarceration (appraisal) are associated with their choice of activities, and whether engagement in these activities is associated with variation in well-being. Therefore, incarceration is treated as a chronic stressor that requires coping over a prolonged period of time. All inmates in this study were exposed to approximately equivalent objective conditions of confinement, but their perceptions of their incarceration experience varied. Consequently, this transactional approach implies

that stress is a result of an interaction between the environment and each individual's cognition (Lazarus, 1990).

CHAPTER 3: METHODS

As outlined above, the goal of this study is to examine the relationships between several different dimensions of time utilization and inmates' emotional well-being. The first three dimensions are concerned with a subjective perception of using time in prison and include 1) experience of idleness, 2) future orientation, and 3) preparation for release. Rooted in the stress-coping model (Lazarus & Folkman, 1984), the next two dimensions refer to an actual utilization of activities as coping and include 1) engagement in formal and informal activities and 2) motivation for engagement in these activities. In the next sections, I address the formal hypotheses and methodology used in the current study.

3.1. Hypotheses

A review of the literature demonstrated that inmates spend a significant amount of time idle or in aimless pursuits (e.g. Clemmer, 1940; Meisenhelder, 1985; Zamble & Porporino, 1988). Emotional dissatisfaction with being idle is frequently referred to as "doing hard time." Experiencing idleness and boredom is often accompanied by a lack of orientation towards the future and release because idleness as an element of a state of mind suspends the reality (Carvalho et al., 2015; Welch, 1991). Therefore, inmates often strive to simply "pass the time" rather than use it.

Prior research on experience of time and well-being suggests that inmates who spend time idle are more likely to experience depression and anxiety (e.g. Cashin, et al., 2008; Farber, 1944; Martos-Garcia et al., 2009). Furthermore, there is evidence that individuals who are more oriented towards the future will be more anxious but less

depressed than those who are not future-oriented (Kendall & Ingram, 1989; MacLeod, et al., 1997; Surtees, 1995). Finally, inmates who feel that they are better prepared for their release manifest fewer symptoms of depression and anxiety (e.g. Castellano & Sodestrom, 1997; Cormier et al., 1967; Shinkfield & Graffam, 2010). Therefore, I hypothesize the following:

$H1_a$: *Controlling for personal characteristics, experiencing idleness is associated with higher levels of depression.*

$H1_b$: *Controlling for personal characteristics, experiencing idleness is associated with higher levels of anxiety.*

$H2_a$: *Controlling for personal characteristics, future orientation is associated with lower levels of depression.*

$H2_b$: *Controlling for personal characteristics, future orientation is associated with higher levels of anxiety.*

$H3_a$: *Controlling for personal characteristics, preparation for release is associated with lower levels of depression.*

$H3_b$: *Controlling for personal characteristics, preparation for release is associated with lower levels of anxiety.*

Furthermore, research shows that the way individuals perceive their environment will affect how they respond to the stress in that environment. Particularly, we know that inmates' perceptions about various aspects of the prison environment (e.g. safety and

social stimulation) affect their psychological and behavioral adjustment (Wright, 1991). Similarly, research on stress shows that the way individuals perceive their own abilities to manage stress will affect how they cope with stressors (Lazarus & Folkman, 1984; Lazarus, 1993). The literature also suggests that inmates engage in different activities to cope with stress, and these coping efforts mediate the relationship between the stressor and emotional outcomes (Brown & Ireland, 2006; Lazarus & Folkman, 1984; Maschi et al., 2015; Van Harreveld et al., 2007). As such, the engagement in different activities has different effects on well-being because the motivation for utilizing these coping methods differs (Lazarus & Folkman, 1984). Therefore, I hypothesize that:

H4$_a$: *Controlling for personal characteristics, the relationship between stress appraisal and depression is mediated by engagement in activities.*

H4$_b$: *Controlling for personal characteristics, the relationship between stress appraisal and anxiety is mediated by engagement in activities.*

H5$_a$: *Controlling for personal characteristics, the relationship between stress appraisal and depression is mediated by motivation for engagement in activities.*

H5$_b$: *Controlling for personal characteristics, the relationship between stress appraisal and anxiety is mediated by motivation for engagement in activities.*

H6$_a$: *Controlling for personal characteristics and appraisal, the relationship between motivation for engagement in activities and depression is mediated by engagement in activities.*

$H6_b$: *Controlling for personal characteristics and appraisal, the relationship between motivation for engagement in activities and anxiety is mediated by engagement in activities.*

3.2. Sample Selection

This research was conducted with male inmates under the supervision of the South Carolina Department of Corrections (SCDC). The SCDC operates twenty-four institutions and houses around 20,500 inmates out of which around 19,100 are male inmates (SCDC, 2017). The institutions the agency runs are categorized into four security levels: high security (level 3), medium security (level 2), minimum security (level 1B), and community-based pre-release/work centers (level 1A). There are nine medium security prisons in South Carolina, housing around 8,000 inmates in general housing units (SCDC, 2017).

This study was conducted at five medium security correctional institutions for men: Allendale Correctional Institution, Evans Correctional Institution, Ridgeland Correctional Institution, Kershaw Correctional Institution, and Tyger River Correctional Institution. At each institution, the SCDC personnel created a list of adult male inmates housed in general population units, both minimum and medium custody. This list was the sampling frame for sample selection. Inmates who do not speak English, or who are not able to provide consent (due to physical or mental illness), were excluded from the sampling frame by the personnel.

Table 3.1. Characteristics of the selected correctional institutions

Institution	Total population[1]	Population in general housing	Education programs	Vocational/work programs	Rehabilitation programs	Recreation programs
Allendale	1150	1044	Literacy, GED preparation, adult education	Bee program[2]	Jumpstart[3], Addiction Recovery Program	Quilting, Animal Rescue and Training Program
Evans	1295	1175	Literacy, GED preparation, high school courses, adult education classes	Computer training, barbering, assembling of electronic components, labor crew[4]	Long-Term Offenders Program, and Character Education	Religious services, recreational services
Kershaw	1290	1219	GED preparation, Self-Paced in Class Education Program	Work Keys,[5] carpentry, upholstery, small engine repair	Alcoholics Anonymous, Impact of Crime classes, Pre-Release Program	Religious services, recreational services
Ridgeland	1177	1106	Literacy, GED preparation, high school courses	Small appliance repair, carpentry, recycling, labor crew, litter crew	Alcoholics Anonymous, Narcotics Anonymous, Impact of Crime classes	Religious services, recreational services
Tyger River	1278	1140	Literacy, GED preparation, high school courses, Self-Paced in Class Education Program	Carpentry, brick masonry, heating and air conditioning, auto body, auto mechanics, hardwood flooring, litter crew, Adopt a School program[6]	Alcoholics Anonymous, Narcotics Anonymous	Religious services, recreational services

[1] As of September 8, 2016
[2] Making of honey
[3] Faith based re-entry program
[4] to the Department of Parks, Recreation and Tourism
[5] Job skills assessment that measures real-world skills
[6] labor for renovations to local high school

The selected correctional institutions house approximately 5800 inmates in general housing (SCDC, 2017). These institutions were selected because they accommodate large populations of adult male inmates in general housing necessary for adequate sample selection. In fact, each institution houses more than 1000 inmates in general population units. The institutions opened between the early 1980s and late 1990s (SCDC, 2016). They provide different work opportunities for inmates in industry programs as well as educational and treatment programs (see Table 3.1). Inmates are housed in double-bunk cells or double-bunk cubicles (SCDC, 2016).

Conducting this study in medium security institutions means the level of surveillance, control, and movement of inmates is less restrictive than in high security prisons. Thus, inmates have greater access to resources, privileges, and contacts with the outside world. Because inmates have more freedom and autonomy, I expected greater variability in time utilization patterns in medium security institutions. Moreover, inmates who are housed in a general population unit were selected because their free time is not structured by staff as is the case in the "programing units" (e.g. therapeutic community) and they are not isolated from each other as inmates are in the "segregated/special housing units" (e.g. protective custody, administrative or disciplinary segregation).

A total of 516 inmates were randomly selected to participate from the sampling list and 503 completed the questionnaires, which represents a response rate of 97%. At Kershaw Correctional Institution, 103 inmates were drawn from the sampling list and 100 completed the questionnaire. At Ridgeland Correctional Institution, 102 inmates were selected to participate and 99 completed the questionnaire. Furthermore, at Allendale Correctional Institution, 107 inmates were drawn from the sampling list and 103 inmates

completed the questionnaire. At Evans Correctional Institution, 100 inmates were invited to participate and 99 completed the questionnaire. Finally, at Tyger River Correctional Institution, 104 inmates were selected from the sampling list, and 102 completed the questionnaire. Inmates who were selected to participate but did not complete the questionnaire, either refused to participate after being introduced to the study, or were not able to participate because they had other obligations at the same time.

The sample size of around 500 inmates was determined through an a priori power analysis using G*Power 3.1 software (Faul, Erdfelder, Lang, & Buchner, 2007), with the number of predictors in regression models set at 16 and the α set at .05 (two-tailed). The analysis showed that to achieve power of .95 and a medium effect size (f2 = .15), a sample size of at least 204 participants is required to reach statistical significance at the .05 level (F (16,187) =1.70) (Cohen, 1992; Faul et al., 2007). A sample of around 500 was expected to yield sampling error of no greater than plus or minus 4.3%.

3.3. Study Design

Selection of an appropriate research design involves consideration of many factors, including the research topic, cost, and time necessary to complete the study (Gottfredson & Hirschi, 1987). Lazarus (1990) argues that coping with stress is not a single event that can be measured at one time point; rather, it is a dynamic process of repeated assessments of stressfulness. Therefore, he advocates for a design that includes frequent data collections with short periods between collection points and advises against aggregating stress responses over longer periods of time (Lazarus, 1990). Even though I recognize the complex nature of interactions between an individual and the stressor and I acknowledge that experimental design and longitudinal studies are superior approaches in

research, I use a cross-sectional design in this study. I also treat the stress-coping process as a constant occurrence. I use this design for several reasons.

First, the stressor I examine—incarceration—does not change as a fact over time. Some conditions of confinement and associated perceptions of stressfulness of incarceration may change over time. Current research, however, does not provide sufficient evidence to know how often this change occurs. Therefore, incarceration as a stressful occurrence is present throughout. Second, daily hassles, routines, and single stressful events (e.g. violent altercations, victimization) change over time and consequently, can change levels of stress. However, this study does not focus on these stressors. Lazarus (1990) admits that it is difficult to measure stress/coping as a process that includes continued reappraisals and feedback so he argues that, "the appropriateness of any given measure will depend on the research or clinical purpose to which it is applied" (p. 10). Therefore, this study aims to examine time utilization patterns and their statistical associations with well-being but it does not seek to establish causations.

Third, because of the limited research on this topic, it is not clear if there is a lag between the onset of time utilization activities and the associated effects on well-being. If conducting a longitudinal study, I would have to make strong, unsupported assumptions about the appropriate time intervals between two measurements. This also includes making assumptions about the stability of time utilization that would not be grounded in empirical knowledge.

Finally, compared to longitudinal studies, cross-sectional studies in correctional settings are usually less costly and less time-consuming (Gottfredson & Hirschi, 1987; Zamble & Porporino, 1988). Resource constraints precluded a longitudinal design for the

current study. Moreover, collecting data at more than one time point would cause an increased burden to correctional staff and costs to the corrections system. In fact, due to the limitations associated with the uniqueness of correctional settings, cross-sectional designs are quite common in correctional research (Zamble & Porporino, 1988; see e.g. ICPSR, 2016). Given the gaps in the literature and the fact that this study is the first quantitative examination of a full range of time utilization elements and well-being, the current study makes useful and important contributions to the literature despite these methodological compromises.

3.4. Data Collection Procedure

Before data collection started, the study protocol was approved by the Director of Resource and Information Management at SCDC and the University of South Carolina Institutional Review Board (IRB) (Appendix A). Next, a draft survey was pretested with a convenience sample of 5 inmates at Ridgeland Correctional Institution. A small non-representative sample was appropriate for pretesting because information gathered was not analyzed statistically; rather, it was used to improve the questionnaire and the surveying process (DeMaio, Mathiowetz, Rothgeb, Beach, & Durant, 1993).

The goal of pretesting was to identify questions, items, and instructions on the questionnaire that inmates may interpret differently or their interpretation is in disagreement with the intended meaning. Based on the information gathered during the pretesting, I revised the instrument before collecting data. Therefore, pretesting of the instrument was intended to improve the quality of the collected data by reducing measurement error and missing data.

Techniques used to pretest the instrument included completing a pretesting questionnaire and a debriefing session. The convenience sample of inmates was informed that the purpose of the process was to improve the questionnaire after which they were asked to complete the pretesting questionnaire. After inmates completed the questionnaire, I guided a short group debriefing session. The debriefing session included elements of cognitive interviewing (DeMaio et al., 1993; Willis, 2002). Specifically, the participants were first asked if there was a question or an item that they found difficult to answer or understand. One inmate said that answering questions about well-being was hard because the questions are more appropriate for inmates who have serious mental health issues. Other inmates agreed. The response scale used for these questions on the pretesting questionnaire was later revised to address the issues the inmates identified (see Measurement).

Next, the participants were asked to evaluate other items for which there may be a concern regarding the participants' comprehension. First, they were asked about what the expressions "doing easy time," "living day by day," "passing time," and "domestic partnership" mean to them. Next, they were asked questions about what they thought when answering questions about the amount of time they spend in certain activities and motivation for engagement. Inmates did not have issues with comprehending these expressions and questions. The questionnaire was also revised after the debriefing session to include two additional daily activities that inmates reported: "writing" and "playing musical instruments."

Data were collected during a three-week period at the end of October and beginning of November of 2016. Approximately a week before data collection, an

announcement was posted on bulletin boards at the selected institutions informing inmates and staff of the forthcoming research project (see Appendix B). On the day when they were scheduled for participation, inmates were given a pass to come to a room where they were invited to complete a self-administered questionnaire. The administration of surveys occurred in visitation rooms, classrooms, and a chapel, depending on the institution. The size of groups in which surveys were administered ranged from 40 to 99 inmates.

The recruitment of inmates and the surveying process was conducted with the coordination of the prison staff in a manner that caused minimal burden on staff resources and in no way compromised the safety of the inmates or staff. Before distributing the questionnaires, I read the informed consent script that introduced the inmates to the project and informed them about the study objectives and their rights as study participants (see Appendix C). The inmates signed a copy of the informed consent form as required by the SCDC before the questionnaires were distributed (Appendix D). Per SCDC rules, the participants were not compensated for their participation. The inmates who completed the questionnaire or declined to participate were checked off the list of inmates selected for this study. This list contained inmates' names and SCDC ID numbers but it was not associated with individual questionnaires in any way. The questionnaire was anonymous.

It took approximately 30 minutes to complete the questionnaire. None of the inmates asked for help with reading, although a few had questions about how to answer certain questions. I expected that some inmates would be reluctant to ask for help. Therefore, in order to maximize inmates' comprehension of the questionnaire, the

language used in the questionnaire was written at a level well below the average reading level of the SCDC inmate population (Appendix E). To be specific, the education level of the male SCDC inmate population at intake is 10.6 (SCDC, 2015), and the Flesch-Kincaid Grade Level of the questionnaire is 4.9, meaning that a fifth grader can understand the text in the questionnaire[7] (Flesch, 1948).

In addition, unlike the traditional form of self-administered survey process, the method of administration used in this study is hybrid (De Leeuw, Hox, & Dillman, 2008). This means that an intermediary who gives instructions and provides help is present while respondents complete surveys (De Leeuw et al., 2008). Self-administered questionnaires are advantageous because they lead to considerable cost savings when administered to larger groups at the same time (De Leeuw et al., 2008). In addition, this method tends to produce greater validity for sensitive questions, such as those related to symptoms of distress, than face-to-face interviews (De Leeuw et al., 2008). While response rates are usually lower in self-administered questionnaires than in face-to-face interviews (De Leeuw et al., 2008), the non-response rate in this study was only 2.5%. However, the rate of missing values was significantly higher (see Analytical Procedure).

The questionnaires included a series of questions about the inmates' experience of time and their time use, criminal history, personal and demographic characteristics, and their well-being. Because the visual presentation of questions and the general layout of the questionnaire are very important for self-administered surveys, the questionnaire was designed to be "respondent friendly" (De Leeuw et al., 2008; Jenkins & Dillman, 1995). I ensured that the questionnaire did not look cluttered, that the respondents could easily

[7] The reading score was obtained using MS Word.

read and reply to questions, that the arrangement of questions and answers was consistent with cultural norms and expectations, and that there was adequate "white space" between each question to allow respondents to progress relatively quickly through the pages.

3.5. Ethical Considerations

Because this study required participation of human subjects who belong to a vulnerable population, I sought approval from the University of South Carolina IRB and complied with all rules, regulations, and training requirements. Moreover, this study conformed to all applicable correctional standards, state and federal statutes and regulations, and SCDC policies and procedures. This includes notifying appropriate authorities if, during the research process, I became aware of any actual or potential victimization or criminal activity.

There were several risks associated with participation in this study. First, this study involved vulnerable population who could be exposed to risks of coercion or undue influence. Even so, to minimize the possibility of coercion or undue influence, several procedures were implemented. First, although the SCDC staff members were in the room during survey administration, I ensured that they did not directly distribute and collect questionnaires. This prevented inadvertent identification of prison administration with the study, maximized participants' privacy, maintained confidentiality of responses, and ensured that inmates understood their participation was voluntary.

Furthermore, before completing the questionnaire, I emphasized that this study was not connected with the correctional institution or SCDC. The participants were also informed that none of the information obtained from individual inmates would be made available to the parole board or prison administration. I explained that the SCDC will

know who participated in the study, but the administration will not know the inmates' responses on the questionnaire. Finally, the risk of coercion or undue influence was minimized by informing the participants that they would not be compensated for their participation, that there were no direct benefits from participating in the study, and that participation in the study would have no effect on their sentence or parole hearing.

Second, questions on the survey instrument that assess inmates' emotional state and suicide ideation had potential to cause discomfort or embarrassment. This risk was minimized because the data was collected through self-administered surveys and the participants' answers were anonymous. Inmates were informed that the researchers would not be able to identify them. In addition, the participants were informed that they would not have to answer any question that made them feel uncomfortable.

Asking about emotional states in correctional contexts was not likely to cause serious distress for the participants because of the context in which data collection is administered (McCosker, Barnard & Gerber, 2001). Inmates are often exposed to questions about their emotional well-being while under correctional supervision. In fact, they are asked about their emotional state and suicide ideation at booking in jail, during the classification and diagnostics procedures, and during intake in a correctional facility. In addition, inmates who manifest acute mental health issues, who may be affected by questions about their emotional state, were excluded from the sampling frame in this study.

The third risk is a potential loss of confidentiality. The SCDC staff collected signed informed consent forms; therefore, the administration knows who participated in the study. However, given that identifiable data was not collected on the questionnaires

and the SCDC staff does not have access to the completed questionnaires, it is not possible to connect inmates' responses with any identifiable information (consent forms, files necessary for sample selection). The files used to select the sample remained in the correctional institution. All data are completely confidential and are saved on an encrypted external hard drive and stored in a locked drawer in a locked office at the Department of Criminology and Criminal Justice.

3.6. Measurement

Measurement of key independent variables (experience of idleness, future preparation, preparation for release, stress appraisal, engagement in activities, and motivation for engagement), dependent variables, and control variables were collected through inmates' self-reports. Using self-reports could introduce bias in a study (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Respondents might want to present themselves in a more desirable fashion or they might commit errors in reporting of their attitudes and behaviors because of poor recall (see e.g. Hindelang, Hirschi, & Weis, 1981).

However, I decided to use self-reports because they are the only source of information on key independent and dependent variables in this study. State Departments of Corrections and the Federal Bureau of Prisons do not collect data on inmate time utilization, even though they keep records on some aspects of time use such as reported misconduct and participation in formal programing. Therefore, there are no official records on how inmates use their free time by engaging in informal and leisure activities. Furthermore, even though inmates are usually screened at admission for serious mental disorders, there are no records of levels of symptoms of depression and anxiety of all

inmates at multiple time points (Van Voorhis & Salisbury, 2014). For these reasons, self-reports are the most suitable source of data.

3.6.1. Dependent Variables

Well-being was operationalized along two separate conceptual domains: depression and anxiety. Such conceptualization of well-being has been used by many researchers (e.g. Cooper & Berwick, 2001; Linquist, 2000; Wooldredge, 1999). In this study, I measured depressive and anxiety symptoms using the Patient Health Questionnaire (PHQ) scales PHQ-9 and GAD-7 (Kroenke, Spitzer, Williams, & Löwe, 2010; Spitzer, Kroenke, Williams, & Löwe, 2006). The PHQ-9 and GAD-7 are widely used to measure depression and anxiety for both clinical and general populations (Kroenke et al., 2010).

The PHQ-9 contains nine items and measures depression. The items of the scale address respondents' affective state and somatic symptoms (e.g. appetite, energy) and they ask about inmates' frequency of experiencing the following conditions:

- "Little interest or pleasure in doing things"
- "Feeling down, depressed, or hopeless"
- "Trouble falling or staying asleep, or sleeping too much"
- "Feeling tired or having little energy"
- "Poor appetite or overeating"
- "Feeling bad about yourself — or that you are a failure or have let yourself or your family down"
- "Trouble concentrating on things, such as reading the newspaper or watching television"

- "Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual"
- "Thoughts that you would be better off dead or of hurting yourself in some way."

The original questionnaire asks the respondents to check how often they experienced the symptoms of depression in the past two weeks: not at all (0), several days (1), more than half the days (2), and nearly every day (3). However, this scale was replaced because during the debriefing session, inmates reported that these questions and response categories are more suitable for those who have serious mental health issues. Because experiencing the symptoms several days in the past two weeks seemed too frequent, all of them circled 0 (not at all). Therefore, to increase variability in responses, and to allow for a wider and more nuanced range of the frequency of symptoms, the original scale was replaced with never (1), almost never (2), sometimes (3), often (4), and all the time (5). The scale transformation was a successful method of achieving greater variability in responses (see Results: Descriptive Statistics). The scale reliability is high (α= .88).

The GAD-7 is a seven-item scale that measures anxiety. The items of the scale assess anxiety as a state, rather than a trait. The items included in the scale are:

- "Feeling nervous anxiety or on edge"
- "Not being able to stop or control worrying"
- "Worrying too much about different things"
- "Trouble relaxing"

- "Being so restless that it is hard to sit still"
- "Becoming easily annoyed or irritable"
- "Feeling afraid as if something awful might happen."

Just like with the PHQ-9, the original scale was replaced with never (1), almost never (2), sometimes (3), often (4), and all the time (5). The scale reliability was high (α= .88). Both dimensions were analyzed as continuous variables.

Both the PHQ-9 and GAD-7 have good sensitivity and specificity for detecting disorders among clinical patients and the general population (Kroenke et al., 2010; Martin, Rief, Klaiberg, & Braehler, 2006; Williams, Pignone, Ramirez, Perez, 2002). In fact, a meta-analysis of 38 studies confirmed that the PHQ-9 was equal to or more effective than other depression measures (Williams et al., 2002). Validation studies compared the PHQ-9 to the Structured Clinical Interview for the DSM-III-R (Spitzer, Williams, Gibbon, & First, 1992) and found an overall accuracy score of .93 (specificity = .96, sensitivity = .73). In addition, the scale characteristics were consistent across sex, age, and race/ethnicity (Klapow et al., 2002; Löwe, Unutzer, Callahan, Perkins, Kroenke, 2004; Petersen et al., 2015; Huang, Chung, Kroenke, & Spitzer, 2006). Similarly, GAD-7 has been validated in population-based epidemiologic studies, showing consistency across different age, sex, and racial/ethnic groups (Kroenke et al., 2010; Löwe et al., 2008). Validation studies that compared the GAD-7 to the Structured Clinical Interview showed that the GAD-7 had an overall accuracy of .91 (specificity = .97, sensitivity = .63) in detecting any anxiety disorder (Spitzer et al., 1992).

