

VICTIMIZATION, FEAR, AND COPING IN PRISON

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A thesis presented to the Faculty of Graduate Studies in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Psychology (Clinical).

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Victimization, Fear, and Coping in Prison

BY

Donna Elaine Chubaty

**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University
of Manitoba in partial fulfillment of the requirements of the degree**

of

Doctor of Philosophy

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ABSTRACT

The present study was an investigation of violence, fear, and coping in a prison setting. Integral parts of prison life, high levels of fear and violence, combined with ineffective coping, likely undermine the rehabilitative goals of prison. The present study focused on personality predispositions, victimization experiences, coping, and social support as probable factors affecting level of fear and psychological symptomatology. At Stony Mountain Institution and Saskatchewan Penitentiary, inmates completed a questionnaire package and file reviews were conducted to obtain further demographic and personality test scores. Data were factor analyzed, then entered into multiple regression equations. A set of exploratory correlational analyses was conducted in order to provide additional information and clarification of results.

While the overall model was not supported by the present study, it was clear that the present sample tended to report personality pathology, coping deficits, social isolation, and psychological symptoms. Victimization experiences within prison were associated with higher levels of self-reported fear. While only personality maladjustment and escape-oriented coping evidenced predictive utility with regards to psychological symptoms, exploratory analyses suggested a range of mental health difficulties and difficult early familial experiences in the lives of prison inmates. Specifically, parental loss and a history of physical/sexual abuse emerged as prominent themes among the sample. Implications for identification and management of vulnerable inmates, as well as for further research, are discussed.

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INTRODUCTION

Violence, victimization, and fear are routine aspects of prison life, and have a substantial impact on the day-to-day lives of inmates living within institutions (e. g., Cooley, 1993; McCorkle, 1992b, Struckman-Johnson, 1996). These aspects of imprisonment can have a number of deleterious psychological effects, and have a potentially negative impact with regards to the reintegration of inmates into broader society. Research has suggested that both individual and environmental characteristics impact on how inmates cope with the possibility of violence in prison. Researchers tend to agree that environmental, social, and individual factors interact to determine coping, but the nature of their interaction is less clear. The present study focuses on the way in which personality characteristics, prison experiences with violence, social supports, and coping style impact on fear and psychological adjustment in prison. In this way, it is hoped that factors which render an individual vulnerable to being victimized in prison will be elucidated, facilitating identification of and intervention with vulnerable individuals. In the same vein, it is hoped that factors which may buffer negative psychological effects will also be identified.

How inmates cope with the possibility of violence is important in determining their potential to benefit from the rehabilitative efforts of prison. The present study represents an attempt to add to the existing literature on prison violence in a number of ways. It examines experiences along the continuum of victimization, not only the extremes (e. g., Wright, 1991), and attempts to provide more precise definitions and

measures, which have been lacking in the preliminary research to date (e. g., McCorkle, 1992a). Thus, it is hoped that a more precise picture of psychological and interpersonal dynamics can be painted. The focus of the present study is on the psychological experiences of inmates, as opposed to the sociological context of the prison subculture (e. g., Cooley, 1995). Thus, the cognitive, behavioural, and contextual factors which mediate the impact of fear and violent experiences in prison are highlighted.

Prison Inmates in Canada

The Correctional Service of Canada supervises approximately 22,000 offenders on any given day, with 12,500 offenders incarcerated within 53 institutions and 9,500 under some form of community supervision, with approximately 7,100 new admissions in 1992 (Porporino & Baylis, 1993). In terms of their distribution, Motiuk and Belcourt (1997) reported that the 3,000 incarcerated homicide offenders in the federal system constitute 22% of incarcerated Canadian federal offenders, with more than half of those (1,694) in medium security institutions. The 3,000 incarcerated sex offenders similarly comprise 22% of the incarcerated offender population, with more than two-thirds incarcerated in medium security institutions. Robbery offenders constitute approximately one-third of the total federally incarcerated population, with almost two-thirds of them in medium security institutions. One-quarter of federal inmates are drug offenders, with 60% at a medium security level.

A decade ago, violent offenders seemed to be on the rise, however in recent years, incarceration for violent offenses seems to be remaining relatively stable and perhaps

slightly decreasing. Porporino and Baylis reported that in 1984-85, 43% of inmates were admitted for violent offences, but by 1991-92, violent offences consisted of 48% of admissions. In the same period, the percentage of admissions for violent sex offences increased from 8% to 12%, drug offences increased from 7% to 14%, and property offences decreased from 31% to 23%. However, Dell et al. (1998) reported that nationally and regionally, the rate of adult males charged for violent crimes slightly decreased between 1992 and 1997, from 107 to 88 per 10,000 nationally and 138 to 125 per 10,000 in the Prairie Region. The authors reported that nationally and regionally (Prairies), prison dispositions for criminal behaviour remained relatively stable.

Porporino and Baylis (1993) further reported that 85% of federal inmates have sentence lengths from two to five years, and 7% have sentences over 10 years, which has remained relatively stable between 1984-85 and 1991-92. Age of offenders has steadily increased, with the 30-39 year age group increasing from 21% of admissions in 1981-82 to 31% in 1991-1992, and the 20-29 age group decreasing from 64% to 54% in the same period. More recent figures indicate that the average age of men processed through the court system through the 1990's has remained at 32-33 years (Dell et al., 1998).

Porporino and Baylis suggested that the trend towards older inmates denotes not the aging of the Canadian population, but rather an increased risk for imprisonment of men in their 30's.