The PHQ scales have not been validated for prison populations yet. Although Hewitt, Perry, Adams, and Gilbody (2011) argue that the diagnostic properties of the

PHQ (such as sensitivity and specificity) might not be equal for general and offender populations because it may over-diagnose depression, it is not uncommon to use PHQ scales in correctional settings (see e.g. Calcaterra, Beaty, Mueller, Min, & Binswanger, 2014; Karlsson, Bridges, Bell, & Petretic, 2014; Kubiak, Beeble, & Bybee, 2012; Kubiak, Kim, Fedock, & Bybee, 2012).

3.6.2. Independent Variables

The key independent variables were operationalized as multi-item indices. They address inmates' subjective perceptions of time and their engagement in different activities. Specifically, I measured a range of behaviors and attitudes associated with general and specific time use patterns, the quality of time use in terms of inmate future orientation, the motivation for engagement, and inmate attitudes about their carceral experience. The measurement of key independent variables is to an extent adapted from previous literature (e.g. Irwin, 1980; Meisenhelder, 1985; Zamble & Porporino, 1988)

The variable **Experience of idleness** measures to what extent inmates plan their daily routines, live "day by day," and experience boredom and idleness. It is measured as an index of responses on a Likert scale ranging from strongly disagree (1), disagree (2), neither disagree nor agree (3), agree (4), and strongly agree (5). Some of the items were adopted from Zamble and Porporino's (1988) study. The items included in this index are: "I try to keep myself busy to pass the time"; "I try to plan my free time"; "I can say I live day by day"; "I often feel bored"; and "I spend most of my free time doing nothing." The first two items were reverse coded and a higher total score on the index indicates a higher level of idle time.

Future-orientation was operationalized with statements about an inmate's general focus on the future and goal-oriented time use. This variable addresses to what extent inmates perceive that they use their time productively to improve their future. The respondents had to choose their level of agreement or disagreement with five items on a Likert scale ranging from strongly disagree (1), disagree (2), neither disagree nor agree (3), agree (4), and strongly agree (5). The items are: "I have a goal I want to achieve during this prison term"; "I try to take part in any necessary programs to get out as soon as possible"; "I try to do something to improve myself while I'm here"; "I don't really think about my future"; and "I'm only focused on what is happening right now." The last two items were reverse coded and a higher total score on the index indicates a stronger future-orientation.

A more specific assessment of future orientation was examined using items that evaluate **Preparation for release.** Unlike future orientation that examined general goals for the near future in prison, the variable preparation for release evaluated inmates' perception about their readiness for their release as it relates to concrete aspects of reentry. Specifically, this variable asks questions about release planning, concerns associated with release and recidivism, and securing housing and employment. The items included in this index are: "I don't have a place to stay when I'm released"; "I don't have any plans for finding a job after my release"; "I think I'm not ready for release"; "I'm afraid that I will go back to crime when I'm released"; "Participation in different programs has prepared me for what I will face when I am released"; "I use the time here to prepare myself for my release." The respondents had to choose their agreement with the items on a Likert scale ranging from strongly disagree (1), disagree (2), neither

disagree nor agree (3), agree (4), and strongly agree (5). The first three items were reverse coded and a higher score on the index indicates better preparation for release.

Appraisal. In order to assess inmates' subjective perceptions of the stressfulness of incarceration, I measured these perceptions based on Lazarus' concepts of primary and secondary appraisal—cognitive processes of evaluating the significance of life events or situations (Lazarus & Folkman, 1984). In psychology research, studies that directly examine cognitive appraisal mostly use validated scales and instruments specifically designed to measure stress appraisal (for a review, see Carpenter, 2016). These instruments measure primary appraisal as an evaluation of three elements: damage that has already occurred (harm/loss), damage that is anticipated (threat), and anticipated threat that can be overcome (challenge) (Lazarus & Folkman, 1984). Secondary appraisal is measured as a self-evaluation of potential coping resources in several domains: physical (e.g. health), social (social support), psychological (beliefs to sustain hope, skills for problem solving, self-esteem, and morale), and material assets (money, tools, and equipment) (Lazarus & Folkman, 1984; Carpenter, 2016; Peacock & Wong, 1990).

However, to keep the questionnaire concise and avoid the respondents' fatigue, I used one item that measures general assessment of the stressfulness of incarceration and one item that measures controllability of the situation by the individual. A single-item measure of appraisal has been used in other studies as well (e.g. Aldwin, Sutton, Chiara, & Spiro, 1996). Specifically, the first item evaluated the perception of the stressfulness of incarceration and subjective assessment of the level of threat: "Doing time in prison is a stressful experience for me." The second item evaluated the perception of personal capability to deal with stress "I think I'm able to do 'easy time'." The second item was

reverse coded, and the items were combined into an index. A higher score on the index indicates a greater level of perceived stress.

Engagement in daily activities is measured as an average number of hours and minutes per day spent in different activities. Serving as coping mechanisms, these activities include pursuits that are scheduled by administration, leisure activities, contacts with the outside world, and other informal and/or unstructured activities. On the questionnaire, activities are separated depending on whether they are more likely to occur on a daily or weekly basis. Activities that are scheduled, administered, and monitored by prison administration that are included in this study are work, education, group religious services, individual and group counseling, and other group meetings.

Furthermore, leisure activities that are analyzed are watching TV; playing group sports; physical exercise; playing cards, chess or other games; listening to the radio or music; reading newspapers, magazines or books; talking to other inmates; participating in hobbies, arts, or crafts; writings songs or stories; and playing musical instruments. Activities that involve contact with the outside world such as visits, writing letters, and phone calls are also included. Finally, other unstructured and informal pursuits that I analyze include daydreaming, sleeping, prayer or meditation, studying, grooming, and cleaning the cell/cubicle. An additional question asks the respondents to report what other activities they engage in and their duration.

Motivation for engagement in activities was based conceptually on Toch's (1997) categories of environmental concerns: privacy, escape, safety, enhancing peer status, maintaining autonomy, self-improvement, and social feedback. As such, these motivational factors, when associated to a particular activity, represent a function or a

goal of coping (Lazarus & Folkman, 1984). To measure this variable, the respondents were provided with selected activities and groups of activities. In each case, they had to check motivational factors that drive their engagement in this activity and then circle the most important factor for each activity. Each of the seven concepts (privacy, escape, safety, enhancing peer status, maintaining autonomy, self-improvement, and social feedback) were represented by one corresponding motivational factor formulated as a half-statement, and some of the statements were reworded to better apply to a specific activity. For example, a statement that addresses the concept of self-improvement was worded "to learn new skills" when referring to working in prison, but it is formulated as "to become a better person" when referring to reading books.

The statements that were used to measure motivational factors are as follows. Motivational factor for privacy concerns was evaluated using one item: "to stay away from inmates/noise or to relax." Escape, as a motivational factor, was examined using items "to forget about life on the outside" and "to keep busy/to pass time." Depending on the context, I assessed safety concerns using two different phrases: "to avoid conflicts with other inmates" and "to feel safe." Enhancing peer status was evaluated using a single item: "to be respected by other inmates." Furthermore, maintaining autonomy included the following options: "to stay informed about relevant matters" and "to earn money or credits for early release." As mentioned above, self-improvement includes two options: "to learn new skills" and "to become a better person." Finally, social feedback is assessed using two options: "to feel accepted by other inmates" and "to make friends."

Because the majority of the respondents checked multiple motivational factors for each activity but failed to circle the most important one, the motivational factors for each

activity were operationalized as dichotomous variables, where 1 indicates presence of the motivational factor, and 0 indicates absence of that factor. Therefore, with seven motivational factors and seven activities/groups of activities for which inmates had to report their motivation, the total number of unique dichotomized motivational factors used in the analyses is 49.

Control variables. Consistent with previous correctional research on well-being and prison social world (e.g. Clemmer, 1940; Grosholz, 2014; Lazarus & Folkman, 1984; Maschi et al., 2014; Toch, 1977, Toch et al., 1986; Zamble & Porporino, 1988), I controlled for key demographic variables, personal background information and criminal history. Demographic variables used in this study include age (in years), race/ethnicity (1=white, 0=non-white), employment (1=employed full-time, 0=not employed full-time), marital status (1=married, 0=not married), and having children under 18 (1=yes, 0=no). I also controlled for other possible individual-level risk factors. Mental health issues were measured as an answer to the question "Have you ever received treatment for psychiatric or emotional problems (e.g. counseling, medication)?" (1=yes, 0=no). Drug dependence was measured as a response to the following question: "In the year before you started your sentence, did using drugs keep you from doing work, going to school, or caring for children?" (1=yes, 0=no).

Furthermore, criminal history was measured as a number of times the respondents served a sentence in prison or jail before the current sentence. Other criminal background variables that were used in the analyses were current violent offense (1=violent, 0=non-violent) and time served (in years). When inmates reported multiple offenses, if at least one of the offenses was violent, I coded 1. While measurements of education and

sentence length were available in the dataset, they were excluded from the analyses due to multicollinearity issues and inability to achieve convergence during multiple imputation (see Analytical Procedure).

3.7. Analytical Procedure

The data were analyzed using Stata MP13 software. First, I examined the data for errors and illogical entries. I observed that for some activities, most specifically, talking to others and daydreaming, inmates recorded 24 hours. I made an assumption that by doing so, inmates wanted to report that they spend "all day" or "a lot of time" in these activities. For this reason, I subtracted the reported number of hours sleeping from 24 in cases where time spent in an activity equaled 24. Treating these entries as missing would increase already high proportions of missing values on these variables (see Table 4.2). Furthermore, I examined the inmates' responses on open-ended questions on case-by-case bases. Because I noticed that all responses can fit into the existing categories, I added time reported in open-ended questions to the corresponding existing categories (e.g. group counseling, hobbies, religious activities).

Finally, I recoded items that needed to be reverse coded and created indices as described above using the Stata "generate" command that uses listwise deletion. When "egen," the alternative command that treats missing values as zeros, was used to create indices, the number of cases in estimation models was only 3% higher. Because treating missing values as zeros may introduce bias and the increase in the number of cases was negligible, I decided to create indices using the "generate" command. The difference in the number of cases available for analysis would be even smaller if other methods of

creating indices were used (e.g. retaining cases where the respondent answered half of the items on an index).

Next, I examined missing data. Missing data represents between 0 and 15% of the observations (see Tables 4.1and 4.2), which results in the loss of around 40% of the sample in a complete case analysis. Higher rates of missing data are present in variables that measure time utilization and associated motivational factors. Examination of missing data revealed that patterns of missing-ness were not correlated with demographic and other personal characteristics of the respondents. Therefore, assuming data are missing at random (MAR), I decided to conduct multiple imputation by chained equations (MICE) in order to avoid potential bias due to missing data (Royston & White, 2011; White, Royston, & Wood, 2011). I applied Stata's "mi impute chained" command to predict missing values using OLS for continuous variables, negative binomial regression for count variables, and multinomial and binary logistic regression for categorical variables (StataCorp, 2011).

I included the dependent variables, independent variables, and all control variables in the MICE models. However, because the total number of variables was more than 85 and some of them had multiple categories, the number of parameters was too large to build successful prediction models (Schafer & Olsen, 1998). If too many parameters exist in a model, this leads to small cell sizes and perfect prediction. While issues with perfect prediction were resolved after I included the "augment" option into the logistic regression equation, which added negligible values that prevented perfect prediction (StataCorp, 2011), a large portion of missing values continued to cause issues with convergence. After a careful examination of the multiple imputation output and

confirmation that the models are correctly specified, it was clear that multinomial regression models, as well as the large number of categorical variables, were preventing convergence. Therefore, in subsequent analyses, I collapsed multiple response categories on variables that measured race, employment, education, marital status, and offense type into two categories for each of the variables, as described above (see Measurement).

Additionally, variables that measured education and sentence length continued to prevent convergence after recoding; therefore, they were excluded from further imputation and hypotheses testing. The preliminary analyses showed that the exclusion of these two variables from estimation models, however, did not alter any relationships between the key independent and dependent variables. Moreover, to reduce the number of factor variables in the equations used in multiple imputation, the 49 variables that measure motivational factors were excluded. Because the motivational factors were going to be examined as they relate to time spent in activities, variables that measure utilization of time were excluded from imputation. These data manipulations were successful and a total of 16 variables were imputed and $m = 40$ imputed datasets were generated—a number recommended by White and colleagues (2011) based on the potential data loss in a complete case analysis.

Because multiple imputation was not successful for all variables, I tested the hypotheses using two different methods of handling missing data: MICE and listwise deletion. All variables necessary for testing hypotheses H1 through H3 were successfully imputed; therefore, the models used to test these hypotheses were estimated on the imputed datasets. Hypotheses H4 through H6, on the other hand, were tested using estimation models based on complete cases. Complete case analyses resulted in loss of on average

40% of the sample, which may have resulted in biased estimates (White & Carlin, 2010). In fact, listwise deletion results in biased estimates when data are MAR, but unbiased estimates when data are missing completely at random (MCAR) (Brown, 1994).

Further, I analyzed descriptive statistics, bivariate correlations, and ran diagnostic tests to verify that the assumptions of regression are satisfied. Spearman correlation coefficients and variance inflation factors (VIFs) did not indicate issues with multicollinearity. In fact, all correlation coefficients were lower than .70 and VIFs were lower than 4, common cut-off values for collinearity (Licht, 1995; Pan & Jackson, 2008). Models that predict depression and anxiety satisfied all other assumptions of linear regression (Greene, 2000; Shaphiro & Wilk, 1965; White, 1980). However, all the regression models with time spent in activities as the dependent variable violated the assumption of normality of residuals (Shaphiro & Wilk, 1965). For this reason, I recoded all time utilization variables into quartiles and treated these variables as ordinal using ordered logistic models. Tests of model fit demonstrated that ordered logistic models fit better than linear regression models, with Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) ranging from 500 to 800 for ordered logistic models, and between 1500 and 1900 for linear regression models (Akaike, 1974; Raftery, 1995).

In the next step, using "mi estimate" command in Stata, eight ordinary least squares (OLS) regression models were estimated to test hypotheses H1 through H3. These models were estimated based on $m = 40$ imputations, using Rubin's combination rules (Rubin, 1987; StataCorp, 2011). All the models in this study were estimated with robust standard errors adjusted to control for the clustering of respondents in 5

correctional institutions (Long & Freese, 2006). To test hypotheses H4, H5, and H6, I performed a mediation analysis where the variables engagement in activities and motivation for engagement were the mediators (Figure 3.1). First, I examined the potential mediating effects of engagement in activities on the relationships between stress appraisal and depression and anxiety. Next, I analyzed possible mediating effects of motivation for engagement in activities on the relationships between stress appraisal and depression and anxiety. Finally, I tested for mediating effects of engagement in activities on the relationship between motivation for engagement in activities and depression and anxiety.

I assessed the existence of full mediation based on whether or not the following requirements were satisfied: 1) independent variable predicts the mediator (path a); 2) the mediator predicts the dependent variable (path b); 3) when controlling for the mediator, a previously significant relationship between the independent variable and the dependent variable is no longer significant (path c`) (Baron & Kenny, 1986). Partial mediation was established when the third requirement was not satisfied; rather, the regression coefficients remained significant but reduced. The Sobel's Z-test was used to test the statistical significance of mediation (Sobel, 1982). The test statistic is calculated using the following formula,

$$Z = \frac{ab}{\sqrt{b^2 SE_a^2 + a^2 SE_b^2}}$$

where *a* is an unstandardized regression coefficient for the association between the independent variable (appraisal) and a mediator, *b* is an unstandardized regression coefficient for the association between the mediator and the dependent variable (in the

model where the independent variable is also a predictor of the dependent variable), and SE_a and SE_b are the standard errors of *a* and *b* (Sobel, 1982).

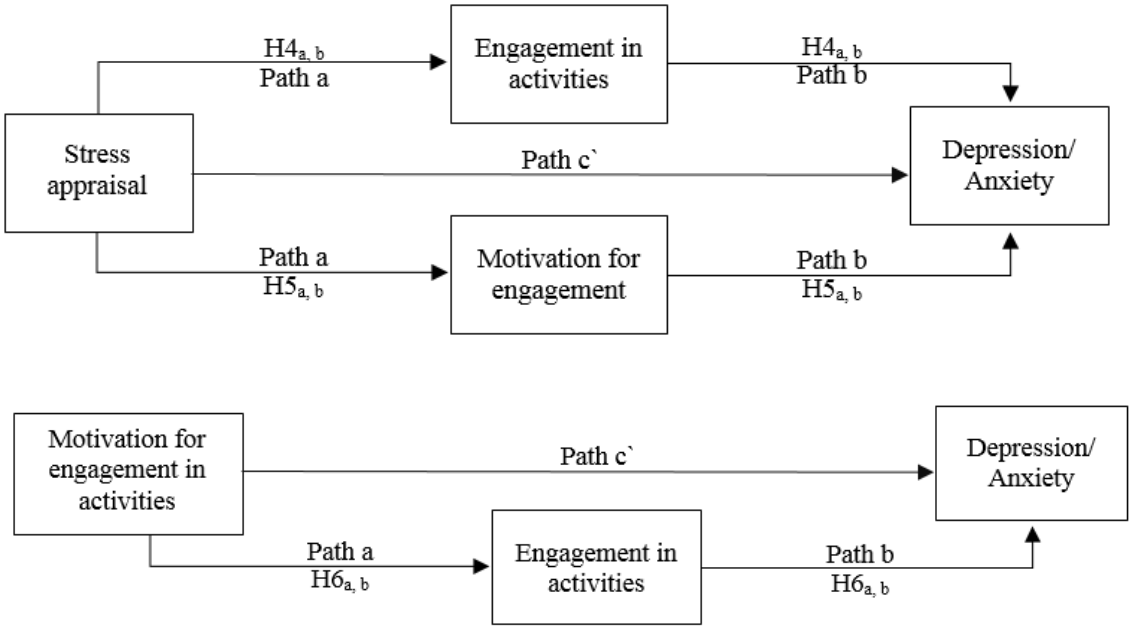

Figure 3.1. Mediation analyses

To test hypotheses $H4_a$ and $H4_b$, 25 regression models estimated the relationship between stress appraisal and time utilization variables, i.e. the mediators (path a). Because time spent in activities was operationalized on an ordinal scale, models were estimated using ordered logistic regression. However, because the likelihood ratio omnibus test of parallel slopes showed that the model that predicted studying violated the parallel slopes assumption of ordered logistic regression (χ^2 (22) = 41.64, p = .01), this model was estimated using multinomial logistic regression (Wolfe & Gould, 1998). Furthermore, two linear regression models estimated the relationship between appraisal and depression/anxiety. Finally, two linear regression models assessed the relationship between stress appraisal and depression/anxiety, including the variables that measure engagement in activities as predictors.

To test the hypotheses $H5_a$ and $H5_b$, 49 binary logistic regression models estimated the relationship between stress appraisal and each of the motivational factors (path a). The next two sets of 7 linear regression models estimated the relationship between appraisal as well as motivational factors for 7 activities and depression/anxiety. To test the hypotheses $H6_a$ and $H6_b$, a set of 12 ordered logistic regression models estimated the relationship between motivation for engagement in activities and utilization of time (path a). Seven linear regression models estimated the relationship between time utilization variables as well as appraisal and depression/anxiety. Sobel's Z-test of mediation was conducted for models where the first and second criteria of mediation are satisfied as proposed by Baron and Kenny (1986). Post-estimation tests of fitness of the models were utilized for all models in the study. All significance levels in tables were reported as * $p < .05$, ** $p < .01$, and *** $p < .001$.

Tests of mediation on cross-sectional data in social science research are common (Maxwell, Cole, & Mitchell, 2011). However, there is evidence that when not accounting for time necessary for mediating effects to occur, the estimates produced by mediation analysis will be biased (Maxwell & Cole, 2007; Maxwell et al., 2011). In fact, cross-sectional analyses are more likely to find that a mediator does not fully mediate the relationship when a longitudinal analysis shows it does, or in case of partial mediation, that mediation effects exist while longitudinal data shows otherwise (Maxwell & Cole, 2007; Maxwell et al., 2011). The alternative is the MacArthur approach that recommends using a longitudinal design with at least two or three time points (e.g. Kraemer, Kiernan, Essex, & Kupfer, 2008). Given that the McArthur approach emphasizes the importance of temporal order of focal variables, it is also more successful than Baron and Kenny's

(1986) approach in addressing the issue of reciprocal causation (Kraemer et al., 2008). For this reason, and because the current study includes only cross-sectional data, the estimates generated in this study are interpreted with caution.

CHAPTER 4: RESULTS

In this chapter, I first present descriptive statistics for the sample. Next, I examine regression models that estimated the relationships between subjective evaluations of time use and well-being (hypotheses H1 through H3). Furthermore, I comment on regression models that estimate the relationships between appraisal, time utilization, and well-being (H4). Then I examine the associations between appraisal, motivational factors, and well-being (H5). Finally, I inspect the relationships between stress appraisal, motivational factors, time utilization, and well-being (H6). The existence of mediation effects is also investigated in these sections.

4.1. Descriptive Statistics

Descriptive statistics for the original sample and combined imputed samples are presented in Table 4.1. Regarding demographic characteristics of the sample, 35% of the inmates are white, while 65% belong to a racial or ethnic minority or are multiracial. On average, inmates are 40 years old with around 20% of the sample younger than 30. Furthermore, 55% of the inmates reported having full-time employment before their current incarceration. Around 17% reported being married and 46% have minor children. With respect to risk factors, around 28% of inmates reported they have drug or alcohol dependence issues, while 36% reported receiving treatment for mental health issues before their current period of incarceration.

Overall, the average time inmates served on the current sentence is 8 years with around 24% of inmates having served less than 2 years. On average, the sample has 1.6

prior incarcerations and for 43% of the sample, this is their first prison sentence. Finally, 33% of inmates currently serve their sentence for a violent offense. These characteristics are roughly comparable to the nationally representative sample of federal and state inmates (Bureau of Justice Statistics, 2004), although this sample is slightly older and less violent, which is possibly because the study was conducted exclusively in medium security institutions.

Table 4.1. Sample characteristics

	Original sample				Imputed sample		
Variable	$\bar{X}$	***Range***	***SD***	**Missing**	$\bar{X}$	***SD***	**Imputed**
White	.35			6%	.37		6%
Age	40.19	19-78	11.48	14%	40.15	11.56	14%
Employed full-time	.55			4%	.57		4%
Married	.17			5%	.18		5%
Has children	.46			5%	.49		5%
Time served (years)	8.37	.08-46	7.83	9%	8.47	7.85	9%
Violent offense	.33			15%	.39		15%
Criminal history	1.58	0-20	2.36	9%	1.74	4.42	9%
Drug dependence	.28			5%	.30		5%
Mental health issues	.36			6%	.38		6%
Institutions							
Kershaw	.20			0%			
Ridgeland	.20			0%			
Allendale	.20			0%			
Evans	.20			0%			
Tyger River	.20			0%			

When it comes to the dependent variables, 38% of the sample reported having never or almost never experienced any depressive symptoms and less than 5% reporting experiencing all the symptoms often or all the time. Between these two extremes, 57% of the sample reported experiencing some symptoms of depression to some extent in the past two weeks. On the anxiety scale, 22% of the sample reported having never or almost

never experienced all the symptoms of anxiety and around 10% of inmates reported experiencing all the symptoms of anxiety often or all the time. Around 68% of the sample reported experiencing some symptoms of anxiety to some extent in the past two weeks. These figures suggest that both emotional states are largely prevalent in the sample. The original PHQ-9 and GAD-7 instruments for depression and anxiety record respondents' answers on a scale that measures frequency of experiencing symptoms on four levels. Based on the total score on each scale, researchers determined and validated cut-off points for mild, moderate, and severe depression and anxiety, with moderate and severe requiring treatment (Kroenke et al., 2010; Spitzer et al., 2006). Because I replaced the original 4-point scale with a 5-point scale to increase variation of responses, it is not possible to determine for how many inmates the reported levels of depression and anxiety cross the threshold of clinical significance. Nevertheless, it is evident that anxiety is a greater issue for the inmates in the sample than depression is.

With respect to the key independent variables, 42% of the sample strongly appraised that incarceration is a stressful and uncontrollable experience for them, while less than 7% reported the lowest level of agreement with the statements. Furthermore, 23% of the inmates overall disagreed or strongly disagreed with all items that idleness is an issue for them, whereas less than 2% agreed or strongly agreed that they are experiencing idleness on all items. On the other hand, less than 1% of the sample disagreed or strongly disagreed with all statements about future orientation, while 62% of the sample agreed or strongly agreed that they are oriented towards the future on all items. Finally, less than 1% disagreed or strongly disagreed with all statements that they

are prepared for release, and less than 50% of the sample agreed or strongly agreed that they are prepared for release on all items.

Regarding daily time utilization, inmates reported that they spend on average 7 hours sleeping, while the rest of the time is occupied by various structured and unstructured activities. For example, they spend close to 4 hours a day in work assignments and around 2 hours in educational programs. The greatest number of hours, more than 4 hours a day, inmates spend in casual conversations with others. In other less structured activities such as watching TV, listening to the radio, reading, studying, and daydreaming, inmates spend between 2 to 3 hours per day. On average, inmates spend the least amount of time in activities such as writing, playing musical instruments, and group sports. Furthermore, inmates spend more than 2 hours a week in group religious activities and around 1 hour a week in rehabilitation programs such as AA/NA meetings. Finally, between 1 and 2 hours a week inmates spend in activities that promote contact with the outside world, such as writing letters, phone calls, and visits.

It is apparent that the range of time spent in certain activities is wide with some values approaching close to 24 hours a day. These highest values do not present a pattern, however, as they are present in 0.2% of the cases. On the other hand, 0 hours spent in an activity is a more common occurrence in the data and the percentage of inmates who reported that they do not spend any time in the activity ranges from 1% for sleeping to 92% for playing music. Other activities for which a significant number of inmates reported not participating include listening to the radio (33%), work (34%), school (41%), playing cards (51%), other group programs (63%), hobbies and visits (64%), writing (70%), playing sports (70%), and individual and group counseling (77%).

Concerning motivation to engage in various activities, it appears that inmates preferred engaging in activities for some reasons more often than others (Table 4.3). In fact, across all activities, except rehabilitation programs, inmates were strongly motivated by a desire to seek privacy and relax (privacy) and to pass time and forget about the life on the outside (escape). Self-improvement was also a preferred motivational factor with, in some cases, more than half of the sample reporting this motivational factor. On the other hand, seeking peer status was the least recognized factor that motivates inmates to engage in activities.

To be more specific, inmates are most likely to engage in playing cards and games to pass time and forget about life outside (30%) and to socialize (28%). Furthermore, inmates are most likely to read for self-improvement (57%), to seek privacy from others or relax (43%), to achieve autonomy by staying informed (43%), and to pass time (39%). Engaging in sports and exercise is most likely to be motivated by seeking social feedback (48%) and a desire for self-improvement (46%). Although some inmates, perhaps those who enjoy exercising alone as opposed to playing group sports, are motivated by the desire for privacy (25%) and passing time (34%).

The motivation behind having hobbies stems from the desire to learn new skills (37%), but also to isolate oneself from others and noise (23%) and to pass time (21%). More than half of the respondents watch TV to seek autonomy by staying informed (56%), while over a third watch TV to relax (39%) and avoid thinking about life outside (36%). Finally, the most favored motivational factors for participation in work and rehabilitation programs are self-improvement (41% and 52%, respectively) and achieving autonomy (32% and 20%, respectively).

Table 4.2. Descriptive statistics for the dependent and key independent variables

	Original sample				Imputed sample		
Variable	$\bar{X}$	***Range***	***SD***	**Missing**	$\bar{X}$	***SD***	**Imputed**
Dependent variables							
Depression	21.53	9-45	7.50	8%	21.67	7.51	8%
Anxiety	19.38	7-35	6.35	8%	19.35	6.37	8%
Key independent variables							
Idleness	12.86	5-25	3.13	4%	12.85	3.14	4%
Future orientation	20.93	7-25	2.88	5%	20.90	2.89	5%
Preparation for release	22.65	11-30	2.96	5%	22.60	2.97	5%
Appraisal	7.10	2-10	1.81	3%	7.08	1.82	3%
Daily time utilization (h/day)							
Sleep	7.06	0-20	2.75	9%			
Talking to others	4.64	0-21	4.58	12%			
Work	3.88	0-18	4.03	9%			
Watching TV	2.96	0-18	2.91	9%			
Reading	2.49	0-20	3.01	9%			
School	2.45	0-20	3.14	9%			
Daydreaming	2.16	0-23	4.01	13%			
Listening to the radio	2.11	0-21	3.18	10%			
Studying	2.05	0-20	2.99	12%			
Prayer	1.76	0-21	2.93	9%			
Grooming	1.60	0-19	2.99	10%			
Exercise	1.45	0-16	2.33	9%			
Playing cards, games	1.21	0-18	2.14	9%			
Hobby	1.16	0-21	2.76	12%			
Cleaning	1.11	0-19	2.07	9%			
Writing stories, songs	.60	0-12	1.36	11%			
Group sports	.59	0-16	1.38	12%			
Playing mus. instrument	.17	0-10	.83	13%			
Weekly time utilization (h/week)							
Religious activities	1.84	0-40	3.35	10%			
Phone calls	1.71	0-40	3.53	10%			
Visits	1.43	0-21	2.52	13%			
Writing letters	1.15	0-24	1.98	12%			
Other group activities	1.06	0-15	2.13	15%			
Individual counseling	.73	0-20	2.26	13%			
Group counseling	.70	0-40	2.70	14%			

Table 4.3. Descriptive statistics for motivational factors

Variable	**%**	**Missing**
Motivation for playing cards, games		
Escape	30.42	9%
Social feedback	28.43	9%
Self-improvement	22.47	9%
Privacy	22.27	9%
Safety	16.10	9%
Autonomy	7.36	9%
Peer status	4.77	9%
Motivation for reading		
Self-improvement	56.66	8%
Privacy	43.34	8%
Autonomy	42.54	8%
Escape	39.17	8%
Safety	23.03	8%
Peer status	3.78	8%
Social feedback	1.99	8%
Motivation for sports, exercise		
Social feedback	48.49	10%
Self-improvement	45.73	10%
Escape	33.60	10%
Privacy	24.85	10%
Safety	9.34	10%
Peer status	5.96	10%
Autonomy	5.77	10%
Motivation for hobbies		
Self-improvement	36.98	15%
Privacy	22.47	15%
Escape	20.68	15%
Safety	11.13	15%
Social feedback	10.34	15%
Autonomy	4.97	15%
Peer status	3.58	15%
Motivation for watching TV		
Autonomy	56.46	7%
Privacy	38.57	7%
Escape	35.59	7%
Safety	17.89	7%
Self-improvement	12.13	7%
Social feedback	7.55	7%

Peer status	2.39	7%
Motivation for work		
Self-improvement	40.56	9%
Autonomy	31.61	9%
Escape	29.82	9%
Privacy	15.71	9%
Safety	13.92	9%
Social feedback	8.15	9%
Peer status	5.77	9%
Motivation for rehabilitation programs		
Self-improvement	51.89	12%
Autonomy	20.48	12%
Escape	11.33	12%
Social feedback	9.34	12%
Privacy	8.95	12%
Safety	6.36	12%
Peer status	3.98	12%

4.2. Hypotheses H1 through H3

Table 4.4 presents the results of the linear regression models that test hypotheses H1 through H3. Hypotheses $H1_{a,b}$ state that experiencing idleness is associated with higher levels of depression and anxiety and both were confirmed by the analysis. Specifically, idleness is a significant predictor of both depression and anxiety (b_d=.77, p < .05, b_a=.41, p < .05). As hypothesized, inmates who experience greater idleness tend to feel more depressed and more anxious.

Furthermore, $H2_{a,b}$ state that future orientation is associated with lower levels of depression, and higher levels of anxiety, while $H3_{a,b}$ postulate that preparation for release is associated with lower levels of both depression and anxiety. The results show that future orientation and preparation for release are associated with depression ($H2_a$ and $H3_a$). Specifically, inmates who are more oriented towards future are less depressed, which corresponds to the relationship that was hypothesized (b_d= -.49, p < .05).

Similarly, inmates who feel that they are more prepared for release experience less depression, as expected (b_d= -.52, $p < .05$).

However, future orientation and preparation for release have null effects on anxiety. It is important to note, however, that the size of these effects is small across all models. In the full model that included all three key independent variables, idleness is the only key independent variable that remained a significant predictor of depression. Significant relationships between the control variables and the dependent variables are discussed in the context of all models in the study at the end of Chapter 4.

4.3. Hypotheses $H4_a$ and $H4_b$

Hypotheses $H4_{a,b}$ predict that the relationships between stress appraisal and depression and between stress appraisal and anxiety are mediated by engagement in activities. These hypotheses are tested through a series of linear regression models that predict depression and anxiety, as well as ordered logistic regression models that predict time utilization variables. The OLS models shown in Table 4.5 demonstrate that stress appraisal is a significant predictor of both depression and anxiety (b_d=.80, $p < .05$, b_a=.95, $p < .05$). The more inmates evaluate their incarceration as a stressful experience which they cannot handle, more likely they are to be depressed and anxious. However, when time utilization variables are included in the models, appraisal is no longer a significant predictor of depression, while the coefficient for the association with anxiety remains significant but is reduced (b_a=.38, $p < .05$).

Surprisingly, out of 25 variables that measure time spent in activities, only three are significant predictors of well-being. Specifically, the results reveal that inmates who spend more time daydreaming are more likely to be anxious (b_a=.99, $p < .05$).

Furthermore, inmates who spend more hours participating in "other" group activities are less likely to experience anxiety (b_a= -.89, p < .05). Finally, inmates who occupy more of their time writing letters have higher levels of depression (b_d=.88, p < .05).

Further, ordered logistic regression models that estimate the relationship between stress appraisal and time utilization variables demonstrate that stress appraisal is a significant predictor of only a few activities (Table 4.6). The results show that inmates who are more likely to evaluate their incarceration as a stressful experience that they cannot control spend fewer hours in leisure activities such as talking to others (b= -.10, p < .05), playing cards and games (b= -.14, p < .05), and hobbies (b= -.09, p < .05). For example, the odds of spending time playing games are 13% lower for those with higher stress appraisal. Inmates with higher stress appraisal also spend less time in individual (b= -.08, p < .05) and group counseling (b= -.19, p < .05). However, inmates with higher reported stress appraisal spend more time daydreaming (b= .12, p < .05). Specifically, the odds of spending more hours daydreaming increase by 13% with each unit increase in appraisal.

It is worth noting other significant associations in these models. For example, white inmates spend less time in school, prayer, watching TV, writing, playing cards/games, group sports, exercise, reading, individual and group counseling, and studying than minority inmates. The strongest effect of race is evident in the case of group counseling, playing games, and group sports. The odds of engaging in group counseling decrease by 56% and the odds of engaging in playing games and sports decrease by 54% for white inmates, compared to minority inmates.

As we would expect, older individuals spend more time in prayer and group religious activities, but spend less time in contacts with the outside world as well less time in group and individual physical activity. For example, with each additional year of age, the odds of spending more time in prayer increase by 3% and the odds of engaging in group sports and exercise decrease by 5% and 2%, respectively. Inmates have 6% lower odds of spending time on the phone with each additional year of age. Moreover, those who served more time on the current sentence sleep shorter, but work more hours and spend more time studying. For instance, with each additional year spent in prison, inmates have 5% higher odds of spending more time in work. On the other hand, violent offenders spend fewer hours in work. Compared to non-violent offenders, violent offenders have 19% lower odds of participating in work.

Furthermore, individuals with a history of drug or alcohol dependence spend more hours in unstructured activities such as sleeping, talking to other inmates, listening to the radio, playing games, and group sports, but spend less time in other group programs and individual counseling. For example, the odds for playing games increase by 72% and the odds of playing group sports increase by 83% for individuals with a prior history of drug dependence. Similarly, inmates who have been incarcerated more times spend more time in physical exercise, reading, daydreaming, and religious activities. In fact, the odds of spending more time in these activities increase by 4-11% for individuals with more extensive criminal histories. However, they devote less time to visitation.

Finally, inmates with mental health issues spend more time in prayer and group religious activities, writing, individual counseling, and other group activities, but less time in cleaning and visits. For instance, mentally ill inmates have 41% lower odds of

spending time in visitation compared to those without mental health issues. On the other hand, they have 51% and 30% higher odds of participating in group religious activities and prayer, respectively.

When it comes to mediating effects of time utilization variables, the examination of the estimates shows that none of the variables satisfies all three conditions for mediation of the relationship between appraisal and well-being as proposed by Baron and Kenny (1986). However, daydreaming partially mediates the relationship between appraisal and anxiety because appraisal remains a significant predictor of anxiety even after time utilization variables are included in the model. Even so, this mediation is statistically significant ($Z = 2.01$, $p = .04$).

4.4. Hypotheses $H5_a$ and $H5_b$

Hypotheses $H5_{a,b}$ state that the relationship between stress appraisal and depression and anxiety is mediated by motivation for engagement in activities. The results of hypotheses testing are presented in Tables 4.8-15. The models show that appraisal remains a significant predictor of depression and anxiety after motivational factors for each activity are added into the models. What is more, the coefficients for appraisal do not substantively differ from the base model. Across all the models that predicted the dependent variables, several motivational factors were significant predictors of depression and anxiety (Table 4.8). First, inmates who are more likely to engage in playing cards and games in order to avoid conflicts with other inmates are more depressed ($b= 2.83$, $p < .05$) and anxious ($b= 2.61$, $p < .05$). On the other hand, inmates who play cards and games to learn new skills are less likely to be depressed ($b= -3.75$, $p < .05$). Second, inmates who read in order to pass time are more depressed ($b= 1.69$, $p <$

.05), and inmates who read to avoid conflicts with others have higher levels of anxiety (b= 1.84, p < .05). On the other hand, individuals who read to achieve autonomy by staying informed have lower levels of depression (b= -1.58, p < .05).

When it comes to motivation for engagement in sports and exercise, those who play sports or exercise because they are afraid for their safety are more likely to be depressed (b= 3.11, p < .05). Engaging in hobbies in order to become a better person is associated with lower depression (b= -1.78, p < .05) and anxiety (b=-1.15, p < .05). Likewise, participating in hobbies in order to stay informed is related to lower levels of anxiety (b= -3.65, p < .05). Finally, inmates who watch TV in order to pass time (b_d= 1.61, p < .05; b_a= .91, p < .05) or because of their concern for safety (b_d= 1.98, p < .05; b_a= 1.82, p < .05) are more depressed and anxious. None of the motivating factors for engaging in work is a significant predictors of well-being. Privacy as a motivating factor for participation in rehabilitation programs is the only significant predictor of well-being, namely depression (b= 3.31, p < .05).

The analyses of predictors of motivational factors show that appraisal does not predict motivation across all models (Tables 4.8-14). However, where it does, the relationship between appraisal and a motivational factor is negative. Specifically, inmates who find their incarceration a stressful experience which they cannot control have 12% lower odds of playing games to relax (b= -.13, p < .05), 7% lower odds of playing cards to pass time (b= -.07, p < .05), 17% lower odds of playing cards to stay informed (b= -.18, p < .05), and 21% lower odds of playing cards to socialize with friends (b= -.24, p < .05) (Table 4.8). While these individuals have a tendency not to choose to play games for

all these reasons, it appears that socializing is the least likely reason of engaging in such recreation for stressed out inmates.

Furthermore, inmates with higher stress appraisal have 11% lower odds of engaging in reading for safety concerns (b= -.12, p < .05) and 11% lower odds of reading for self-improvement (b= -.12, p < .05) (Table 4.10). Inmates with greater perceived stress have 21% lower odds of engaging in sports to stay informed (b= -.24, p < .05) and 18% lower odds of participating in physical activity to socialize (b= -.20, p < .05) (Table 4.11). For inmates who perceive their incarceration as stressful, the odds of having hobbies because of the concern for safety are 18% lower (b= -.20, p < .05), the odds of engaging in hobbies to be respected by peers are 36% lower (b= -.44, p < .05), and the odds of using hobbies as a vehicle for socialization are 29% lower (b= -.34, p < .05) (Table 4.12). The results reveal that for stressed out inmates, seeking peer respect is the least likely reason that they participate in hobbies.

Next, appraisal is not a significant predictor of motivation for watching TV in any model (Table 4.13). On the other hand, inmates with higher stress appraisal have 31% lower odds of working to be respected (b= -.37, p < .05), 17% lower odds of working for self-improvement (b= -.18, p < .05), and 22% lower odds of working for the purpose of socializing (b= -.25, p < .05) (Table 4.14.). Finally, inmates who perceive their incarceration as more stressful have 7% lower odds of participating in rehabilitation programs for self-improvement (b= -.07, p < .05) and 18% lower odds of participating in rehabilitation programs to socialize (b= -.20, p < .05) (Table 4.15). It appears that for the individuals with higher stress appraisal, self-improvement is a more likely reason for participation in treatment programing than socialization.

It is also important to note other significant predictors of motivational factors across the models. Compared to minority inmates, white inmates are more likely to engage in activities—reading, hobbies, watching TV and work—to pass time or forget life on the outside. However, they are less likely to engage in activities (playing games, reading) for self-improvement than are non-white inmates. Older individuals, on the other hand, are less likely to engage in activities for socialization (playing cards, sports), as well as to pass time, to stay away from other inmates or noise, and to seek peer respect (playing games, hobbies, work, rehabilitation programs). Inmates who served more time on the current sentence are more likely to participate in activities to be respected, as well as for self-improvement, to stay informed, and to socialize (reading, hobbies, work, and rehabilitation programs). Finally, individuals with more extensive criminal histories are more likely to partake in activities in order to satisfy their status seeking needs and because of their concern for safety (reading, sports, hobbies, watching TV, work).

Finally, the examination of mediation effects revealed that there is a potential for partial mediation in only one case. In this case, safety as a motivational factor for engaging in reading satisfies the two requirements for partial mediation (Baron & Kenny, 1986), however, a Sobel (1982) Z-test shows that this mediation is not statistically significant at $p < .05$ ($Z = -0.13$, $p = .89$). Other relationships are not potential candidates for mediation analysis because they did not satisfy conditions for mediation: either appraisal is not a significant predictor of a motivational factor (path a in Figure 3.1), or motivational factors do not predict depression or anxiety (path b in Figure 3.1).

4.5. Hypotheses $H6_a$ and $H6_b$

The final set of hypotheses state that the relationship between motivation for engagement in activities and depression and anxiety is mediated by engagement in these activities. The models that examined whether time utilization variables predict well-being continue to show null effects (Tables 4.16-22). Therefore, because one of the crucial conditions for mediation has not been satisfied (path b in Figure 3.1), hypotheses are not confirmed. However, the analyses still reveal some relationships worth discussing.

First, if we compare models presented in Table 4.8 with models presented in tables 4.16 through 4.22, we notice that in some models, the estimates for the motivational factors on well-being change with inclusion of time utilization variables. Specifically, in models that examine the relationship between time spent playing games and motivation for playing games and well-being, safety remains a significant predictor of both anxiety and depression, however, escape emerges as a significant predictor of depression. For participation in sports and exercise, after including time spent in sports and exercise, safety remains a significant predictor of depression, but also appears as a significant predictor of anxiety. When number of hours spent in reading was included in the models, reading to achieve autonomy was no longer a significant predictor of depression, but reading to socialize emerges as a significant predictor of anxiety, whereas other variables remain significant predictors of well-being.

Seeking escape by watching TV is no longer a significant predictor of depression and anxiety and safety is no longer a significant predictor of depression after including the number of hours spend watching TV. Finally, seeking privacy by participating in rehabilitation programs is no longer a significant predictor of depression after including

hours spent in various treatment programs, while participation in programming for self-improvement emerges as a significant predictor of both depression and anxiety. Although it appears that inclusion of certain time utilization variables into the models changed the relationships between motivational factors and the dependent variables, time utilization variables do not mediate these relationships.

Furthermore, models that examine whether motivation for engagement is associated with engagement in activities reveal multiple relationships worth noting (Table 4.23). First, in most of the cases where motivational factors are associated with the amount of time spend in the activity that they refer to, this relationship is positive. Specifically, inmates who have a desire to pass time (b= 1.44, p < .05), to seek peer status (b= .57, p < .05), to socialize (b= 1.03, p < .05), or to become a better person (b= .26, p < .05) spend more time in playing cards and games, and the strongest predictors are escape and social feedback. To be specific, inmates who want to pass time, have 322% higher odds of engaging in playing games than those who do not. Similarly, inmates who want to socialize have 180% higher odds of spending more hours playing games than those who do not desire socialization.

Seeking peer status in terms of reading, on the other hand, is one of the few motivational factors that are negatively associated with activities. In fact, inmates who are concerned about peer respect have 69% lower odds of spending hours reading (b= -1.17, p < .05). At the same time, inmates who seek peer affirmation have 265% higher odds of spending more hours participating in group sports (b= 1.30, p < .05). Similarly, inmates want to socialize have 343% higher odds of participating in sports (b= 1.49, p < .05), compared to those who do not. However, individuals who have concern for their

safety have 74% lower odds of spending their time in participatory sports (b= -1.35, p < .05). Individuals who are motivated by seeking privacy, escape, self-improvement, and socialization are more likely to engage in exercise, with self-improvement being the strongest predictor. To be specific, the odds of greater engagement in exercise increase by 345% for individuals who have concern about self-improvement (b= 1.49, p < .05).

Furthermore, significant predictors of participating in hobbies are privacy, self-improvement, and social feedback, with privacy being the strongest. Inmates who seek privacy by staying away from noise or other inmates have 679% higher odds of engaging in hobbies than individuals who are not concerned about privacy (b= 2.05, p < .05). Inmates who have concern for their privacy, escape, safety, and autonomy spend more hours watching TV. The strongest predictor here is privacy; inmates who are motivated by the desire to stay away from noise and relax have 75% higher odds of spending more hours watching TV, than inmates who do not have that concern (b= .56, p < .05).

When it comes to formal activities scheduled by the administration, the results show several patterns. First, engagement all these activities is motivated by self-improvement. Self-improvement is the strongest predictor of participating in educational programs. In fact, for individuals who want to become better persons, the odds of spending more hours in school increase by 519% compared to inmates who do not want to self-improve (b= 1.82, p < .05). Furthermore, some inmates seek privacy and autonomy through work, while others avoid work for safety concerns. Specifically, the odds of spending more hours in work decrease by 58% for inmates who have concern about safety, compared to inmates who do not fear for their safety (b= -.88, p < .05).

Seeking social feedback is positively associated with engaging in individual (b= .93, $p < .05$) and group counseling (b= .50, $p < .05$). Finally, inmates who want to pass time and escape reality spend fewer hours in individual counseling, but more hours in other group activities. Specifically, inmates who want to pass time have 41% lower odds of spending more hours in individual counseling (b= -.52, $p < .05$) but 136% higher odds of spending more hours in other group activities (b= .86, $p < .05$).

Finally, across all the models that predicted depression and anxiety with any combination of predictors, control variables reveal several patterns. First, in many cases white individuals experience more depression and anxiety than minority inmates do. Second, individuals who have minor children also have higher levels of depression and anxiety. Furthermore, inmates with a history of drug or alcohol dependence report more depressive symptoms. Finally, as one might expect, inmates who reported that they have received treatment for mental health issues prior to incarceration have higher levels of depression and anxiety. In fact, along with stress appraisal, the variable that measures serious mental health issues is one of the most robust predictors of well-being. The nature of the relationships between these demographic characteristics and well-being found in this study corresponds to the empirical evidence found in previous studies (e.g. Adams, 1992; Carroll, 1990; Linquist, 2000; Vuolo & Kruttschnitt, 2008; Wooldredge, 1999).

Table 4.4. OLS regression: Depression and anxiety regressed on idleness, future orientation, and preparation for release

	Idleness model				**Future orientation model**				**Preparation for release model**			
	Depression		**Anxiety**		**Depression**		**Anxiety**		**Depression**		**Anxiety**	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Idleness	.77*	.14	.41*	.10	-	-	-	-	-	-	-	-
Future orientation	-	-	-	-	-.49*	.13	-.18	.07	-	-	-	-
Prep. for release	-	-	-	-	-	-	-	-	-.52*	.11	-.30	.13
Time served	.07	.08	.05	.05	.04	.08	.04	.06	.05	.09	.05	.06
Violent offense	-.09	.85	.24	.47	-.53	1.04	.03	.53	-.64	.98	-.06	.51
Age	.03	.05	-.07	.04	.01	.04	-.08	.04	-.01	.05	-.09	.04
White	1.28	.59	1.07	.45	1.85	.63	1.34	.50	1.39	.50	1.11	.43
Employed full-time	-1.32	.50	-.72	.34	-1.45	.54	-.80	.34	-1.45	.60	-.79	.38
Married	1.20	.66	.90	.47	1.25	.82	.92	.54	1.44	.71	1.03	.49
Has children	1.56*	.33	1.16	.41	1.67*	.44	1.25	.45	1.96*	.43	1.38	.41
Drug dependence	1.71	.56	1.82	.59	2.13	.73	2.03	.70	1.96	.70	1.94	.67
Criminal history	-.07	.17	-.05	.14	-.02	.17	-.02	.13	.00	.16	-.01	.13
Mental health	3.46*	.57	2.73*	.41	3.51*	.66	2.78*	.44	3.09*	.61	2.51*	.40
Intercept	7.82	2.59	14.35*	2.13	28.76*	3.69	23.73*	2.47	3.95*	3.13	27.30*	3.31
R^2	.23		.18		.17		.15		.18		.16	
	$F(11, 11.3) = 29.68$ $p < .001$		$F(11, 11.7) = 22.65$ $p < .001$		$F(11, 10.2) = 36.72$ $p < .001$		$F(11, 10.7) = 26.43$ $p < .001$		$F(11, 10.1) = 42.60$ $p < .001$		$F(11, 10.8) = 31.87$ $p < .001$	

Table 4.4. OLS regression: Depression and anxiety regressed on idleness, future orientation, and preparation for release (continued)

	Complete model			
	Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***
Idleness	.66*	.13	.38	.13
Future orientation	-.08	.11	.08	.11
Prep. for release	-.30	.12	-.22	.14
Time served	.08	.08	.06	.06
Violent offense	-.29	.89	.15	.49
Age	.01	.05	-.08	.04
White	1.21	.54	.93	.40
Employed full-time	-1.30	.48	-.71	.34
Married	1.33	.58	.99	.44
Has children	1.63*	.36	1.24	.36
Drug dependence	1.71	.63	1.77	.61
Criminal history	-.05	.16	-.04	.14
Mental health	3.16*	.56	2.53*	.39
Intercept	18.38*	4.27	18.46*	4.89
R^2	.25		.19	
	$F(13, 12.9) = 40.55$ $p < .001$		$F(13, 12.3) = 25.07$ $p < .001$	

Table 4.5. OLS regression: Depression and anxiety regressed on time utilization variables

	Base model				Complete model			
	Depression		Anxiety		Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Appraisal	.80*	.23	.95***	.14	.02	.24	.38***	.06
Sleep	-	-	-	-	.04	.23	-.24	.20
Work	-	-	-	-	-.47	.55	-.68	.31
School	-	-	-	-	-.26	.40	.29	.32
Prayer	-	-	-	-	-1.69	.81	-1.10	.70
Talking to inmates	-	-	-	-	.08	.30	.17	.27
TV	-	-	-	-	.84	.47	-.02	.36
Radio	-	-	-	-	-.68	.55	-.06	.24
Grooming	-	-	-	-	.31	.74	-.06	.30
Writing stories	-	-	-	-	.11	.39	.19	.30
Playing games	-	-	-	-	-.55	.46	-.72	.36
Cleaning	-	-	-	-	-.36	.73	.59	.73
Group sports	-	-	-	-	-.02	.23	.29	.18
Exercise	-	-	-	-	-.96	.52	-.45	.46
Hobby	-	-	-	-	-.28	.49	.03	.27
Reading	-	-	-	-	-.34	.37	-.49	.30
Studying	-	-	-	-	.12	.43	-.08	.55
Daydreaming	-	-	-	-	1.54	.58	.99*	.27
Playing mus. instr.	-	-	-	-	-.07	.30	-.04	.23
Group religious	-	-	-	-	.74	.38	.66	.30
Individual couns.	-	-	-	-	.16	.35	.48	.33
Group counseling	-	-	-	-	.30	.29	.21	.44
Other grp. activities	-	-	-	-	-.33	.44	-.89*	.24
Writing letters	-	-	-	-	.88*	.27	.46	.39
Phone	-	-	-	-	-.57	.49	-.08	.27
Visits	-	-	-	-	-.04	.11	.13	.38
Age	.04	.06	-.06	.03	.05	.06	.00	.03
White	2.35*	.87	1.67	.65	2.2***	.35	1.66	.87

Table 4.5. OLS regression: Depression and anxiety regressed on time utilization variables (continued)

	Base model				Complete model			
	Depression		Anxiety		Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Employed full-time	-1.36	.87	-.90	.54	-.84	.87	-.34	.25
Married	1.11	1.13	.63	.68	.48	.64	.52	1.44
Has children	1.42*	.48	.98	.45	1.95***	.23	2.19*	.65
Time served	-.03	.10	.00	.06	-.02	.11	.02	.05
Violent offense	-.37	1.25	.10	.58	.77	1.23	.61	.77
Drug dependence	.93	.78	1.17	.48	.68	.97	.65	.92
Criminal history	.03	.19	.00	.14	.06	.23	.16	.16
Mental health issues	3.57**	.56	2.99***	.20	3.58*	.87	2.82*	.75
Intercept	11.87*	2.68	12.75***	1.73	19.26*	6.08	14.48*	2.61
n	339		341		215		215	
R^2	.19		.25		.33.		.35	
AIC	2253.08		2120.76		1383.47		1291.36	
BIC	2268.38		2136.09		1396.96		1304.85	

Table 4.6. Ordered logistic regression: Time utilization variables regressed on appraisal

	Sleep			Work			School			Pray		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.08	.07	.92	-.07	.07	.93	-.09	.07	.91	-.08	.09	.93
Age	-.02	.02	.98	.02*	.01	1.02	-.01	.02	.99	.03*	.01	1.03
White	.28	.18	1.32	.14	.24	1.15	-.45*	.19	.64	-.77***	.06	.46
Employed full-time	.07	.17	1.08	.34	.27	1.41	-.27*	.13	.76	.21	.29	1.23
Married	.35	.33	1.41	-.71*	.33	.49	-.09	.46	.91	.78*	.35	2.18
Has children	.07	.17	1.07	-.21	.27	.81	-.51***	.15	.60	-.29	.21	.75
Time served	-.03*	.02	.97	.05***	.01	1.05	.04	.03	1.04	.00	.01	1.00
Violent offense	.02	.18	1.02	-.21**	.08	.81	-.24	.33	.78	-.34	.26	.71
Drug dependence	.48***	.17	1.62	-.11	.19	.89	-.06	.32	.94	.19	.17	1.21
Criminal history	.06	.05	1.06	.00	.03	1.00	.03	.02	1.03	.05	.04	1.05
Mental health issues	-.02	.23	.98	-.09	.17	.91	.39	.21	1.48	.26*	.11	1.30
n	330			330			332			327		
Pseudo R^2	.04			.05			.03			.04		
AIC	834.70			806.38			858.78			832.89		
BIC	849.90			821.57			874.00			848.05		

Table 4.6. Ordered logistic regression: Time utilization variables regressed on appraisal (continued)

	Talking to inmates			TV			Radio			Grooming		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.10*	.04	.90	.05	.06	1.05	-.04	.07	.96	.07	.07	1.07
Age	-.01	.01	.99	.01	.01	1.01	-.02*	.01	.98	.00	.01	1.00
White	-.32	.32	.72	-.56***	.08	.57	-.10	.24	.91	-.56*	.22	.57
Employed full-time	-.17	.26	.85	-.03	.21	.97	-.12	.10	.89	-.20	.17	.82
Married	.21	.21	1.23	-.08	.19	.93	.29*	.13	1.34	.00	.26	1.00
Has children	.05	.10	1.05	-.09	.11	.91	-.34	.25	.71	-.10	.16	.91
Time served	.00	.00	1.00	-.01	.01	.99	.01***	.00	1.01	-.02	.02	.98
Violent offense	-.54*	.24	.58	-.30	.16	.74	.23	.28	1.26	-.04	.33	.96
Drug dependence	.40*	.20	1.50	-.05	.21	.95	.44***	.09	1.56	-.43	.32	.65
Criminal history	.05	.04	1.05	.03	.04	1.03	.03	.02	1.03	.01	.07	1.01
Mental health issues	-.55	.30	.58	-.15	.22	.86	.02	.37	1.02	-.30	.22	.74
n		320			329			328			330	
Pseudo R^2		.03			.01			.02			.02	
AIC		857.38			892.86			890.73			797.40	
BIC		872.46			908.04			905.90			812.60	

Table 4.6. Ordered logistic regression: Time utilization variables regressed on appraisal (continued)

	Writing stories			Playing cards, games			Cleaning			Group sports		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	.03	.04	1.03	-.14*	.07	.87	.02	.02	1.02	-.03	.06	.97
Age	-.03***	.01	.97	-.01	.01	.99	-.01	.01	.99	-.05***	.01	.95
White	-.41*	.20	.67	-.78***	.20	.46	-.50	.46	.61	-.78***	.26	.46
Employed full-time	-.05	.28	.95	.14	.24	1.15	-.51*	.19	.60	-.11	.27	.89
Married	-.05	.26	.95	.15	.24	1.16	.08	.26	1.08	-.09	.63	.91
Has children	-.34	.20	.71	.17	.14	1.19	-.10	.24	.91	-.18	.29	.83
Time served	.00	.04	1.00	-.03	.02	.97	.00	.01	1.00	.04	.02	1.04
Violent offense	-.23	.15	.80	.16	.33	1.18	-.06	.29	.94	.07	.41	1.07
Drug dependence	-.49	.35	.61	.54***	.13	1.72	.14*	.07	1.15	.61*	.26	1.83
Criminal history	.00	.03	1.00	-.03	.05	.97	.07	.05	1.07	.01	.04	1.01
Mental health issues	.50*	.22	1.64	-.12	.20	.89	-.47***	.14	.62	-.17	.25	.85
n	325			331			330			321		
Pseudo R^2	.03			.04			.03			.06		
AIC	468.42			630.32			855.09			503.42		
BIC	483.56			645.53			870.28			518.50		

Table 4.6. Ordered logistic regression: Time utilization variables regressed on appraisal (continued)

	Exercise			Hobby			Reading			Daydreaming		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.14	.08	.87	-.09*	.04	.91	.01	.06	1.01	.12*	.05	1.13
Age	-.02*	.01	.98	-.02	.02	.98	.02	.01	1.02	-.02	.02	.98
White	-.61*	.24	.54	.24	.25	1.26	-.60*	.27	.55	-.23	.29	.79
Employed full-time	.31	.28	1.37	-.23	.19	.79	-.06	.19	.94	-.08	.20	.92
Married	.21	.19	1.24	-.23	.34	.79	-.10	.23	.91	-.03	.11	.97
Has children	-.19	.14	.83	-.32	.25	.73	-.31***	.03	.73	-.27	.31	.76
Time served	-.02*	.01	.98	.01	.02	1.01	-.02	.02	.98	-.02	.01	.98
Violent offense	.16	.32	1.17	-.32	.28	.72	.14	.27	1.15	.21	.14	1.23
Drug dependence	.27	.34	1.31	-.17	.18	.84	.19	.34	1.21	.27	.17	1.31
Criminal history	.09***	.03	1.09	-.01	.05	.99	.10***	.03	1.11	.07**	.02	1.08
Mental health issues	-.44	.25	.64	.30	.17	1.36	-.04	.13	.96	.00	.25	1.00
n	330			319			330			316		
Pseudo R^2	.04			.02			.02			.03		
AIC	800.01			568.39			828.29			841.38		
BIC	815.21			583.45			843.49			856.40		

Table 4.6. Ordered logistic regression: Time utilization variables regressed on appraisal (continued)

	Playing music			Religious activities			Other group activities			Individual counseling		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.09	.20	.91	-.08	.06	.92	-.06	.03	.95	-.08***	.03	.92
Age	-.01	.01	.99	.02***	.01	1.02	.01	.02	1.01	.03	.02	1.03
White	.62	.43	1.86	-.40	.24	.67	-.24	.40	.79	-.76*	.27	.47
Employed full-time	.13	.25	1.13	.04	.16	1.04	-.32	.29	.73	-.26	.43	.77
Married	.97***	.34	2.64	-.04	.26	.96	-.35	.48	.71	-1.08*	.50	.34
Has children	.49	.38	1.63	-.18	.17	.84	-.08	.19	.92	.24	.30	1.27
Time served	.03	.05	1.04	.01	.01	1.01	.02	.03	1.02	.02	.03	1.02
Violent offense	-.38	.43	.68	-.46*	.18	.63	-.28	.23	.75	.18	.24	1.20
Drug dependence	.43	.43	1.53	.10	.28	1.1	-.24***	.08	.79	-.33*	.12	.72
Criminal history	-.11***	.03	.89	.04*	.02	1.04	-.03	.03	.97	-.09	.05	.92
Mental health issues	.08	.46	1.08	.41*	.20	1.51	.68*	.25	1.96	.66***	.19	1.93
n	316			326			307			318		
Pseudo R^2	.06			.02			.03			.09		
AIC	176.11			872.43			561.67			321.45		
BIC	191.13			887.58			576.58			336.50		

Table 4.6. Ordered logistic regression: Time utilization variables regressed on appraisal (continued)

	Group counseling			Letters			Phone			Visits		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.19***	.05	.83	.00	.02	1.00	.08	.08	1.09	-.08	.05	.93
Age	.01	.02	1.01	.00	.02	1.00	-.06***	.01	.94	-.03	.01	.97
White	-.81***	.23	.44	.18	.17	1.20	-.15	.20	.86	-.29	.19	.75
Employed full-time	.24	.49	1.28	-.13	.18	.88	-.25	.27	.78	.27	.28	1.31
Married	.05	.30	1.05	-.09	.27	.91	.31	.26	1.37	.17	.41	1.19
Has children	-.39	.33	.68	.12	.12	1.13	.07	.10	1.07	-.06	.09	.94
Time served	.00	.03	1.00	.01	.02	1.01	.01	.02	1.01	.01	.02	1.01
Violent offense	-.28	.25	.76	-.06	.16	.94	.12	.30	1.13	.28	.29	1.32
Drug dependence	.17	.25	1.18	-.15	.36	.86	.00	.30	1.00	-.22	.25	.80
Criminal history	-.04	.09	.96	-.03	.03	.97	-.04	.04	.96	-.25***	.05	.78
Mental health issues	.30	.23	1.35	.17	.10	1.19	-.47	.26	.62	-.72***	.18	.49
n	312			321			332			318		
Pseudo R^2	.05			.003			.05			.07		
AIC	333.88			872.00			834.16			548.01		
BIC	348.85			887.09			849.38			563.06		

Table 4.7. Multinomial logistic regression: Time utilization variables regressed on appraisal

	Studying		
Variable	***b***	***SE***	***OR***
1st quartile = Base outcome			
2nd quartile			
Appraisal	.00	.11	1.00
Age	.02	.01	1.02
White	-1.1*	.44	.33
Employed full-time	.31	.27	1.36
Married	-.87	.56	.42
Has children	-.52	.35	.59
Time served	.01	.01	1.01
Violent offense	.03	.21	1.03
Drug dependence	.42*	.17	1.52
Criminal history	-.05	.08	.95
Mental health issues	.32	.32	1.38
Intercept	-.59	.69	.55
3rd quartile			
Appraisal	.00	.09	1.00
Age	.02*	.01	1.02
White	-1.66***	.19	.19
Employed full-time	.83	.58	2.29
Married	-.62	.51	.54
Have Has children	-.42	.34	.66
Time served	.02	.03	1.02
Violent offense	.17	.33	1.19
Drug dependence	-.48	.41	.62
Criminal history	.00	.07	1.00
Mental health issues	.12	.52	1.13
Intercept	-.74*	.27	.48

Table 4.7. Multinomial logistic regression: Time utilization variables regressed on appraisal (continued)

	Studying		
Variable	***b***	***SE***	***OR***
4th quartile			
Appraisal	-.15	.09	.86
Age	.03***	.01	1.03
White	-1.15***	.31	.32
Employed full-time	.02	.23	1.02
Married	-.37	.44	.69
Has children	-.37	.28	.69
Time served	.04*	.02	1.04
Violent offense	.01	.10	1.01
Drug dependence	.26	.58	1.30
Criminal history	.01	.04	1.01
Mental health issues	.61	.47	1.84
Intercept	-.24	.66	.79
n		321	
Pseudo R^2		.08	
AIC		826.08	
BIC		841.17	

Table 4.8. OLS regression: Depression and anxiety regressed on motivational factors

	Motivation for games, cards				Motivation for reading			
	Depression		Anxiety		Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Appraisal	.78*	.16	.93***	.14	.83*	.22	1.00***	.12
Motivational factors								
Privacy	.57	1.34	.37	1.55	-.15	.83	-.01	.58
Escape	1.18	.75	.86	.78	1.69*	.44	.32	.55
Safety	2.83*	1.03	2.61*	.71	1.31	.84	1.84*	.58
Peer status	3.24	2.42	.95	1.22	1.80	1.36	-.93	1.51
Autonomy	-.73	1.38	-.49	1.00	-1.58*	.48	-.75	.76
Self-imp.	-3.75*	1.08	-1.78	1.01	-.52	1.40	-.41	.89
Social feedback	-.93	.55	-.78	.66	-1.48	2.91	2.61	1.63
Age	.00	.07	-.08	.04	.03	.06	-.06	.03
White	1.88	.74	1.44*	.35	1.86	.69	1.71*	.47
Employed full-time	-1.21	.95	-.82	.39	-1.29	.60	-.90	.53
Married	.51	1.36	.01	.78	1.42	.88	.62	.61
Has children	1.13*	.39	.91	.48	1.08*	.25	.87	.37
Time served	.02	.10	.03	.08	.00	.11	.02	.08
Violent offense	-.98	1.37	-.34	.85	-.34	1.23	.05	.47
Drug dependence	.77	.64	1.04*	.36	.48	.99	.93	.61
Criminal history	.04	.25	-.11	.24	.02	.19	.00	.15
Mental health	3.77***	.35	3.03***	.49	3.86***	.45	2.99***	.36
Intercept	14.09*	2.57	13.83***	1.92	12.21*	2.26	12.49***	1.77
n	317		319		324		326	
R^2	.25		.28		.23		.28	
AIC	2078.40		1961.42		2132.39		2011.11	
BIC	2093.44		1976.48		2147.51		2026.25	

Table 4.8. OLS regression: Depression and anxiety regressed on motivational factors (continued)

	Motivation for sports, exercise				Motivation for hobbies			
	Depression		Anxiety		Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Appraisal	.75*	.19	.99***	.15	.78*	.23	.93***	.16
Motivational factors								
Privacy	.20	.85	1.19	1.31	-.31	1.01	-.38	.58
Escape	-.56	.46	.11	.43	1.16	1.44	1.11	.80
Safety	3.11***	.35	1.44	.69	1.84	1.91	1.77	.69
Peer status	3.68	1.67	1.54	1.61	5.61	2.31	2.01	2.52
Autonomy	-1.84	2.02	-1.21	1.1	-3.33	2.72	-3.65*	.89
Self-imp.	-.58	.40	-.69	.54	-1.78*	.50	-1.15*	.36
Social feedback	-1.70	.74	-.06	.50	-1.38	.68	-.46	1.3
Age	.00	.06	-.07	.03	.03	.05	-.06	.03
White	2.10	.79	1.51*	.55	1.77	.95	.92	.71
Employed full-time	-1.36	.88	-.78	.67	-1.55*	.56	-1.23	.47
Married	1.40	.91	.59	.69	1.85	1.36	1.31	1.39
Has children	1.27*	.32	1.03	.46	1.1	.42	1.06	.57
Time served	.00	.10	.00	.06	-.01	.10	.01	.08
Violent offense	-.83	1.39	-.13	.48	-.69	1.57	.10	.69
Drug dependence	.81	.64	.89	.48	.71	.77	.89*	.33
Criminal history	.08	.18	.03	.15	-.06	.24	-.17	.25
Mental health	3.73***	.35	2.96***	.37	4.38***	.60	3.67***	.42
Intercept	14.21***	2.38	12.9***	1.81	13.56*	2.95	13.52***	1.76
n	322		324		303		304	
R^2	.22		.26		.24		.30	
AIC	2125.66		2003.76		2003.81		1862.03	
BIC	2140.76		2018.88		2018.67		1876.90	

Table 4.8. OLS regression: Depression and anxiety regressed on motivational factors (continued)

	Motivation for watching TV				Motivation for working			
	Depression		Anxiety		Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Appraisal	.82*	.24	.99***	.17	.76*	.18	.94***	.14
Motivational factors								
Privacy	-.89	.65	-.14	.54	1.29	1.96	1.57	2.10
Escape	1.61*	.53	.91*	.19	.81	.96	-.06	.47
Safety	1.98*	.61	1.82*	.44	-.24	.99	.45	.71
Peer status	2.32	2.06	-1.02	1.21	.64	1.61	-1.17	1.11
Autonomy	.46	1.09	-.14	.54	-.05	1.18	.26	1.21
Self-imp.	-1.03	1.59	-.37	1.21	-1.21	.82	-.81	.36
Social feedback	.70	1.40	1.35	1.35	1.5	1.68	2.10	1.44
Age	.03	.05	-.06	.03	.03	.06	-.06	.04
White	2.10	.86	1.52*	.55	2.15	.86	1.58*	.56
Employed full-time	-1.23	.78	-.80	.55	-1.48	.75	-1.03	.50
Married	1.38	.93	.48	.60	1.40	.95	.49	.72
Has children	1.19*	.23	.93	.40	1.55***	.24	1.17	.50
Time served	-.01	.09	.01	.07	-.02	.09	-.01	.07
Violent offense	-.49	1.24	-.05	.54	-.44	1.18	.09	.53
Drug dependence	.91	.71	1.22	.51	.78	.96	1.03	.49
Criminal history	-.03	.18	-.03	.15	.07	.19	-.10	.19
Mental health	4.01***	.60	3.02***	.35	3.81***	.44	2.9***	.35
Intercept	11.05*	2.35	11.71***	2.00	12.25*	2.84	12.88***	1.79
n	329		332		327		328	
R^2	.22		.27		.21		.26	
AIC	2173.12		2051.40		2163.59		2026.54	
BIC	2188.31		2066.62		2178.75		2041.71	

Table 4.8. OLS regression: Depression and anxiety regressed on motivational factors (continued)

	Motivation for rehabilitative programs			
	Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***
Appraisal	.84*	.26	1.03****	.16
Motivational factors				
Privacy	3.31*	.88	1.69	.96
Escape	1.46	1.20	.76	1.12
Safety	.53	1.86	1.67	1.30
Peer status	-1.38	1.35	-1.38	.69
Autonomy	-1.32	1.34	-1.23	.57
Self-improvement	-2.07	.88	-1.04	.49
Social feedback	1.67	1.85	2.31	1.84
Age	.05	.07	-.05	.04
White	1.89	1.04	1.45	.59
Employed full-time	-1.47	.79	-1.03	.70
Married	.82	.76	.25	.63
Has children	1.51***	.13	1.06*	.34
Time served	-.04	.10	-.02	.07
Violent offense	-.52	1.00	-.03	.32
Drug dependence	.88	.98	.78	.54
Criminal history	-.01	.15	.00	.14
Mental health issues	4.15***	.68	3.11***	.36
Intercept	12.39*	3.13	12.59***	2.16
n	315		316	
R^2	.23		.28	
AIC	2083.07		1948.12	
BIC	2098.08		1963.15	

Table 4.9. Binary logistic regression: Motivation for playing games, cards regressed on appraisal

	Privacy			Escape			Safety			Peer status		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.13***	.05	.88	-.07***	.02	.93	-.06	.07	.94	-.11	.11	.90
Age	-.01	.01	.99	-.02*	.01	.98	.00	.01	1.00	.04	.04	1.04
White	-.46	.26	.63	.18	.28	1.19	-.52	.34	.60	-.51	.42	.60
Employed full-time	.59	.36	1.8	-.31	.26	.73	.14	.20	1.15	.05	.82	1.05
Married	.42	.34	1.52	.64***	.22	1.9	.75***	.13	2.12	1.07*	.49	2.91
Has children	-.08	.23	.92	.05	.32	1.06	.19	.31	1.21	-.17	.37	.84
Time served	.02	.01	1.02	-.02	.03	.98	.00	.02	1.00	.02	.04	1.02
Violent offense	.20	.29	1.22	.20	.41	1.22	.03	.23	1.04	-.39	.88	.68
Drug dependence	.46	.40	1.59	.37***	.11	1.44	.07	.29	1.07	-.38	.55	.68
Criminal history	.08	.05	1.09	.09*	.04	1.09	.12	.07	1.13	.18***	.02	1.19
Mental health issues	.18	.17	1.19	-.30	.17	.74	-.24	.14	.79	.28	.62	1.32
Intercept	-.60	.66	.55	.79**	.31	2.20	-1.62	.94	.20	-4.51*	1.72	.01
n		329			329			329			329	
Pseudo R^2		.04			.05			.04			.11	
AIC		348.91			418.86			295.25			110.61	
BIC		364.09			434.04			310.43			125.79	

Table 4.9. Binary logistic regression: Motivation for playing games, cards regressed on appraisal (continued)

	Autonomy			Self-improvement			Social feedback		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.18***	.06	.83	-.08	.06	.92	-.24***	.05	.79
Age	.01	.03	1.01	-.03	.02	.97	-.02***	.00	.98
White	-.02	.74	.98	-.92***	.15	.40	-.12	.26	.89
Employed full-time	-.02	.56	.98	-.27	.18	.76	.51	.33	1.67
Married	-.20	.51	.82	-.03	.35	.97	.39	.45	1.48
Has children	.11	.63	1.12	.01	.37	1.01	-.24	.31	.79
Time served	.03	.03	1.03	.04*	.02	1.04	.03*	.02	1.04
Violent offense	-.02	.32	.98	-.80***	.19	.45	-.76***	.15	.47
Drug dependence	-.36	.34	.69	-.16	.19	.85	.57	.39	1.76
Criminal history	.04	.07	1.04	.05	.06	1.06	-.04	.08	.96
Mental health issues	-.12	.77	.89	-.22	.33	.80	.11	.13	1.12
Intercept	-1.95	1.42	.14	1.15	.66	3.16	1.47***	.46	4.33
n		329			329			329	
Pseudo R^2		.04			.07			.07	
AIC		163.86			339.57			399.05	
BIC		179.05			354.75			414.24	

Table 4.10. Binary logistic regression: Motivation for reading regressed on appraisal

	Privacy			Escape			Safety			Peer status		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.02	.09	.98	-.07	.05	.93	-.12*	.06	.89	-.23	.17	.80
Age	.00	.01	1.00	-.02	.01	.98	-.02	.01	.98	.01	.04	1.01
White	-.10	.16	.90	.50*	.19	1.64	-.41	.23	.66	-.32	.21	.73
Employed full-time	.29	.18	1.34	.06	.16	1.06	.38	.41	1.47	.40	.39	1.49
Married	.14	.32	1.14	.05	.33	1.06	.33	.52	1.39	.98***	.23	2.66
Has children	-.07*	.03	.93	.26	.15	1.30	.24*	.12	1.28	.28	.94	1.32
Time served	-.03***	.01	.97	.00	.01	1.00	.00	.02	1.00	.06*	.02	1.06
Violent offense	-.12	.19	.89	-.13	.37	.88	-.12	.47	.89	.32	.55	1.37
Drug dependence	.30	.23	1.35	.57	.35	1.76	.36*	.17	1.43	.04	.96	1.04
Criminal history	.00	.02	1.00	.03	.06	1.03	.13***	.03	1.14	.18***	.06	1.19
Mental health issues	.27*	.14	1.31	.06	.21	1.07	.27	.24	1.31	-.11	.66	.89
Intercept	.33	.78	1.39	.61	.84	1.85	-.16	1.11	.85	-3.87	2.08	.02
n	336			336			336			336		
Pseudo R^2	.02			.05			.05			.12		
AIC	464.88			448.56			368.65			104.67		
BIC	480.15			463.83			383.92			119.94		

Table 4.10. Binary logistic regression: Motivation for reading regressed on appraisal (continued)

	Autonomy			Self-improvement			Social feedback[8]		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.02	.04	.98	-.12*	.05	.89	-.46*	.18	.63
Age	.01	.01	1.01	.03	.01	1.03	-.12	.09	.88
White	-.51*	.25	.60	-.72***	.21	.48	†	†	†
Employed full-time	-.06	.23	.94	.41	.29	1.51	-.01	.69	.99
Married	.26	.19	1.30	-.17	.14	.84	†	†	†
Has children	-.47***	.14	.63	-.09	.23	.91	-.79	.44	.45
Time served	.03	.02	1.04	-.02*	.01	.98	.20	.15	1.23
Violent offense	.16	.31	1.18	-.07	.13	.93	-.15	.54	.87
Drug dependence	-.05	.33	.95	.39	.30	1.47	-.45	.71	.64
Criminal history	-.05	.06	.95	-.03	.07	.97	-.20	.32	.82
Mental health issues	.08	.25	1.08	.07	.29	1.08	†	†	†
Intercept	-.21	.44	.81	.68	.78	1.98	2.13	1.20	8.38
n	336			336			118		
Pseudo R^2	.06			.04			.24		
AIC	445.24			428.96			34.41		
BIC	460.51			444.23			45.49		

† variable omitted because it predicts outcome perfectly

[8] The number of cases for this model was reduced through listwise deletion of missing cases.

Table 4.11. Binary logistic regression: Motivation for sports and exercise regressed on appraisal

	Privacy			Escape			Safety			Peer status		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.09	.07	.91	-.07	.09	.93	-.20	.15	.82	-.16	.13	.85
Age	.00	.01	1.00	-.03*	.01	.97	.02	.02	1.02	-.02	.02	.98
White	-.35	.24	.71	-.04	.27	.96	-.49	.48	.61	-.16	.20	.85
Employed full-time	-.16	.22	.85	-.31	.30	.73	.07	.32	1.07	.35	.51	1.42
Married	.23	.25	1.25	-.29	.44	.75	-.27	.56	.77	.08	.35	1.08
Has children	-.04	.27	.96	.14	.30	1.15	.85***	.22	2.33	-.43	.41	.65
Time served	-.01	.02	.99	-.03***	.01	.97	-.01	.04	.99	.02	.02	1.02
Violent offense	.25	.18	1.28	.26	.36	1.30	.77	1.04	2.16	.24	.50	1.27
Drug dependence	-.06	.31	.95	.53	.35	1.70	.45	.57	1.56	.45	.65	1.57
Criminal history	.00	.05	1.00	.09*	.04	1.10	.01	.04	1.01	.13***	.04	1.14
Mental health issues	-.13	.17	.88	-.15	.16	.86	-.11	.65	.89	-.63	.80	.53
Intercept	.13	.83	1.14	1.43	1.23	4.19	-2.54	1.84	.08	-1.35	1.29	.26
n		333			333			333			333	
Pseudo R^2		.02			.08			.06			.05	
AIC		404.59			422.44			196.95			161.91	
BIC		419.82			437.67			212.18			177.14	

Table 4.11. Binary logistic regression: Motivation for sports and exercise regressed on appraisal (continued)

	Autonomy			Self-improvement			Social feedback		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.24*	.11	.79	-.03	.04	.97	-.20*	.09	.82
Age	-.04*	.02	.96	-.02	.01	.98	-.03***	.00	.97
White	-1.63*	.76	.20	-.21	.18	.81	-.18	.11	.84
Employed full-time	.67	.41	1.95	.10	.15	1.10	.12	.15	1.12
Married	.26	.35	1.3	.45*	.21	1.56	-.03	.39	.97
Has children	.15	.76	1.16	-.12	.14	.88	.24	.33	1.27
Time served	.04	.04	1.04	-.02	.01	.98	.08***	.01	1.08
Violent offense	-.74	.39	.48	.26	.35	1.30	-.63	.33	.53
Drug dependence	-.28	.62	.75	-.10	.11	.91	.32	.42	1.38
Criminal history	.00	.07	1.00	.03	.05	1.03	.09***	.01	1.10
Mental health issues	.24	.26	1.27	-.49	.27	.61	-.37***	.12	.69
Intercept	.40	.93	1.50	1.28***	.44	3.59	.62	.71	1.86
n		333			333			333	
Pseudo R^2		.10			.03			.07	
AIC		148.83			453.83			328.03	
BIC		164.06			469.06			343.26	

Table 4.12. Binary logistic regression: Motivation for hobbies regressed on appraisal

	Privacy			Escape			Safety			Peer status		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.02	.07	.98	-.03	.05	.97	-.20***	.05	.82	-.44***	.10	.64
Age	-.03	.02	.97	-.04***	.01	.96	-.05*	.02	.95	-.08***	.01	.92
White	-.23	.31	.79	.74*	.32	2.10	-.28	.35	.75	.10	.30	1.10
Employed full-time	-.25	.34	.78	.08	.49	1.09	.45	.71	1.57	.54	.59	1.72
Married	-.26	.18	.77	.06	.48	1.06	.77	.46	2.17	-.57	1.00	.57
Has children	.13	.22	1.14	.21	.14	1.24	.75***	.25	2.11	-.03	.34	.97
Time served	.04	.02	1.04	.02	.01	1.02	.08***	.02	1.08	.09*	.04	1.09
Violent offense	-.55	.32	.58	.15	.35	1.17	-.10	.19	.90	-.41	.75	.67
Drug dependence	-.01	.10	.99	.03	.17	1.03	.28	.40	1.33	.13	.61	1.13
Criminal history	.00	.06	1.00	.08	.05	1.08	.07	.10	1.07	.18*	.07	1.19
Mental health issues	.61	.40	1.84	.18	.35	1.20	.17	.53	1.19	-1.12	.84	.33
Intercept	-.03	.96	.97	-.24	.42	.79	-.33	.53	.72	1.48	1.17	4.39
n	313			313			313			313		
Pseudo R^2	.03			.05			.08			.14		
AIC	359.56			343.01			228.13			89.63		
BIC	374.55			357.99			243.11			104.61		

Table 4.12. Binary logistic regression: Motivation for hobbies regressed on appraisal (continued)

	Autonomy			Self-improvement			Social feedback		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.23	.14	.80	-.09	.05	.91	-.34***	.07	.71
Age	-.06*	.03	.94	-.01	.01	.99	-.02	.03	.98
White	-.26	.62	.77	.12	.38	1.13	.03	.44	1.03
Employed full-time	.23	.46	1.26	-.15	.27	.86	.33	.55	1.39
Married	1.01	.54	2.74	-.10	.47	.91	.41	.44	1.51
Has children	.23	.45	1.26	.09	.23	1.1	-.26	.31	.77
Time served	.08*	.03	1.08	.04***	.01	1.05	.04	.04	1.04
Violent offense	-.09	.34	.92	-.38***	.12	.69	-.78	.45	.46
Drug dependence	-.40	.43	.67	.02	.13	1.02	.29	.44	1.34
Criminal history	.08	.05	1.08	.01	.02	1.01	.02	.06	1.02
Mental health issues	.37	.37	1.45	-.02	.14	.98	-.30	.46	.74
Intercept	-.39	1.63	.68	.60	.45	1.83	.97	1.14	2.63
n		313			313			313	
Pseudo R^2		.08			.02			.08	
AIC		118.65			429.19			220.88	
BIC		133.63			444.17			235.87	

Table 4.13. Binary logistic regression: Motivation for watching TV regressed on appraisal

	Privacy			Escape			Safety			Peer status[9]		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	.05	.04	1.06	.07	.06	1.07	-.08	.05	.92	-.41	.24	.67
Age	-.02	.01	.98	-.02	.02	.98	-.03	.02	.97	-.07	.05	.94
White	.19	.25	1.21	.39***	.13	1.47	.02	.45	1.02	†	†	†
Employed full-time	-.03	.30	.97	-.05	.18	.95	.08	.28	1.09	.06	.65	1.06
Married	.10	.23	1.10	-.44	.30	.64	.16	.32	1.17	.71	.85	2.03
Has children	.14	.13	1.15	.14	.24	1.15	.48	.27	1.61	.48	.81	1.62
Time served	.02*	.01	1.02	-.01	.02	.99	.00	.02	1.00	.12*	.05	1.13
Violent offense	-.37	.35	.69	-.04	.36	.97	.10	.28	1.11	-.31	.55	.73
Drug dependence	-.23	.32	.79	.04	.33	1.04	-.25	.30	.78	†	†	†
Criminal history	-.05	.03	.95	.08	.06	1.08	.10***	.03	1.10	.08	.11	1.08
Mental health issues	.28*	.14	1.32	-.20	.25	.82	-.33*	.16	.72	†	†	†
Intercept	-.17	.55	.84	-.13	.97	.88	-.01	.73	.99	.62	1.11	1.86
n	341			341			341			115		
Pseudo R^2	.02			.04			.05			.15		
AIC	456.05			455.24			338.32			53.06		
BIC	480.38			470.56			353.65			64.04		

† variable omitted because it predicts outcome perfectly

[9] The number of cases for this model was reduced through listwise deletion of missing cases.

Table 4.13. Binary logistic regression: Motivation for watching TV regressed on appraisal (continued)

	Autonomy			Self-improvement			Social feedback		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.01	.05	.99	-.18	.09	.84	-.23	.14	.79
Age	.02*	.01	1.02	.00	.02	1.00	-.01	.02	.99
White	-.11	.23	.90	-.15	.36	.86	-.15	.44	.86
Employed full-time	.36	.41	1.43	.43	.56	1.54	-.05	.29	.95
Married	-.10	.3	.90	.44	.45	1.56	.78	.60	2.18
Has children	-.12	.08	.89	.08	.39	1.08	-.27	.28	.76
Time served	.01	.02	1.01	.03	.03	1.03	.01	.03	1.01
Violent offense	-.05	.31	.95	.04	.24	1.04	.10	.25	1.10
Drug dependence	.15	.14	1.16	-.13	.43	.88	.04	.18	1.04
Criminal history	.01	.05	1.01	-.05	.09	.95	.02	.04	1.03
Mental health issues	-.13	.36	.88	-.11	.19	.89	-.59	.44	.55
Intercept	-.33	.59	.72	-1.31	1.27	.27	-.46	1.15	.63
n		341			341			341	
Pseudo R^2		.02			.05			.05	
AIC		448.77			231.60			195.79	
BIC		464.10			246.92			211.12	

Table 4.14. Binary logistic regression: Motivation for work regressed on appraisal

	Privacy			Escape			Safety			Peer status		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.07	.06	.93	.07	.04	1.07	-.06	.10	.94	-.37***	.09	.69
Age	-.04***	.01	.96	-.03***	.01	.97	-.01	.01	.99	-.06	.04	.95
White	.07	.37	1.08	.54***	.10	1.72	-.30	.37	.74	.64	.49	1.89
Employed full-time	.65	.41	1.92	.60	.38	1.83	.33	.47	1.39	.72	.39	2.06
Married	-.33	.50	.72	-.39*	.18	.68	-.08	.31	.92	-.85	.85	.43
Has children	.07	.23	1.07	-.22	.19	.80	.07	.19	1.07	.84***	.23	2.31
Time served	.04	.02	1.04	.01	.02	1.01	.03	.02	1.03	.11*	.04	1.11
Violent offense	.32	.38	1.38	-.15	.29	.86	.37	.40	1.45	-.08	.83	.93
Drug dependence	-.14	.33	.87	.20	.29	1.22	-.14	.45	.87	-2.21*	1.02	.11
Criminal history	.11	.06	1.12	.05	.06	1.05	.13*	.05	1.14	.11***	.03	1.11
Mental health issues	.06	.22	1.06	-.08	.25	.92	-.16	.25	.85	-.38	.57	.69
Intercept	-.52	.34	.59	-.45	.71	.64	-1.36	1.12	.26	.04	1.69	1.04
n	338			338			338			338		
Pseudo R^2	.05			.04			.04			.19		
AIC	314.89			420.72			281.31			135.40		
BIC	330.19			436.01			296.60			150.69		

Table 4.14. Binary logistic regression: Motivation for work regressed on appraisal (continued)

	Autonomy			Self-improvement			Social feedback		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	.00	.03	1.00	-.18***	.06	.83	-.25***	.04	.78
Age	.01	.01	1.01	.01	.01	1.01	.01	.03	1.01
White	.02	.47	1.02	-.28	.29	.76	-.52	.35	.60
Employed full-time	.07	.36	1.07	.05	.22	1.06	.78*	.40	2.17
Married	.11	.39	1.12	-.37	.44	.69	-.21	.73	.81
Has children	-.14	.26	.87	-.02	.10	.98	-.18	.38	.84
Time served	.00	.03	1.00	.03*	.01	1.03	.07***	.02	1.07
Violent offense	-.32	.24	.73	-.41***	.12	.66	-.29	.66	.75
Drug dependence	.15	.28	1.16	.22	.24	1.24	.51	.30	1.67
Criminal history	-.02	.04	.98	.01	.05	1.01	-.06	.16	.94
Mental health issues	.19	.29	1.21	.08	.09	1.08	.07	.34	1.07
Intercept	-1.00	.68	.37	.75	.56	2.12	-1.93	1.36	.15
n		338			338			338	
Pseudo R^2		.01			.04			.13	
AIC		439.26			454.68			183.89	
BIC		454.55			469.97			199.18	

Table 4.15. Binary logistic regression: Motivation for rehabilitation programs regressed on appraisal

	Privacy			Escape			Safety			Peer status		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	-.01	.08	.99	.00	.15	1.00	-.09	.12	.92	-.23	.23	.80
Age	-.05*	.02	.95	-.06*	.03	.94	-.09	.05	.91	.00	.05	1.00
White	-.01	.75	.99	.45	.68	1.57	-.43	.64	.65	-1.33	.90	.26
Employed full-time	.22	.46	1.25	.27	.33	1.32	.95	.70	2.59	.23	.83	1.26
Married	1.05***	.24	2.86	.61*	.30	1.85	.76	.45	2.13	-.18	1.04	.84
Has children	-.49	.38	.61	-.64	.42	.52	-.35	.22	.71	.90*	.46	2.46
Time served	.05	.03	1.06	.03	.03	1.03	.06	.06	1.06	.07***	.02	1.08
Violent offense	.00	.58	1.00	-.36	.31	.70	-.09	.47	.92	-.57	.40	.56
Drug dependence	-.03	.26	.97	-.08	.41	.93	-.23	.66	.79	-.60	1.07	.55
Criminal history	.06	.07	1.06	.06	.08	1.06	.02	.07	1.02	-.03	.18	.97
Mental health issues	-.01	.40	.99	-.32	.50	.72	-.07	.32	.93	.68	.48	1.98
Intercept	-1.04	1.57	.35	.16	1.7	1.17	.52	.83	1.68	-2.74	2.93	.06
n		325			325			325			325	
Pseudo R^2		.05			.06			.09			.12	
AIC		203.04			258.27			158.59			98.05	
BIC		218.18			273.41			173.72			113.19	

Table 4.15. Binary logistic regression: Motivation for rehabilitation programs regressed on appraisal (continued)

	Autonomy			Self-improvement			Social feedback		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Appraisal	.02	.07	1.02	-.07*	.03	.93	-.20***	.04	.82
Age	-.02	.03	.98	.00	.01	1.00	.00	.02	1.00
White	-.11	.13	.89	-.11	.25	.89	.04	.41	1.04
Employed full-time	.21	.48	1.23	-.23	.18	.79	.25	.32	1.28
Married	.08	.15	1.08	.09	.21	1.09	-.48	.57	.62
Has children	-.26	.40	.77	-.09	.16	.91	.16	.25	1.18
Time served	.03	.02	1.03	.02	.02	1.02	.07*	.03	1.07
Violent offense	-.35	.40	.70	-.37	.26	.69	-1.04	.62	.35
Drug dependence	.19	.26	1.21	.21	.33	1.24	.25	.39	1.29
Criminal history	-.04	.03	.96	.04	.03	1.04	.03	.09	1.03
Mental health issues	-.01	.31	.99	.53*	.20	1.71	.09	.38	1.09
Intercept	-.61	1.01	.54	.73	.64	2.08	-1.49*	.76	.23
n		325			325			325	
Pseudo R^2		.02			.03			.08	
AIC		355.32			431.81			212.60	
BIC		370.46			446.94			227.74	

Table 4.16. OLS regression: Depression and anxiety regressed on playing cards, games and motivation for playing cards, games

	Depression		Anxiety		Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Appraisal	.75*	.14	.90***	.13	.81*	.22	.97***	.09
Playing cards, games	-.77	.38	-.44	.32	-.32	.20	-.10	.32
Motivational factors								
Privacy	1.01	1.27	.66	1.56	-	-	-	-
Escape	1.71*	.63	1.20	.54	-	-	-	-
Safety	2.94*	1.06	2.75*	.58	-	-	-	-
Peer status	3.96	2.30	1.36	.85	-	-	-	-
Autonomy	-.98	1.32	-.60	.84	-	-	-	-
Self-imp.	-3.45	1.31	-1.63	1.11	-	-	-	-
Social feedback	-.42	.61	-.43	.56	-	-	-	-
Age	.01	.06	-.06	.04	.05	.06	-.05	.03
White	1.71	.71	1.30*	.38	2.16	.98	1.55	.76
Employed full-time	-1.28	1.09	-1.02	.49	-1.39	1.07	-1.04	.60
Married	.92	1.28	.46	.92	1.35	1.18	.97	.85
Has children	1.33*	.48	.95	.42	1.69*	.56	1.07	.46
Time served	-.02	.11	.00	.09	-.06	.10	-.02	.07
Violent offense	-.36	1.42	.04	.93	.02	1.42	.31	.67
Drug dependence	1.05	.75	1.24*	.33	1.17	.73	1.28*	.40
Criminal history	.04	.27	-.11	.25	.03	.19	.01	.15
Mental health issues	3.91***	.45	3.11***	.45	3.86*	.70	3.17***	.25
Intercept	14.51***	1.98	13.95***	1.85	11.78*	2.54	12.19***	1.62
n	300		302		320		322	
R^2	.28		.30		.21		.26	
AIC	1960.96		1849.41		2124.84		1997.44	
BIC	1975.77		1864.25		2139.92		2012.54	

Table 4.17. OLS regression: Depression and anxiety regressed on reading and motivation for reading

	Depression		Anxiety		Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Appraisal	.75	.28	.94***	.10	.73	.28	.90***	.11
Reading	-.65	.45	-.68	.41	-.59	.30	-.63	.35
Motivational factors								
Privacy	-.21	.96	-.13	.56	-	-	-	-
Escape	1.95*	.52	.62	.63	-	-	-	-
Safety	1.57	.76	2.04*	.62	-	-	-	-
Peer status	1.80	1.36	-1.05	1.23	-	-	-	-
Autonomy	-1.74*	.34	-.84	.66	-	-	-	-
Self-imp.	-1.03	1.17	-.77	.81	-	-	-	-
Social feedback	-2.10	3.14	2.27*	.63	-	-	-	-
Age	.06	.05	-.04	.03	.06	.06	-.05	.03
White	1.70	.76	1.47	.55	2.28*	.81	1.48	.66
Employed full-time	-1.15	.79	-.89	.54	-1.23	1.09	-.88	.64
Married	1.58	1.01	.84	.76	1.07	1.36	.70	.76
Has children	.92	.51	.68	.49	1.43	.79	.95	.58
Time served	-.06	.10	-.02	.08	-.08	.10	-.04	.06
Violent offense	.02	1.25	.24	.45	-.14	1.26	.18	.51
Drug dependence	.50	1.15	1.04	.67	.87	.91	1.15	.54
Criminal history	.05	.15	.04	.14	.06	.18	.04	.15
Mental health issues	4.14***	.55	3.19***	.35	3.83**	.63	3.23***	.22
Intercept	13.66***	1.47	13.91***	1.43	13.17***	1.83	13.9***	1.16
n	305		308		319		322	
R^2	.27		.32		.21		.27	
AIC	1994.31		1884.72		2112.34		1988.58	
BIC	2009.19		1899.64		2127.40		2003.68	

Table 4.18. OLS regression: Depression and anxiety regressed on sports and exercise and motivation for sports and exercise

	Depression		Anxiety		Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Appraisal	.68*	.19	.96***	.10	.71*	.21	.91***	.10
Group sports	-.08	.27	.39	.39	-.07	.22	.41	.37
Exercise	-1.01	.41	-.25	.31	-.86	.35	-.16	.32
Motivational factors								
Privacy	.72	.74	1.04	1.3	-	-	-	-
Escape	-.49	.55	.04	.39	-	-	-	-
Safety	2.31*	.55	1.83*	.64	-	-	-	-
Peer status	4.07	1.95	.70	1.4	-	-	-	-
Autonomy	-2.13	2.18	-1.59	1.08	-	-	-	-
Self-imp.	.20	.48	-.83	.63	-	-	-	-
Social feedback	-1.10	.99	.27	.45	-	-	-	-
Age	.00	.06	-.06*	.02	.02	.06	-.05	.04
White	1.75	.69	1.58	.64	1.97	.81	1.68	.69
Employed full-time	-1.17	.90	-.82	.81	-1.23	.96	-1.06	.66
Married	1.21	1.27	.78	.97	1.01	1.40	.76	.89
Has children	1.69*	.48	1.06	.57	1.59	.64	1.05	.60
Time served	-.04	.09	-.03	.06	-.06	.09	-.03	.06
Violent offense	-.43	1.29	-.06	.57	.00	1.20	.27	.60
Drug dependence	1.03	.51	.81	.53	1.12	.57	1.03	.44
Criminal history	.10	.16	.06	.15	.05	.19	.03	.14
Mental health issues	3.67***	.38	3.09***	.44	3.67***	.56	3.34***	.29
Intercept	16.78***	2.84	12.95***	1.72	15.5*	3.54	12.37***	2.04
n	295		297		309		311	
R^2	.25		.28		.21		.26	
AIC	1945.68		1839.08		2051.79		1936.64	
BIC	1960.43		1853.85		2066.73		1951.60	

Table 4.19. OLS regression: Depression and anxiety regressed on hobbies and motivation for hobbies

	Depression		Anxiety		Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Appraisal	.74*	.24	.85***	.14	.79*	.24	.92***	.12
Hobbies	-.37	.61	.02	.28	-.08	.56	.14	.39
Motivational factors								
Privacy	.26	.97	-.41	.32	-	-	-	-
Escape	1.43	1.51	1.31	.97	-	-	-	-
Safety	2.03	2.02	1.54	.83	-	-	-	-
Peer status	4.35	2.44	1.58	2.71	-	-	-	-
Autonomy	-1.94	2.26	-3.14*	.62	-	-	-	-
Self-imp.	-1.33*	.31	-.93*	.34	-	-	-	-
Social feedback	-1.23	.70	-.42	1.37	-	-	-	-
Age	.03	.05	-.06	.03	.05	.06	-.05	.03
White	2.09	.90	1.10	.69	2.68*	.81	1.92*	.60
Employed full-time	-1.68*	.62	-1.49*	.54	-1.51	.97	-1.27	.68
Married	1.64	1.51	1.33	1.47	1.04	1.42	.80	.96
Has children	1.54*	.48	1.30	.49	1.9*	.43	1.34*	.41
Time served	-.03	.09	.00	.08	-.04	.10	-.01	.07
Violent offense	-.41	1.59	.26	.80	-.17	1.43	.24	.75
Drug dependence	.72	.89	.93	.46	.91	.93	1.13	.55
Criminal history	-.03	.24	-.14	.24	.04	.18	.03	.15
Mental health issues	4.30***	.60	3.63***	.43	3.59***	.53	3.04***	.27
Intercept	13.99*	3.48	13.87***	2.07	11.69*	3.97	12.09***	2.87
n	279		279		309		310	
R^2	.25		.30		.20		.26	
AIC	1844.39		1713.66		2054.36		1927.35	
BIC	1858.92		1728.18		2069.29		1942.30	

Table 4.20. OLS regression: Depression and anxiety regressed on watching TV and motivation for watching TV

	Depression		Anxiety		Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Appraisal	.85*	.18	.99***	.16	.80*	.19	.92***	.14
Watching TV	.11	.39	-.13	.34	.41	.29	.10	.29
Motivational factors								
Privacy	-.79	.54	-.01	.46	-	-	-	-
Escape	1.08	.69	.65	.37	-	-	-	-
Safety	2.12	.81	1.99*	.66	-	-	-	-
Peer status	3.60	2.32	-.10	1.82	-	-	-	-
Autonomy	.79	1.14	.10	.51	-	-	-	-
Self-improvement	-1.13	1.77	-.36	1.34	-	-	-	-
Social feedback	.85	1.59	1.66	1.44	-	-	-	-
Age	.05	.05	-.05	.03	.06	.06	-.05	.04
White	2.15	.85	1.49*	.50	2.29*	.85	1.52	.61
Employed full-time	-.75	.84	-.59	.59	-.83	.91	-.61	.67
Married	.99	.93	.50	.87	.72	1.11	.62	.89
Has children	1.34*	.33	.82	.37	1.60*	.49	.92	.40
Time served	-.02	.09	.01	.07	-.04	.10	-.01	.06
Violent offense	-.10	1.34	.07	.66	.04	1.32	.21	.70
Drug dependence	1.22	.71	1.44	.59	1.15	.78	1.35	.56
Criminal history	-.02	.18	-.01	.14	.02	.20	.00	.15
Mental health issues	4.03***	.51	3.14***	.37	3.64***	.59	3.14***	.19
Intercept	9.52*	3.29	11.31*	2.99	9.92*	3.39	12.15*	2.77
n	310		312		319		320	
R^2	.23		.27		.20		.24	
AIC	2030.95		1926.21		2102.01		1987.82	
BIC	2045.90		1941.18		2117.07		2002.89	

Table 4.21. OLS regression: Depression and anxiety regressed on work and motivation for work

	Depression		Anxiety		Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Appraisal	.74*	.16	.87***	.14	.79*	.22	.89***	.13
Work	-.51	.61	-.07	.32	-.45	.48	-.17	.30
Motivational factors								
Privacy	1.02	2.12	1.5	2.15	-	-	-	-
Escape	1.29	.71	.13	.38	-	-	-	-
Safety	-1.06	.92	.13	.62	-	-	-	-
Peer status	.86	1.58	-1.29	1.13	-	-	-	-
Autonomy	.18	1.13	.24	1.16	-	-	-	-
Self-imp.	-1.29	1.07	-.98	.50	-	-	-	-
Social feedback	2.04	1.90	2.25	1.55	-	-	-	-
Age	.05	.07	-.05	.05	.06	.07	-.05	.04
White	2.33*	.80	1.7*	.55	2.52*	.81	1.74	.69
Employed full-time	-1.36	.83	-1.12	.52	-1.22	.88	-.97	.54
Married	1.03	1.25	.61	.89	.75	1.4	.77	.92
Has children	1.32	.54	.95	.48	1.15	.71	.71	.41
Time served	-.03	.09	-.02	.08	-.04	.10	-.01	.07
Violent offense	-.30	1.23	.11	.6	-.31	1.33	.09	.70
Drug dependence	.30	.96	.82	.46	.58	.79	1.03	.41
Criminal history	.08	.17	-.10	.18	.03	.19	.00	.14
Mental health issues	4.08***	.34	3.09***	.39	3.87***	.54	3.21***	.21
Intercept	12.93*	2.43	13.52***	1.91	12.43*	2.64	13.40***	1.96
n	307		309		319		322	
R^2	.22		.25		.20		.24	
AIC	2026.49		1913.80		2117.11		2006.41	
BIC	2041.40		1928.73		2132.17		2021.51	

Table 4.22. OLS regression: Depression and anxiety regressed on rehabilitation programs and motivation for rehabilitation

	Depression		Anxiety		Depression		Anxiety	
Variable	***b***	***SE***	***b***	***SE***	***b***	***SE***	***b***	***SE***
Appraisal	.81*	.16	.99***	.16	.77*	.14	.96***	.10
School	-.53	.35	.33*	.06	-.89	.35	.09	.13
Individual couns.	-.03	.53	.56	.37	-.06	.47	.40	.36
Group counseling	.38	.37	.36	.44	.38	.36	.39	.46
Other grp. programs	.00	.42	-.79*	.25	-.02	.37	-.79*	.25
Motivational factors								
Privacy	2.20	.93	.60	.92	-	-	-	-
Escape	1.96	1.21	1.68	1.39	-	-	-	-
Safety	.86	2.63	2.62	1.64	-	-	-	-
Peer status	-2.03	1.54	-2.47	1.22	-	-	-	-
Autonomy	-.92	1.50	-1.54	.63	-	-	-	-
Self-imp.	-2.24*	.79	-1.36*	.50	-	-	-	-
Social feedback	1.89	1.60	2.39	1.30	-	-	-	-
Age	.05	.07	-.05	.04	.04	.06	-.05	.03
White	1.69	1.13	1.57	.82	2.12*	.76	1.86	.78
Employed full-time	-1.45	1.09	-1.09	1.04	-1.51	1.10	-1.02	.82
Married	.86	.94	.38	1.33	1.08	1.25	.75	1.28
Has children	1.59***	.26	1.51***	.23	1.36*	.33	1.25	.47
Time served	-.05	.10	-.03	.07	-.03	.10	-.02	.06
Violent offense	-.51	1.09	-.03	.59	-.62	1.35	-.12	.81
Drug dependence	.72	1.13	.91	.72	.63	.86	1.09	.64
Criminal history	-.02	.13	.07	.12	.02	.18	.06	.13
Mental health issues	4.43*	.89	3.15*	.63	3.9***	.69	3.10***	.47
Intercept	13.56*	3.03	12.26***	2.02	14.2***	2.37	12.64***	1.93
n	267		266		282		282	
R^2	.24		.31		.20		.27	
AIC	1772.22		1635.19		1885.51		1754.45	
BIC	1786.57		1649.53		1900.08		1769.02	

Table 4.23. Ordered logistic regression: Time utilization regressed on motivational factors

	Playing cards, games			Reading			Group sports			Exercise			Hobby		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Motivational factors															
Privacy	.46	.48	1.59	.12	.15	1.13	.39***	.12	1.48	.95***	.30	2.59	2.05***	.22	7.79
Escape	1.44***	.17	4.22	.24	.29	1.27	.08	.37	1.08	.69***	.22	1.98	.54	.39	1.72
Safety	.38	.29	1.46	.41	.33	1.51	-1.35***	.47	.26	-.57	.34	.57	-.16	.56	.85
Peer status	.57*	.24	1.77	-1.17*	.58	.31	1.30***	.41	3.65	.41	.22	1.50	-.43	.41	.65
Autonomy	-.24	.51	.79	.00	.23	1.00	.53	.58	1.7	-.42	.56	.66	-.46	1.03	.63
Self-imp.	.26*	.13	1.29	.29	.33	1.33	.55	.34	1.74	1.49***	.15	4.45	1.28***	.22	3.61
Social feedback	1.03***	.29	2.80	1.66	1.24	5.25	1.49***	.15	4.43	.57***	.15	1.77	.91***	.19	2.48
Appraisal	-.11	.08	.90	.02	.07	1.02	.04	.04	1.04	-.10	.07	.91	-.03	.08	.97
Age	.00	.01	1.00	.03*	.01	1.03	-.04	.02	.96	.00	.01	1.00	-.01	.02	.99
White	-.81***	.19	.45	-.56***	.19	.57	-.88***	.27	.41	-.49	.30	.61	.31	.20	1.36
Employed full-time	.04	.15	1.04	-.14	.20	.87	-.30	.32	.74	.36	.30	1.43	-.05	.23	.95
Married	.04	.26	1.04	-.02	.23	.98	-.19	.54	.82	.15	.17	1.16	-.16	.46	.85
Has children	.04	.12	1.04	-.34***	.06	.72	-.07	.41	.93	-.11	.27	.90	-.34*	.17	.71
Time served	-.05*	.03	.95	-.02	.02	.98	.03	.03	1.03	-.03***	.01	.97	.00	.02	1.00
Violent offense	.32	.5	1.37	.19	.29	1.21	.34	.49	1.4	.05	.39	1.06	.04	.39	1.04
Drug dependence	.48***	.17	1.62	.29	.37	1.33	.65*	.27	1.91	.16	.31	1.18	-.29	.29	.75
Criminal history	-.06	.04	.94	.11***	.02	1.12	-.02	.05	.98	.09***	.02	1.09	.04	.06	1.04
Mental health issues	-.11	.24	.89	-.18	.16	.83	-.12	.25	.89	-.40	.22	.67	.08	.18	1.09
n	311			316			305			314			287		
Pseudo R^2	.18			.04			.14			.13			.20		
AIC	507.81			780.27			441.56			681.82			427.79		
BIC	522.77			795.29			456.44			696.81			442.43		

Table 4.23. Ordered logistic regression: Time utilization regressed on motivational factors (continued)

	TV			Work			School			Individual counseling		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Motivational factors												
Privacy	.56***	.05	1.75	.92***	.33	2.51	-.56	.55	.57	-.10	.61	.90
Escape	.52***	.12	1.69	.49	.35	1.64	.20	.51	1.23	-.52*	.24	.59
Safety	.35*	.16	1.42	-.88***	.27	.42	.08	.72	1.08	-.05	.61	.95
Peer status	.05	1.05	1.05	-.32	.31	.72	.87	.56	2.40	.17	.78	1.19
Autonomy	.51*	.23	1.66	.96***	.26	2.60	-.06	.27	.94	.88	.61	2.42
Self-improvement	.31	.27	1.37	1.32***	.26	3.76	1.82***	.25	6.19	.65***	.15	1.91
Social feedback	.46	.25	1.58	.05	.22	1.05	-.02	.20	.98	.93*	.43	2.53
Appraisal	.05	.08	1.05	-.03	.06	.97	-.06	.07	.94	-.09***	.03	.92
Age	.01	.01	1.01	.03*	.01	1.03	.00	.02	1.00	.03	.02	1.03
White	-.65***	.16	.52	.17	.22	1.18	-.45	.28	.64	-.57*	.24	.56
Employed full-time	-.14	.25	.87	.32*	.16	1.38	-.08	.08	.92	-.46	.53	.63
Married	-.04	.18	.96	-.75*	.32	.47	-.10	.41	.91	-.93	.52	.39
Has children	-.12*	.06	.89	-.23	.43	.80	-.63***	.15	.53	.19	.42	1.21
Time served	.00	.01	1.00	.05***	.01	1.05	.02	.03	1.02	.02	.02	1.02
Violent offense	-.30	.23	.74	-.10	.17	.90	-.16	.26	.85	.34	.44	1.41
Drug dependence	-.08	.22	.92	-.2*	.08	.82	.00	.4	1.00	-.30	.2	.74
Criminal history	.05	.03	1.05	.01	.07	1.01	-.01	.04	.99	-.08	.06	.92
Mental health issues	-.11	.26	.90	-.14	.18	.87	.29	.23	1.34	.68*	.28	1.98
n	320			317			308			297		
Pseudo R^2	.05			.15			.10			.15		
AIC	834.34			699.22			740.50			277.62		
BIC	849.41			714.25			755.42			292.39		

Table 4.23. Ordered logistic regression: Time utilization regressed on motivational factors (continued)

	Group counseling			Other group activities		
Variable	***b***	***SE***	***OR***	***b***	***SE***	***OR***
Motivational factors						
Privacy	-.59	.52	.56	-.45	.45	.64
Escape	-.01	.72	.99	.86*	.38	2.36
Safety	.36	.62	1.44	.14	.58	1.16
Peer status	.38	1.13	1.47	.83	.91	2.30
Autonomy	.34	.67	1.41	-.04	.49	.96
Self-improvement	1.2***	.38	3.31	1.50***	.34	4.48
Social feedback	.50*	.19	1.65	-.02	.39	.98
Appraisal	-.29***	.07	.82	-.04	.05	.96
Age	.01	.02	1.01	.02	.02	1.02
White	-.78***	.26	.46	-.24	.32	.79
Employed full-time	.29	.45	1.33	-.17	.26	.85
Married	.35	.36	1.42	-.50	.57	.60
Has children	-.38	.44	.69	-.10	.17	.91
Time served	-.01	.04	.99	.01	.03	1.01
Violent offense	-.18	.35	.83	-.24	.16	.78
Drug dependence	.18	.36	1.20	-.25	.15	.78
Criminal history	-.04	.09	.96	-.06	.04	.94
Mental health issues	.13	.33	1.14	.65*	.25	1.91
n	292			290		
Pseudo R^2	.12			.10		
AIC	291.89			498.06		
BIC	306.60			512.74		

CHAPTER 5: DISCUSSION

The goal of this study was to investigate whether the way male inmates use their time in prison is associated with negative emotional outcomes. I examined the subjective perceptions of using time constructively in prison (idleness, future orientation, preparation for release), objective measures of engagement in activities (hours spent in daily activities), and their associations with depression and anxiety. These concepts and associations were investigated because prior research reveals that idleness is associated with negative emotional and behavioral outcomes, whereas structured time is associated with more positive well-being (Arrigo & Bullock, 2008; Carvalho et al., 2015; Cashin et al., 2008; Figueroa, 2011; Gallant et al., 2015; Haney, 2003; Kupers & Toch, 1999; Meek & Lewis, 2014; Nurse et al., 2003). The literature also suggests that these relationships could be explained by the inmates' engagement in activities serving as methods of coping with stress (Lazarus & Folkman, 1984; Zamble & Porporino, 1988). The current study uncovers to what extent these expected associations are supported empirically.

5.1. Limitations

Before discussing the results, it is crucial to examine the limitations of this study. First, the study design is cross-sectional which means that the temporal order of variables and causality are unknown. While I hypothesized that time utilization is the independent variable and well-being is the dependent variable, it is probable that well-being also influences time utilization. For example, inmates who are more depressed may withdraw and want to spend less time in activities that include interactions with others; therefore,

they will avoid partaking in recreation. In addition, as discussed in the section about the analytical procedure, an examination of mediation effects on cross-sectional data can lead to biased estimates (Maxwell et al., 2011). It is possible that no full mediating effects were found because of the study's inability to detect the development of mediating effects over time.

Furthermore, it is possible that daily and weekly time utilization was measured with error. In fact, when inspecting the descriptive statistics, we can notice that for some activities inmates reported high values of time spent. It is plausible that in an environment with a lot of free time and few opportunities for structuring time, some individuals will choose an activity that they enjoy the most and occupy their entire waking time in that activity. In addition, higher values may be due to some activities overlapping with others, like in the case of talking to other inmates or daydreaming. However, it is reasonable to question to what extent these and other evaluations of time spent are objective measures of time use patterns, and to what extent they are the inmates' subjective perception of time spent. As Csikszentmihalyi (2008) suggests, under certain conditions people can participate in activity in a state of "flow" when they are not attentive to time or any other factors outside the activity. More onerous activities may appear to last longer than they actually do (Droit-Volet & Meck, 2007).

Measurement of emotional states is not immune to reporting bias either. It is reasonable to believe that some individuals underreported their symptoms of depression and anxiety because of the stigma attached to mental health issues (Corrigan, 2004; Gary, 2005). In fact, any self-reported measure is sensitive to typical biases of recall and social desirability (Hindelang et al., 1981). Nevertheless, beside field observations that would

be lengthy and would cause considerable burden to prison staff, self-reports, being a satisfactory method with reasonable levels of reliability and validity, are currently the most acceptable method for reporting time utilization (Junger-Tas & Marshall, 1999).

Another characteristic of the collected data for this study is that many inmates reported no participation for many activities. While extant datasets also show lower participation rates for some activities, it is possible that other factors influenced nonparticipation (Bureau of Justice Statistics, 2004). In fact, at two institutions, either in informal conversations or on the questionnaire, inmates shared that the institution has frequent lockdowns when inmates are not allowed to leave their cells for programming and recreation. Although it is not known how frequent these lockdowns were and to what extent they affected the prison population and their schedules, the inmates reported that they were very unsatisfied with these conditions.

Another limitation of this study is a significant amount of missing data. In the case of time utilization questions, one possible explanation for incomplete answers is that some inmates may have left the answers blank because they do not participate in these activities, even though the questionnaire instructed them to enter "0." A large number of missing values in some models resulted in a relatively small number of observations (n= ~100) which led to lower statistical power and exclusion of some variables. While an examination of missing data detected no observable patterns of missing-ness, it is possible that there are unobservable factors that influenced which individuals left what items on the questionnaire incomplete. The existence of such factors could lead to biased estimates, particularly because the method of handling missing data used in testing hypotheses H4-H6, listwise deletion, assumes MCAR. Additionally, with multiple

models and comparisons, the probability of committing a Type I error (the error committed by falsely rejecting null hypotheses) is increased in this study (Benjamini & Hochberg, 1995).

Finally, the study results are only representative of the general population of literate, English speaking male inmates in selected institutions for the period when data were collected. As programs and resources for structuring time in prison are being introduced to and removed from correctional institutions, time utilization patterns may change. Furthermore, other factors that can affect management of institutions (e.g. lockdowns, renovations, budget cuts, understaffing, staff turnovers, crowding) can also influence how inmates spend their time. This study did not control for any of these external factors. The study design was based on the assumption that these factors do not vary across the institutions during the included time period. Additionally, this study does not provide any insight into how inmates in special housing units (protective custody, disciplinary and administrative segregation) as well as institutions of other security levels spend their time. Finally, conclusions drawn from this study may not be applicable to female inmates as women's personal and institutional experiences significantly differ from male offenders (Giallombardo, 1966; Kruttschnitt, & Gartner, 2003; Kruttschnitt et al., 2000; Owen, 1998).

Time utilization and well-being could also have been influenced by disciplinary sanctions that inmates may have received for engaging in misconduct. It is possible that some inmates received a sanction that includes a loss of television, telephone, or visitation privileges, which could affect their time use and their emotional state. Similarly, other factors that could affect emotional states have not been controlled for

either (e.g. family dynamics; relationships with cellmates, other inmates, and staff; taking medication; crowding; status of their legal cases; transfers). Finally, in this study I did not examine any illicit activities inmates may engage in to cope with stress: violence, drug and alcohol use and production, gambling, tattooing, and other aspects of the underground economy.

Addressing these limitations, future research could build upon this study, investigate time utilization patterns of both male and female offenders in the community, and compare the patterns in the community with those in correctional institutions. It is important to understand if patterns of unstructured time in prison are a result of the lack of resources to spend time constructively, or they are indicative of offenders' lifestyle overall. Moreover, it would be beneficial to examine whether the way offenders spend their free time predicts recidivism. Researchers are encouraged to use alternative data collection methods such as time diaries to capture portraits of activities, motivations, and conditions. Although asking inmates to keep a diary to record their daily and weekly activities may still result in measurement error, this method could provide us with information on activities that questionnaires may not ask about. In fact, time diaries are commonly used in studies that examine time management behaviors and practices of specific populations (e.g. Hessing, 1994; Ironmonger & Soupourmas, 2009; Jacelon & Imperio, 2005; Merz, Böhm, & Burgert, 2009; Yoels & Clair, 1994).

5.2. Perceptions of time in prison

Despite the limitations discussed, this study provides a valuable insight into this unexplored topic and offers some practical implications for management of men's prisons. Overall, I found that inmates spend a significant amount of time without

structure and that their subjective experience of a lack of structure is associated with negative emotional outcomes. In fact, the results show that idleness is not an issue for only about a quarter of inmates, while the rest of the sample experience idleness to varying degrees. Moreover, the results reveal that inmates who reported higher levels of idleness, tended to also experience higher levels of depression and anxiety. This finding corresponds to those from previous studies that concluded that idleness is related to negative emotional outcomes (Arrigo & Bullock, 2008; Haney, 2003; Kupers & Toch, 1999; Nurse et al., 2003; Zamble & Porporino, 1988). Idleness is associated with poor well-being because it can act as a stressor itself, but it can also represent a state in which an individual is not using any resources (e.g. programs, recreation) to alleviate negative emotions caused by other stressors.

Examination of the other two domains of the subjective evaluation of time use demonstrates that the majority of inmates perceive that they are future oriented, but only about a half of the sample is certain that they are prepared for their release. It appears that inmates are aware of the obstacles they will have to face after release and although they frequently ponder their future, many do not feel that any concrete steps they have taken have prepared them for the challenges of reentry (Carvalho et al., 2015; Nelson et al., 1999; Zamble & Porporino, 1998). Moreover, this study shows that inmates who are more future-oriented have fewer depressive symptoms. It may be that future-oriented inmates spend less time ruminating about their past and choices they have made, which corresponds to one of the symptoms of depression (Kendall & Ingram, 1989; MacLeod, et al., 1997; Surtees, 1995).

However, greater future orientation was not related to higher levels of anxiety as hypothesized. It is possible that while inmates are oriented towards future events, especially because of the constant waiting for visitations, parole hearings, legal decisions, or release, this anticipation is not fueled by fear, irritability, or worrying like the literature suggests (Castellano & Sodestrom, 1997; Kruttschnitt et al., 2000; Nelson et al., 1999; Crewe et al., 2016; Meisenhelder, 1985). Either these male inmates adopt a healthy approach of dealing with future challenges (e.g. problem solving) or they do not anticipate any significant changes in their status in the near future that would cause them to worry.

Furthermore, inmates who feel like they are more prepared for release reported fewer symptoms of depression. While it is plausible that depression has an influence on the level of preparedness, the literature supports the finding that, for individuals who are more proactive in their release planning, readiness for release is associated with an optimistic view of reentry (Howerton et al., 2009; Visher & O'Connell, 2012). Surprisingly, preparation for release is not associated with anxiety like hypothesized (Kruttschnitt et al., 2000; Nelson et al., 1999). However, the lack of an association between release planning and anxiety is found in other studies on male inmates as well (Castellano & Sodestrom, 1997; Shinkfield & Graffam, 2010).

There could be several reasons for a null relationship between preparation for release and anxiety. First, while about half of the sample feels prepared for reentry, it may be that their plans are unrealistic, and as such, do not require concern or fear (Irwin, 1970; Uggen et al., 2004). Second, many inmates may not contemplate a specific release date because they are serving indeterminate sentences, while for others, the release date

may be too far in the future to start planning for reentry. In these cases, inmates do not perceive their release as an event that should present a concern yet. While overall, anxiety appears to be a greater issue for male inmates than depression, it appears that it is associated with factors other than the subjective evaluations of using time constructively.

5.3. Daily time utilization

The analysis of time spent in daily and weekly activities revealed that with an average of only 2 to 4 hours spent in structured programs such as work and education, more than 12 hours a day are largely free. This is more than three times as long as the leisure time of the general U.S. population and longer than other reports of inmate schedules suggested (Clemmer, 1940; Kelly, 2012; North Carolina Department of Public Safety, 2012). Most of that time is, therefore, shared between casual conversations with others, watching TV, reading, studying, and daydreaming. This is not a surprising finding because the previous literature also provides similar reports of the patterns of unstructured time of male inmates (Batchelder & Pippert, 2002; Glaser, 1969; Steiner & Wooldredge, 2008; Vuk & Sevigny, 2016; Wooldredge, 1999; Zamble & Porporino, 1988).

Inmates in this study, however, seem to spend a longer time in spiritual activities such as prayer and group religious activities compared to the previous studies (Vuk & Sevigny, 2016; Zamble & Porporino, 1988). In addition, a greater proportion of inmates reported participating in spiritual activities compared to the estimates of religious participation in the literature (Bureau of Justice Statistics, 2004; Crittenden, 2013; Camp et al., 2008). While the importance of using spiritual activities for coping in prisons has been recognized in other studies as well, one probable explanation for greater

involvement in the current study is that South Carolina is one the states with the highest levels of religious participation in the United States (Lipka & Wormwald, 2016; Maschi et al., 2014). Multivariate analyses in this study showed, however, that participation in spiritual programs is associated with older age. Therefore, because this sample is slightly older than nationally representative samples of inmates, it is possible that a greater religious participation is a consequence of an older sample (Bureau of Justice Statistics, 2004).

Other patterns worth noting are a large number of inmates who do not participate in rehabilitation programs and group sports. Although low treatment program participation corresponds to previous studies (Crittenden, 2013; Vuk & Sevigny, 2016), it is unexpected that sports—regarded as one of the most important coping methods in men's prisons (Cashin et al., 2008; Figueroa, 2011; Gallant et al., 2015; Martos-Garcia et al., 2009; Meek & Lewis, 2014; Ozano, 2008; Pedlar et al., 2008)—is an underutilized activity in this study. One of the explanations for this finding is that fall weather, as well as frequent lockdowns reported by some inmates, prevented inmates from participating in sports outdoors. Another explanation would be limited resources for participatory sports at selected institutions. Finally, because later analyses showed that participation in sports is inversely associated with age, lower participation in sports could be a product of the sample characteristics (Bureau of Justice Statistics, 2004). A recent study by Brosens, Dury, Vertonghen, Verté, and De Donder (2017) found that not participating in sports for older inmates is often associated with factors such as fear of victimization.

5.4. Daily activities as predictors of well-being

Only a few activities were significant predictors of depression and anxiety. This finding is unexpected especially because there is evidence in the literature that supports the hypothesis that engaging in structured activities is associated with better emotional and behavioral outcomes (e.g. Ambrose & Rosky, 2013; Cope, 2003; Maschi et al., 2015; Petersilia, Honig, Hubay, 1980; Wright, 1991). One reason for this finding could be that the reduced sample size and the corresponding lower statistical power in the models that used hours spent in activities as predictors, as well as potential measurement error, prevented true associations from emerging.

Another explanation may be that engagement in certain activities provides only temporary relief from stress during engagement in the activities, but more stable emotional effects do not hold after the activity ended. On the other hand, due to the cross-sectional nature of this study, we cannot confirm nor deny the existence of the counter-factual. Perhaps if inmates in the sample had not participated in the activities they reported they did, the levels of depression and anxiety might have been even higher. To determine whether time utilization truly has an effect on well-being, it is necessary to conduct a rigorous longitudinal or experimental study. The existence of null effects also precludes any potential mediating effects that time utilization may have on the relationship between appraisal and well-being.

The only exception is daydreaming. Daydreaming was found to be a partial mediator of the relationship between stress appraisal and anxiety. Although it is probable that among so many variables, models, and relationships in this study, this mediation emerged to be significant by random chance, there is a theoretical explanation for this

effect. Because daydreaming entails escaping reality by imagination, it is a passive coping method, and as such, it is associated with negative emotional responses (Gullone et al., 2000; Ireland et al., 2005; Van Harreveld et al., 2007). It is plausible that daydreaming is not associated with lower levels of anxiety because positive emotions evoked by fantasizing about a better life are, perhaps, not intense or long-lasting enough to have any positive influence on well-being (Clemmer, 1940; Hassine et al., 1996). Daydreaming as a coping mechanism in prison is an important finding especially because the previous correctional literature has not given daydreaming enough attention. With 46% of inmates spending an hour a day or more daydreaming, this finding has significant policy implications as well[10].

Two other activities that predict well-being are writing letters and participating in other group programs. Writing letters may be associated with higher levels of depression because inmates experience negative emotions (e.g. guilt, sadness) when corresponding with their loved ones. It is also plausible that for individuals who are more depressed, writing letters is a way of venting their emotions and concerns to the people they write to. Participation in other group activities is associated with lower levels of anxiety because these programs could provide social support to inmates in distress, especially if these programs are based on peer-support and mentoring. As the literature suggests, social support is an important factor in promoting healthy well-being (Cooper & Berwick, 2001; Gibbs, 1982). However, because the item on the questionnaire did not indicate specific programs, it is unknown what particular group activities inmates had in mind when

[10] However, because of the assumption I made about inmates who reported 24 hours in daydreaming, these results should be interpreted with caution.

reporting the hours spent. While these relationships are theoretically sound, these variables do not mediate the relationship between appraisal and well-being as expected.

Another unanticipated discovery was that neither group nor individual physical activity was related to well-being. This result is curious especially because there is ample qualitative evidence of the positive effects of sports and exercise for male inmates (Cashin et al., 2008; Figueroa, 2011; Gallant et al., 2015; Libbus et al., 1994; Martos-Garcia et al., 2009; Meek & Lewis, 2014; Ozano, 2008; Pedlar et al., 2008). The lack of association between physical activity and well-being can possibly be explained by the age distribution of inmates in the sample, an interaction that future research should examine in more detail.

Finally, appraisal is a significant predictor of well-being and this finding supports the stress-coping model (Lazarus & Folkman, 1984). If an individual perceives their situation as threatening and uncontrollable, they experience more negative emotional outcomes (Lazarus & Folkman, 1984). Higher stress appraisal is also associated with avoiding activities that assure interactions with other people such as conversations, playing games, and hobbies. In fact, the data suggest that individuals who perceive their current situation as threatening and uncontrollable will isolate themselves and daydream. Coping for these individuals is focused more on relieving negative emotions and less on seeking social support through group activities.

5.5. Inmate characteristics as predictors of daily activities

The results indicate that individuals with different characteristics engage in different time utilization patterns. The most obvious finding is that white inmates spend less time in activities that involve other participants (watching TV, playing games, and

sports) as well education and counseling. It may be that because non-white inmates represent a numerical majority in prisons, white inmates avoid any interactions with the larger number of racial/ethnic minority inmates out of fear of victimization (Carroll, 1990). Lower participation by white inmates in treatment programing will be discussed below in the context of motivational factors.

Furthermore, younger inmates prefer physical activity, while older individuals occupy more time in religious and spiritual activities. Even though they did not demonstrate significant effects on well-being in this study, spiritual activities were found to be an effective coping mechanism in improving well-being for elderly male inmates in Maschi and colleagues' (2014) study. The discussion of motivational factors below considers differences between younger and older inmates further.

Inmates who have served more time on the current sentence tend to spend their time more constructively in work and studying. This finding corresponds to the Crewe and colleagues' (2016) conclusions that suggest that inmates at later stages of their sentence start perceiving their time less as a burden and more as a resource. It could also be that inmates who have served more time on the current sentence work more hours simply because prison administration uses working longer hours as an incentive for a longer record of positive behavior (especially if there is a possibility to earn more credits or money).

Inmates who serve their time for a violent offense, on the other hand, spend less time in work than do non-violent offenders. They also occupy less time in another structured activity, group religious activities. It appears that either seeking structure is not a dominant pattern for violent offenders like Toch (1977) suggested, or violent offenders

in this sample pursue routine and stability through other avenues, not identified in this study. Similar to violent offenders, structure is not a dominant characteristic of time utilization for inmates with longer criminal histories. Specifically, inmates with more prior incarcerations tend to participate in less structured activities, including daydreaming, reading, and exercise. Individuals with mental health issues tend to participate in more solitary activities, perhaps because they are rejected by their peer group due to the stigma of mental illness or because avoiding others helps them cope with their issues (Corrigan, 2004; Toch, 1977).

5.6. Inmates' preference of motivational factors

Motivational factors help us explain some of the variation in time utilization across different types of offenders. The study confirms that inmates engage in certain activities for multiple reasons, from passing time to becoming a better person. It also appears that individuals deploy multiple coping responses simultaneously. Because using several coping methods on a single stressor indicates higher levels of stress, this suggests that incarceration is a powerful stressor for many individuals in this sample (Lazarus & Folkman, 1984; Maschi et al., 2015).

The most common reasons for engaging in activities are to pass time (escape) and to stay away from others or relax (privacy). That mentally trying to escape reality is an important coping method in prisons has been confirmed in numerous studies (e.g. Cope, 2003; Gullone et al., 2000; Hassine et al., 1996; Ireland et al., 2005; Meisenhelder, 1985; Sexton, 2012; Toch, 1977). In addition to the mental escape from the prison world, inmates seek physical privacy by avoiding social and physical stimulation in order to establish a state of equilibrium or relaxation (Toch et al., 1986). While the literature

suggests that any activity can be used to pass the time or to find a niche, the descriptive statistics show that seeking privacy and escape are most common motivators of leisure and recreation (watching TV, hobbies, playing cards and games) (Cope, 2003; Csikszentmihalyi, 2008; Parisi, 1982; Sexton, 2012; Toch, 1977).

Because seeking privacy and escape are oriented towards relieving negative emotions, these two factors represent passive, emotion-focused coping. Previous studies also found that emotion-focused coping is the most prevalent method of coping among male inmates (Leban et al., 2016; Van Harreveld et al., 2007; Zamble & Porporino, 1988). Self-improvement is also an important motivational factor and using incarceration as an opportunity to become a better person is a common finding in the literature (Crewe et al., 2016; Comfort, 2008; Visher & Travis, 2003). Descriptive statistics reveal that self-improvement is more prevalent for goal-oriented activities such as physical activity, work, and rehabilitation programs.

Seeking peer status, on the other hand, is the least reported factor. This finding is unexpected because the literature consistently reports how maintaining a masculine image and being respected by others is an important norm of the male prison culture (Clemmer, 1940; Sabo et al., 2001; Silberman, 1995; Trammell, 2009). It is plausible that inmates do not use everyday activities to gain peer respect because they utilize other means of building or maintaining their status, for example, violence, participation in the underground economy, tattoos, or gambling (Clemmer, 1940; Hunt et al., 1993; Kalinich, 1986; Sabo et al., 2001; Trammell, 2009; Zamble & Porporino, 1988; Williams & Hinton, 2006; Wooden & Parker, 1982). None of these activities, however, was examined in this study.

It is also probable that maintaining a masculine image and respect through daily routines is not a conscious decision (Schwalbe & Wolkomir, 2001). Male inmates may be using daily interactions with others to establish their role in their social groups but they may not be aware that they are in search of peer respect. Moreover, acknowledging that they seek respect from others may mean that they are admitting that they are not comfortable with their existing peer status and they may be reluctant to report it (Schwalbe & Wolkomir, 2001). It is important to note that, although observed by the researchers, status seeking was not verbalized by male inmates in earlier studies either (Clemmer, 1940; Sykes, 1958; Toch, 1977).

5.7. Inmate characteristics as predictors of motivational factors

Appraisal does not predict a preference for a certain motivational factor; however, individuals who reported a higher stress appraisal are less likely to engage in activities to socialize or to be respected by others. Comparable to their choice of solitary activities discussed above, these inmates avoid opportunities to interact with others, and they are not concerned with their self-image. Older individuals are also less concerned with their peer status as well as making friends or passing time. In fact, contrary to Maschi and colleagues' (2015) conclusions, social support in this study is not a coping mechanism highly adopted by older inmates. Older inmates in this sample also do not have as great a concern for privacy as the prior literature suggests (Toch et al., 1986; Zamble, 1992), although it appears that they still avoid structuring their time around making friends or gaining respect from others. The current study and previous inquiries concur that concern about peer respect as well as escaping reality and passing time, are more common among younger inmates (Flanagan, 1981; Silberman, 1995; Trammell, 2009).

With respect to other demographic characteristics, the results reveal that white inmates are more likely to engage in activities simply to pass time and escape reality and less often for self-improvement. This finding is also indicative in the choice of unstructured activities by white inmates discussed above. While Toch and colleagues (1986) suggest that white inmates are more likely to seek privacy by securing niches, white inmates in this study are not as concerned with physically avoiding other inmates or noise (privacy) as they are with avoiding the entire prison reality mentally (escape).

It is not clear why white inmates have the least concern for self-improvement. It is plausible that by equating self-improvement with participation in formal programing, white inmates do not want to demonstrate their concern for self-improvement because that would violate the norms of the inmate code (Grosholz, 2014; Silberman, 1995). Perhaps white inmates in this sample take a lower place in the social hierarchy and because of that, they feel like they have to adhere to the inmate code more strongly to be accepted, unlike inmates who are highly respected and their peers would not question their loyalty to the inmate culture (Silberman, 1995). Previous literature, however, offers little understanding of how this environmental concern varies with race or ethnicity.

For inmates with more time served on the current sentence, two patterns of coping emerge: emotion-focused coping through social support and problem-focused coping. Emotion-focused coping is manifested in a greater degree of engaging in activities for socialization and peer status. The relationship between seeking status and social feedback and time served can be explained by prisonization: the more time inmates served, the

more embedded they are into prison social networks (Clemmer, 1940; Wheeler, 1961)[11]. Although this finding is contrary to Zamble and Porporino's (1988) discovery that time served is positively associated with solitary activities, the examination of time utilization patterns as well as the pronounced preference of problem-focused coping confirms another conclusion by Zamble and Porporino (1988): inmates with more time served participate in more goal-oriented activities.

Problem-focused coping reflects inmates' interest in self-improvement and autonomy. Perhaps inmates with more time served have learned during their incarceration to use their time more constructively by engaging in activities for self-improvement (Crewe et al., 2016; Flanagan, 1981). While the literature suggests that concern for autonomy is greater for inmates at the beginning of their prison term and for young inmates, this study does not confirm this proposition (Crewe et al., 2016; Toch, 1977). Because autonomy was operationalized as "to stay informed about what's going on" or "to earn credits for early release" in this study, this variable may not have captured all possible aspects of seeking control over one's experiences in prison. In fact, it appears that for those who have served more time, and perhaps earned more respect, embeddedness in inmate social networks does not prevent them from seeking self-improvement, as it seems to be the case with white individuals (Silberman, 1995).

Consistent with the literature, this study shows that compared to non-violent offenders, violent offenders are more motivated by seeking peer respect. Violent inmates, just like the inmates who served more time in prison, are more engaged in the prison

[11] Due to multicollinearity in preliminary analyses, I did not examine how time left to serve is associated with time utilization and motivation. Therefore, it is not possible to further establish whether any effects of prisonization exist.

social world and maintenance of one's status within their social networks is an important aspect of the male prison subculture (Grosholz, 2014; Hunt et al., 1993). Violent offenders are also motivated by seeking safety. Safety is a logical concern for violent offenders because being actively involved in the prison social world includes being involved in the prison underground economy (Grosholz, 2014; Hunt et al., 1993; Toch, 1977). These inmates are more exposed to violence and possible victimization. However, younger age and white race were not found to be associated with safety concerns like the literature suggests (Tewksbury, 1989; Toch, 1977).

5.8. Motivational factors as predictors of well-being

Motivational factors were examined in this study as indicators of a function or a goal of coping. Overall, the results show that individuals who engage in various, mostly leisure, activities because of the concern for their safety are more depressed and anxious. Concern for safety has been found in previous studies to be an important predictor of negative emotional outcomes in male inmates (McCorkle, 1993; Hochstetler et al., 2004; Parisi, 1982; Toch, 1977; Toch et al., 1989). It is the constant fear, alertness, and anticipation of victimization that leads to stress in individuals with safety concerns (Toch et al., 1989).

As expected and confirmed by the literature, self-improvement and autonomy—two factors that have an active, problem solving function of coping—are associated with lower levels of depression and anxiety (Lazarus, 1993). While it is possible that adoption of this style of coping improves well-being because it focuses on the source of stress, it may also be that individuals of better emotional well-being choose more proactive and more effective coping styles. This study, however, cannot disentangle temporal order and

does not provide an answer to this debate. Conversely, engaging in activities to pass time, as an emotion-focused coping mechanism, is associated with higher levels of both depression and anxiety, and this finding corresponds to the results of previous studies (Ireland et al., 2005; Van Harreveld et al., 2007; Gullone et al., 2000). Motivational factors expressed no mediating effects on the relationship between appraisal and well-being.

5.9. Daily activities and motivational factors

Finally, when it comes to motivation as a predictor of engagement in activities, the ordered logistic regression models demonstrated that inmates utilize activities for a variety of reasons. Although this finding was observable from the descriptive statistics, the regression models help us understand the strength and significance of these relationships, as well as how robust these associations are relative to inmates' personal characteristics. The results suggest that privacy is the motivational factor satisfied through engagement in physical activities, watching TV, work, and hobbies, with hobbies being the strongest choice of a privacy-seeking activity. All of these activities can help inmates relax and avoid excessive stimulation. Participation in hobbies, perhaps, provides the greatest relaxation and seclusion from other inmates and noise (Toch & Adams, 1986).

On the other hand, inmates who want to forget about life outside prison and escape reality will partake in recreation including playing games, exercise, watching TV, and other group activities. These mainly unstructured activities successfully satisfy inmates' need for passing time because they are aimless and they allow inmates to occupy as much time as they want in these pursuits. Playing cards and games is the most

common way of escaping reality. Inmates with safety concerns, on the other hand, are more likely to avoid group sports and work. It may be that fearful inmates will avoid these activities simply because they entail leaving the area in which they feel comfortable and safe. In fact, inmates may avoid these activities because they are objectively more likely to be exposed to victimization in areas for work and in the recreation yard (Wooldredge, 1998).

For inmates with a tendency to seek peer status, reading is not an avenue to achieve respect from others. Perhaps male inmates who seek status in prison may perceive reading to be a conformist/pro-social behavior that is not an acceptable norm in prison, similar to their perception of formal programing (Grosholz, 2014). Unlike reading, participation in sports is a more effective way to assert their masculinity. In fact, the results show that those with concerns about their status spend more hours playing sports. When participating in sports, male inmates can affirm their status among peers by demonstrating their physical abilities and making friends (Meek & Lewis, 2014). Furthermore, individuals who want to achieve autonomy (through earning money or credits) spend more hours in work. While some inmates work to stay away from stimuli or relax, it appears that work in prison is a highly structured activity motivated by prosocial tendencies. If fact, individuals who want to become better persons, also strongly prefer work as a way to satisfy this desire.

Likewise, self-improvement is strongly associated with greater participation in other structured and goal-oriented activities: education programs, individual and group counseling, and other group activities. Fulfilling the need for self-improvement through participation in formal programming is a significant aspect of serving time for many

inmates (Crewe et al., 2016; Toch, 1977). Education appears to be the most prevalent method of personal development, perhaps because inmates appreciate the direct and concrete benefits of obtaining education for increasing their post-release prospects.

Finally, inmates with a greater desire to socialize spend more hours in group leisure activities such as playing games, sports, exercise, and hobbies. It is interesting that hobbies can be used in prison to both secure solitude and enhance social interaction. Additionally, participation in counseling can also be utilized to increase social interactions. Considering that Grosholz (2014) found that some inmates participate in treatment programs to pass time, the finding that rehabilitative programming is used for reasons other than its original objective (self-improvement) is not surprising. It is important to note, however, that the data do not provide any information on where these activities occur and whether other inmates are present during these activities, which could explain why some activities have multiple or conflicting functions.

Table 5.1. Summary of the results of hypotheses' testing

Hypothesis	Result
$H1_a$: *Controlling for personal characteristics, experiencing idleness is associated with higher levels of depression.*	✓
$H1_b$: *Controlling for personal characteristics, experiencing idleness is associated with higher levels of anxiety.*	✓
$H2_a$: *Controlling for personal characteristics, future orientation is associated with lower levels of depression.*	✓
$H2_b$: *Controlling for personal characteristics, future orientation is associated with higher levels of anxiety.*	✗
$H3_a$: *Controlling for personal characteristics, preparation for release is associated with lower levels of depression.*	✓

$H3_b$: *Controlling for personal characteristics, preparation for release is associated with lower levels of anxiety.*	✗
$H4_a$: *Controlling for personal characteristics, the relationship between stress appraisal and is depression mediated by engagement in activities.*	✗
$H4_b$: *Controlling for personal characteristics, the relationship between stress appraisal and anxiety is mediated by engagement in activities.*	*
$H5_a$: *Controlling for personal characteristics, the relationship between stress appraisal and depression is mediated by motivation for engagement in activities.*	✗
$H5_b$: *Controlling for personal characteristics, the relationship between stress appraisal and anxiety is mediated by motivation for engagement in activities.*	✗
$H6_a$: *Controlling for personal characteristics and appraisal, the relationship between motivation for engagement in activities and depression is mediated by engagement in activities.*	✗
$H6_b$: *Controlling for personal characteristics and appraisal, the relationship between motivation for engagement in activities and anxiety is mediated by engagement in activities.*	✗

✓ Hypothesis confirmed; ✗ Hypothesis not confirmed; * Hypothesis partially confirmed

CHAPTER 6: CONCLUSION

This study is the first extensive quantitative investigation of male inmates' subjective and objective evaluation of time utilization in U.S. prisons. It assessed over 25 different daily and weekly activities, ranging from unstructured routines such as grooming and socializing, to highly structured, administration-sponsored activities such as work and education. Time utilization was examined as it relates to inmate well-being framed by the stress-coping model (Lazarus, 1966; Lazarus & Folkman, 1984). Activities in which inmates spend time, when paired with motivation for engagement, represent methods of coping with stress. In other words, this inquiry explores to what extent male inmates utilize different activities to cope with the stress of incarceration. Additionally, this study elucidates what motivational factors drive male inmates' choice of activities from within the context of inmate culture.

Using the stress-coping framework, I also assess how the perceived stressfulness of confinement is associated with male inmates' choice of activities and well-being. This approach explicitly recognizes that the same prison conditions will be associated with different behavioral and emotional outcomes, depending on how individuals experience the properties of confinement. This study provides us with a better understanding of the strength and statistical significance of the relationships between various aspects of time utilization and well-being, including how different personal characteristics are associated with engagement in activities. This analysis is based on a unique conceptualization that

combines scholarship on the inmate culture with knowledge on psychological processes that operate parallel to the prison social world.

One of the key conclusions is that negative emotional outcomes represent a substantial issue for individuals in this study. Elevated symptoms of depression and anxiety are reported by the majority of inmates, while almost half of the sample stated that incarceration is a highly stressful and uncontrollable experience for them. Although prisons are not designed to be comfortable and pleasurable environments and a certain level of stress is expected, high levels of distress hinder rehabilitation because they can lead to more serious behavioral issues (Beijersbergen, Dirkzwager, Eichelsheim, Van der Laan, & Nieuwbeerta, 2015; Calcaterra et al., 2014; Cunningham, Reidy, & Sorensen, 2008; Lazarus et al., 1985). Likewise, the perceptions of high stressfulness of incarceration were associated with higher levels of depression and anxiety in this study.

Correctional settings often are not designed or prepared to address the psychological needs of the inmate population. In addition to expanding treatment for inmates with clinically significant levels of depression and anxiety, prison administrators should consider implementing management strategies that would alleviate individuals' experience of stressfulness and uncontrollability. To increase inmates' perception of autonomy over their incarceration, correctional institutions could provide more opportunities for involving inmates in making decisions that affect their conditions. This could be achieved by, for instance, expanding the use of inmate councils and ombudsmen and improving the system of filing and resolving grievances.

Preparation for release is another concern for the majority of inmates. Overall, inmates in this study are future oriented but many do not feel ready for release. Weaker

future orientation and lower preparation for release are associated with higher levels of depression. While pre-release programs are available in some of the institutions in this study, it is vital that the programs are expanded to allow more inmates to participate. Evaluating the effectiveness of existing programs in preparing inmates for release would also be important. To increase readiness for re-entry, access to other educational, vocational, and treatment programs should be expanded according to inmates' risks and needs, especially because less than 30% of inmates reported participation in some form of rehabilitative programs. Not only could introduction of more programming opportunities contribute to rehabilitation, it could also result in healthier emotional well-being and fewer behavioral problems in male inmates. Moreover, the expansion of rehabilitative programing would alleviate another prevalent concern for inmates in this study: idleness. It is particularly important to address this subjective experience of a lack of constructive time use because it is associated with both depression and anxiety.

Idleness is not only a subjective feeling, however. Low levels of productive time utilization are evident in reported participation in activities. Inmates have a lot of free time and that time is mostly occupied in unstructured leisure. Even when engaged in leisure and recreation, such pursuits in correctional settings are rarely characterized by high levels of autonomy and enjoyment as in the free world. In fact, several inmates pointed out while being surveyed that there is no such thing as free time in prison. Indeed, with high levels of control and limited opportunities to organize free time constructively, it is not surprising that inmates are not able to recognize self-determination in their time use. The lack of structure in time use is also manifested in lower participation in rehabilitation programs and sports than expected, although

involvement in religious and spiritual activities was higher than in national samples (Bureau of Justice Statistics, 2004).

The perception of idleness is associated with higher levels of depression and anxiety as hypothesized. Participation in structured activities such as work and programming, however, was not associated with better well-being. Neither was participation in sports and exercise like multiple qualitative studies suggest (e.g. Figueroa, 2011; Gallant et al., 2015; Martos-Garcia et al., 2009; Meek & Lewis, 2014). While these findings differ from the propositions in the literature and do not support the stress-coping framework, one of the least structured activities, daydreaming, did emerge as a method of coping with stress associated with well-being. Keeping in mind that no causal inference can be drawn, the discovery that daydreaming is associated with higher levels of anxiety confirms the stress-coping model (Lazarus 1966; Lazarus & Folkman, 1984). Daydreaming here represents a passive, emotion-focused coping method. When employed to temporarily relieve stress, daydreaming is an example of an inefficient coping method that can exacerbate negative emotional outcomes.

Even though the entire stress-coping process was confirmed only in the case of daydreaming, the examination of individual relationships among appraisal, engagement in activities, motivation, and well-being supports many aspects of the model. For instance, participation in other group activities is associated with lower levels of anxiety although it is not a mediator of the relationship between stress appraisal and anxiety. Moreover, levels of depression and anxiety vary with different reasons for engagement in activities. Another proposition of the stress-coping model confirmed in this study is that individuals who perceive their incarceration as a stressful and uncontrollable experience

have higher levels of depression and anxiety (Lazarus & Folkman, 1984). This study also reveals that these individuals will avoid activities that require interactions with others and they will withdraw from any socialization or status seeking.

The examination of motivational factors in this study uncovers that inmates utilize different activities for diverse purposes, meaning that activities satisfy different functions of coping. The most prevalent reasons for engagement in activities are seeking refuge from other inmates, escaping reality, and self-improvement. Seeking privacy is most often achieved through participation in physical activities, watching TV, work, and hobbies. Escaping reality is accomplished through unstructured leisure activities that are not run or scheduled by staff and that allow inmates to spend as much time as they want in the activity. Participation in work, education, and treatment programs are the most common avenues for self-improvement.

Overall, with self-improvement being an important motivator in more than half of the sample, inmates in this study seem to generally aspire to become better individuals. Even though those with a desire to be better people are more likely to engage in structured activities, a much smaller number of inmates actually participate in work, education, or rehabilitative programming. It is not clear if the reason for lower rates of participation is that inmates do not satisfy the criteria for enrollment in these programs or the programs are not able to accommodate all interested inmates because inmates' access to programs and availability of programming opportunities was not examined in this study. Nevertheless, it is unfortunate that participation in these structured and goal-oriented activities is low because the results clearly demonstrate that this active, problem-focused coping is associated with healthier well-being, confirming the stress-coping

model (Lazarus & Folkman, 1984). Another validation of the model is that escaping reality and passing time emerge as passive, emotion-focused coping methods that are associated with poorer well-being (Lazarus & Folkman, 1984). These findings, however, do not elucidate whether inmates choose passive coping methods because of certain personality characteristics or because they do not have access to the resources necessary for active, problem-solving coping.

This study reinforces the extant evidence, showing that with extensive periods of unstructured time in prison and scarce opportunities for self-improvement, idleness could exhort inmates to unproductive behaviors such as daydreaming and to coping methods that are either ineffective in reducing stress or exacerbate poor emotional well-being (Gullone et al., 2000; Hassine et al., 1996; Ireland et al., 2005; Van Harreveld et al., 2007). For these reasons, prison administrators should strive to maximize opportunities for structured behaviors and active coping methods. As argued above, implementing additional educational, vocational, and treatment programs, and meaningful work opportunities would minimize passive time use and satisfy inmates' needs for self-improvement.

The findings suggest that inmates largely serve their time by *passing through it*, but they would like to serve their sentence more by *using it.* Introducing additional resources for hobbies could also be beneficial, especially since hobbies proved to have a versatile function: they satisfy inmates who seek privacy, inmates who want to socialize, and those who want to self-improve. Because participation in other, non-specified group programs is associated with better well-being, prison administrators as well as researchers should explore the value that self-help programs and peer mentoring have for inmates'

well-being. Addressing elevated levels of stress, depression, and anxiety of inmates may benefit prison administration as well. Specifically, by creating more stable prison environments, prison staff may experience less stress themselves which could lead to greater job satisfaction, less burnout and staff turnover, as well as better overall health of line staff.

Finally, the study confirms that personal characteristics such as age, race, mental health status, type of offense, criminal history, and time served are related to different patterns of time use. Specifically, white inmates spend less time in group activities and activities for self-improvement and more time in unstructured activities to pass time. Furthermore, younger inmates prefer physical activity, they are more concerned with their status among peers, and they are also more likely to engage in activities to pass time. Older individuals occupy more time in religious and spiritual activities and are less concerned with socializing. The findings also suggest that the longer inmates spend in prison, the more they become oriented towards using time constructively. Simultaneously, these individuals are more immersed in prison social groups while they seek socialization and peer status. Violent and chronic offenders are less concerned with self-improvement and more with seeking peer status.

Combined with other evidence-based models of correctional rehabilitation such as the RNR (Andrews & Bonta, 2010b), these findings can provide a basis for developing or refining the existing programs and inmate management. Younger inmates should be offered more programs and activities that foster social interaction and prosocial activities through which they can establish their status in the social hierarchy. Furthermore, first time offenders, older inmates, and those who have served more time will underutilize

leisure resources, therefore, they should be offered more opportunities for self-improvement (work, education, religious activities). Housing inmates in institutions, units, and cellblocks according to the availability of resources would not only maximize efficient use of resources, but it could also facilitate management by increasing inmates' satisfaction and autonomy. Additionally, it would be beneficial to introduce a variety of activities in housing units with diverse populations to offer more choices to inmates to structure their time in a way that available activities match their needs and concerns.

Although this study does not address all the gaps and limitations of the previous literature, it revives scholarly interest into daily routines in today's prisons and gives us insight into what factors correlate with inmate time use. These results, if used to inform correctional policies, may benefit incarcerated men and women because they advocate for rehabilitation and "normalization" of prison conditions which can foster successful transitions from prison to community and enhance public safety. Orderly, safe, productive supervision of inmates hinges not only on a prison's structure and operation, but also on its social qualities.

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APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

UNIVERSITY OF SOUTH CAROLINA

OFFICE OF RESEARCH COMPLIANCE

INSTITUTIONAL REVIEW BOARD FOR HUMAN RESEARCH
APPROVAL LETTER

This is to certify that the following proposal: **Pro00056309**

Entitled: *Inmate time utilization and well-being*

Submitted by:
Principal Investigator: Brandon Applegate, PhD
College of Arts & Science
Criminology & Criminal Justice,
1305 Greene Street, Currell 110
Columbia, SC 29208

was reviewed and approved by the University of South Carolina Institutional Review Board (USC IRB) by **Expedited** review on **10/10/2016** (category **7**).

Approval is for a one-year period from **10/10/2016** to **10/9/2017**. When applicable, approved consent /assent documents are located under the "Stamped ICF" tab on the Study Workspace in eIRB.

PRINCIPAL INVESTIGATORS ARE TO ADHERE TO THE FOLLOWING APPROVAL CONDITIONS

- The research must be conducted according to the proposal/protocol that was approved by the USC IRB
- Changes to the procedures, recruitment materials, or consent documents, must be approved by the USC IRB prior to implementation
- *If applicable*, each subject should receive a copy of the approved date stamped consent document
- It is the responsibility of the principal investigator to report promptly to the USC IRB the following:
  - Unanticipated problems and/or unexpected risks to subjects
  - Adverse events effecting the rights or welfare of any human subject participating in the research study
- Research records, including signed consent documents, must be retained for at least (3) three years after the termination of the last IRB approval.
- No subjects may be involved in any research study procedure prior to the IRB approval date, or after the expiration date. For continued approval of the research study, an update of the study is required prior to the expiration date. The PI is responsible for initiating the Continuing Review process. At the time a study is closed, a Continuing Review report form is to be used for the final report to the USC IRB in order to formally close the research study.

The Office of Research Compliance is an administrative office that supports the University of South Carolina Institutional Review Board. If you have questions, contact Arlene McWhorter at arlenem@sc.edu or (803) 777-7095.

Sincerely,

Lisa M. Johnson
IRB Manager

APPENDIX B: ANNOUNCEMENT

UNIVERSITY OF
SOUTH CAROLINA

Department of Criminology and Criminal Justice

2016 PRISON STUDY
ANNOUNCEMENT

During the next few weeks, a team of researchers from the University of South Carolina will randomly select 100 inmates from [insert name] Correctional Institution to participate in a research study supervised by Dr. Brandon Applegate. The purpose of the study is to learn how people who are in prison spend their free time and how it is related to their overall well-being.

If you are selected to participate in the study, you will be asked to meet with a member of the research team to complete a survey. Your participation in this study is voluntary. We look forward to meeting with you and sharing additional information about this important study.

APPENDIX C: INFORMED CONSENT SCRIPT

Good morning/afternoon,

My name is Mateja Vuk and I am with the Department of Criminology and Criminal Justice at the University of South Carolina. I am here today to invite you to participate in a study about your experiences in this institution sponsored by University of South Carolina. This study is designed to learn how people who are in prison spend their time and how it relates to your overall well-being. You have been randomly selected to participate; you were not singled out for any reason. In addition to this institution, this study is also being conducted in four other correctional institutions in South Carolina.

If you agree to be in this study, you will be asked to complete a survey about your experiences as an inmate in this prison. Answering the survey will take no longer than 30 minutes of your time. The choice of whether to participate in this study is completely up to you. You can choose not to participate or to stop participating in the study at any time, for any reason, without any negative consequences. You do not have to answer any questions that make you feel uncomfortable. All answers are completely confidential and will be coded in such a way that no individual can be identified in any report of the results. To protect your privacy, please do not put your name on your survey.

This study is not connected with this correctional institution or the South Carolina Department of Corrections in any way. None of the information obtained from individual inmates will be made available to the parole board, the prison administration, or staff members. The prison administration will know who participated in the study, but the administration will not know your specific responses.

You will not be paid for participating in this study and your participation will not have an influence on your parole hearing or your sentence in any way. Taking part in this study will not benefit you personally.

After you complete the survey, only the researchers at the University of South Carolina will have access to your responses. Any information that is obtained in connection with this study will remain confidential. The results of the study may be published or presented at seminars, but the report will not include your name or other identifying information about you. Even though we will not ask you questions about victimization or criminal activity other than your current offense, if during the research process we

become aware of any actual or potential victimization or criminal activity, we will notify appropriate authorities.

Do you have any questions before I hand out the survey?

If you wish to participate in the study, please read an informed consent form in front of you and sign both copies. You may keep one copy, along with the sheet with contact information of the University of South Carolina research staff attached with the survey.

Thank you for helping with this important study on how people experience their time in prison.

APPENDIX D: SCDC CONSENT FORM

SOUTH CAROLINA DEPARTMENT OF CORRECTIONS

Division of Resource and Information Management

CONSENT TO PARTICIPATE IN RESEARCH PROJECT

I, _____ the undersigned, do hereby agree to participate voluntarily in a research project entitled _____ undertaken by _____ at the _____ Correctional Institution.

I also hereby release the South Carolina Department of Corrections from any liability or damages that may result from my participation in the above said project.

The above named person(s) or organization(s) may use the information obtained about me for research and statistical purposes only.

The above named person(s) or organization(s) will not reveal any information identifiable to me individually without my prior consent.

I understand that at anytime during the procedure, I have the right to withdraw consent and terminate participation without penalty.

I understand that researchers will comply with pertinent federal/state statutes and regulations.

S/_____ _____ ____/____/____
Inmate Signature **SCDC #** **Date**

S/_____ ____/____/____
Employee Signature **Date**

S/_____ ____/____/____
Employee Signature **Date**

cc: Researcher
Inmate Participant/Employee
Director, Division of Resource and Information Management

APPENDIX E: QUESTIONNAIRE

UNIVERSITY OF
SOUTH CAROLINA

Department of Criminology and Criminal Justice

2016 PRISON SURVEY

First, we want to learn about your life in prison and about how you plan your free time. All of your answers are completely anonymous… no one will know which answers are yours. Please circle the number that represents how you feel about your time in prison.

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
I try to keep myself busy to pass the time.	1	2	3	4	5
I have a goal I want to achieve during this prison term.	1	2	3	4	5
Participation in different programs has prepared me for what I will face when I'm released.	1	2	3	4	5
Doing time in prison is a stressful experience for me.	1	2	3	4	5
I try to plan my free time.	1	2	3	4	5
I don't really think about my future.	1	2	3	4	5
I don't have a place to stay when I'm released.	1	2	3	4	5
I often feel bored.	1	2	3	4	5
I think I'm not ready for release.	1	2	3	4	5
I try to do something to improve myself while I'm here.	1	2	3	4	5
I think I'm able to do "easy time."	1	2	3	4	5
I can say I live day by day.	1	2	3	4	5
I'm afraid that I will go back to crime when I'm released.	1	2	3	4	5
I'm only focused on what is happening right now.	1	2	3	4	5
I don't have any plans for finding a job after my release.	1	2	3	4	5
I try to take part in any necessary programs to get out as soon as possible.	1	2	3	4	5
I spend most of my free time doing nothing.	1	2	3	4	5
I use the time here to prepare myself for my release.	1	2	3	4	5

Now let's look at how you spent your time in prison in the past two weeks. <u>On a usual day</u>, how many hours or minutes did you spend in the following daily activities? Please write "0" if you didn't spend any time in the activity.

	hours	minutes		hours	minutes
Sleeping			Playing cards, chess, other games		
At work			Cleaning the cell/cubicle		
In school/training programs			Playing group sports		
Prayer or meditation			Physical exercise		
Talking to other inmates			Hobbies, arts, crafts		
Watching TV			Reading		
Listening to radio or music			Studying		
Grooming (self)			Daydreaming		
Writing stories or songs			Playing musical instruments		

Are there any other activities you participated in? ☐ Yes ☐ No

If so, what were they? _____ How much time did you spend? _____ _____

We are also interested if you spent time in activities and programs that don't happen every day. How many hours or minutes <u>per week</u> did you spend in the following activities? Please write "0" if you didn't spend any time in the activity.

	hours	minutes		hours	minutes
Group religious services			Writing letters		
Individual counseling			Phone calls		
Group counseling			Visits with family or friends		
Other group meetings					

Are there any other activities you participated in? ☐ Yes ☐ No

If so, what were they? _____ How much time did you spend? _____ _____

Next, we want to learn why you engaged in some of these activities in the past two weeks. For each of the activities below, please check [X] the reasons why you participated in the activity, and then circle the most important reason.

Playing games:

- [ ] to stay away from inmates/noise or to relax
- [ ] to keep busy or to forget about life on the outside
- [ ] to avoid conflicts with other inmates
- [ ] to be respected by other inmates
- [ ] to stay informed about what's going on
- [ ] to learn new skills
- [ ] to spend time with friends
- [ ] I don't play any games.

Reading:

- [ ] to stay away from inmates/noise or to relax
- [ ] to pass time or to forget about life on the outside
- [ ] to avoid conflicts with other inmates
- [ ] to be respected by other inmates
- [ ] to stay informed about what's going on
- [ ] to become a better person
- [ ] to feel accepted by other inmates
- [ ] I don't read.

Sports or working out:

- [ ] to stay away from inmates/noise or to relax
- [ ] to keep busy or to forget about life on the outside
- [ ] to feel safe
- [ ] to be respected by other inmates
- [ ] to stay informed about what's going on
- [ ] to become a better person
- [ ] to spend time with friends or make new friends
- [ ] I don't play sports or work out.

Hobbies, arts, crafts:

- [ ] to stay away from inmates/noise or to relax
- [ ] to keep busy or to forget about life on the outside
- [ ] to avoid conflicts with other inmates
- [ ] to be respected by other inmates
- [ ] to stay informed about what's going on
- [ ] to learn new skills
- [ ] to spend time with friends or to make new friends
- [ ] I don't have hobbies.

Please check [X] the boxes that most closely describe your reasons for engaging in the activity and circle the most important reason.

Watching TV:

- ☐ to stay away from inmates/noise or to relax
- ☐ to pass time or to forget about life on the outside
- ☐ to avoid conflicts with other inmates
- ☐ to be respected by other inmates
- ☐ to stay informed about what's going on
- ☐ to become a better person
- ☐ to spend time with friends or make new friends
- ☐ I don't watch TV.

Working:

- ☐ to stay away from inmates/noise or to relax
- ☐ to pass time or to forget about life on the outside
- ☐ to avoid conflicts with other inmates
- ☐ to be respected by other inmates
- ☐ to earn money or credits for early release
- ☐ to become a better person
- ☐ to spend time with friends or make new friends
- ☐ I am required to work.
- ☐ I don't work.

Rehabilitation programs (e.g. AA/NA, education, counseling):

- ☐ to stay away from inmates/noise or to relax
- ☐ to pass time or to forget about life on the outside
- ☐ to avoid conflicts with other inmates
- ☐ to be respected by other inmates
- ☐ to increase chances for early release
- ☐ to become a better person
- ☐ to spend time with friends or make new friends
- ☐ I am required to attend the program.
- ☐ I'm not participating in any programs.

Did you circle the most important reason for each activity? Please do so.

Many people are sometimes in a bad mood or sad. How often you have felt this way over the last 2 weeks?

	Never	Almost never	Sometimes	Often	All the time
Feeling nervous anxiety or on edge.	1	2	3	4	5
Not being able to stop or control worrying.	1	2	3	4	5
Worrying too much about different things.	1	2	3	4	5
Trouble relaxing.	1	2	3	4	5
Being so restless that it is hard to sit still.	1	2	3	4	5
Becoming easily annoyed or irritable.	1	2	3	4	5
Feeling afraid as if something awful might happen.	1	2	3	4	5
Little interest or pleasure in doing things.	1	2	3	4	5
Feeling down, depressed, or hopeless.	1	2	3	4	5
Trouble falling or staying asleep, or sleeping too much.	1	2	3	4	5
Feeling tired or having little energy.	1	2	3	4	5
Poor appetite or overeating.	1	2	3	4	5
Feeling bad about yourself—or that you are a failure or have let yourself or your family down.	1	2	3	4	5
Trouble concentrating on things, such as reading the newspaper or watching television.	1	2	3	4	5
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual.	1	2	3	4	5
Thoughts that you would be better off dead or of hurting yourself in some way.	1	2	3	4	5

Finally, we have some questions about your background. Your answers will only be used for comparisons. They will never be used to try to identify you personally.

What year you were born? _____

What is your race/ethnicity?

- ☐ White/ Caucasian
- ☐ Black/ African American
- ☐ Hispanic/ Latino
- ☐ American Indian/ Native American
- ☐ More than one race
- ☐ Other

What is the highest level of education you completed?

- ☐ Grade school or less
- ☐ Some high school
- ☐ Completed high school
- ☐ Some college
- ☐ Completed college
- ☐ More than college

Thinking back 6 months before you went to prison, were you working?

- ☐ Working full-time
- ☐ Working part-time
- ☐ Not working
- ☐ Retired

What is your marital status?

- ☐ Married
- ☐ Single
- ☐ Divorced
- ☐ Widowed
- ☐ Domestic partnership

Do you have any children younger than 18?

- ☐ Yes
- ☐ No

How long is your current sentence? _____ years, _____ months

For what offense? _____

How much time have you already served on this sentence? _____ years, _____ months

In the year before you started your sentence, did using drugs keep you from doing work, going to school, or caring for children?

- ☐ Yes
- ☐ No

Not counting the sentence you are in prison for now, have you ever served a sentence in prison or jail before?

- ☐ Yes
- ☐ No

If yes, how many times? _____

Have you ever received treatment for psychiatric or emotional problems (e.g. counseling, medication)?

- ☐ Yes
- ☐ No

Thank you for participating in this study!
If you have any questions about this study or your rights as a study participant, please contact:

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