The Significance of Violence in Prison

Public concern for the welfare of prison inmates is notoriously low for a number of reasons. Struckman-Johnson et al. (1996) noted that there is limited awareness of problems within institutions because of the controlled setting, misperceptions of the nature of violence in prison, prejudice against inmate victims, and a view that inmates deserve whatever happens to them in prison. However, there is reason to be concerned about the prison environment and its effects on offenders, and researchers are beginning to seriously examine the concepts of victimization and fear within the correctional system. While a certain amount of deprivation and discomfort is, according to the values of our society, desirable in prison, beyond a certain level such conditions can work against the rehabilitative ends to which the correctional system is directed. McCorkle (1993a) identified three concrete disadvantages of undue stress in prison. First, unreasonable stress may decrease the supposed deterrent effect of prison by fostering increased hostilities among inmates, resulting in increased criminal behaviour. Second, the rehabilitative goals of institutional programming may be undermined. Third, unreasonable stress may facilitate large-scale prison violence. Marron (1996) pointed out that as most offenders will return to the community, their potential socialization as "ruthless killers" should be a public concern. The converse should also be a concern: The release of victimized and potentially traumatized individuals would likely undermine their ability to successfully function in society. Thus, there is value in examining the environment in which we attempt to rehabilitate offenders.

Prevalence of Violence in Prison

Prisons have long had the reputation of being violent and frightening institutions. Given the nature of the population and the coercive setting, it is not unreasonable to assume that this danger exceeds that encountered in the general community. The literature supports this assumption. Marron (1996) anecdotally reported that Canadian inmates may be up to seven times more likely to be violently attacked or threatened with violence than individuals in the community. Cooley (1993), in his survey of 117 Canadian inmates from three security levels, found a rate of assault/threats of assault approximately three times higher than the community (Statistics Canada General Social Survey, 1988) and more than 50% higher than a comparison community sub-sample (urban males aged 20-59 with incomes under \$20,000).

Robinson and Mirabelli (1996), in reporting the results of a national inmate survey, reported that 21% of Canadian inmates acknowledged having been physically assaulted and 7% indicated that they had been assaulted with a weapon. Fifty-eight percent of inmates reported feeling safe from being assaulted by other inmates while in their present institutions. According to the survey results, the highest rates of physical assaults occurred in maximum security institutions and in the Prairie region versus other regions. Devenport (Personal Communication, November 6, 2000) documented a total of 978 assaults by prison inmates over the last 12 months nationally, with 46% (447) of those within medium security institutions. It should be noted that those statistics represent assaults which came to the attention of staff. It is likely that assaultive incidents

are underreported in prison due to concerns about image management, social rules of conduct which prevent "ratting" on other inmates, and fear of future attack should one inform on fellow inmates. Ouimet (1999) reported that federal prison homicide rates are 13 times higher than that of the general population in Canada. Pointing to suicide rates as indicative of the lack of safety in prisons, Ouimet noted that federal prison suicide rates are 10 times greater than the civilian population.

Cooley (1993), in his Canadian study, also discovered that various violent experiences were quite common. Fifty-five participants (47% of his sample) reported having experienced 107 victimization incidents, indicating substantial repeat victimization and potentially the targeting of a particular group. Theft was the most frequent of such experiences (39%). Assault was the most frequent form of personal victimization (46%) and represented 28% of the total number. Threats of assault represented 35% of personal victimizations and 12% of the total. The severity of assaults ranged from minor to severe. Weapons were involved in 34% of personal victimizations, typically a knife or pipe. Cooley's research indicated that violence may take different forms in institutions of different security levels. For example, weapons were more likely to be used in maximum and medium security institutions and less likely to be used in minimum security facilities.

Little has been documented about sexual aggression in prison, although it is generally supposed that such experiences are underreported. Welch (1996) reported that prevailing statistics suggest that rape occurs among less than 1% of inmates, but that other

sexually aggressive behaviours are more common. For example, in one of the few studies on sexual aggression in male prisons, Lockwood (1980) found that 25% of 89 randomly selected inmates in two American prisons reported having experienced sexual harassment. Similarly, Nacci and Kane (1984) added that sexual matters accounted for about 25% of the conflicts in prison. A recent American study (Struckman-Johnson et al., 1996) found that sexual assault was reported by approximately 12% of 513 male inmates. The authors, in their study of 513 male inmates in American prisons, found that among the 20% (194) of inmates who acknowledged having experienced sexual coercion, the average number of coercive episodes was nine and average number of perpetrators was four. This would again suggest repeat victimization within prison, and perhaps the targeting of a particular group for sexual victimization as well.

A recent Canadian study (Robinson and Mirabelli, 1996) found that 3% of inmates reported sexual assault and 6% indicated that they had been pressured for sex. One may suppose that the differing philosophies and dynamics of Canadian and American prisons may impact on both the number of assaultive experiences and perhaps the likelihood of reporting such experiences.

Theories of Prison Violence

Research has spawned a number of theories on prison violence, some that are extensions from those in the community, and some that emphasize the unique characteristics of the prison institutional environment. Fattah (1991), in his summary of research and theory on violence in the community, identified a number of individual

characteristics that impact on violent incidents. First, he identified a number of criteria by which criminal offenders select targets, including likelihood of physical resistance, potential pay-off, availability, and vulnerability. Fattah noted that certain groups of individuals are considered “fair game” by virtue of their perceived conduct or misconduct (e. g., sexual promiscuity), personal characteristics (e. g., “easy mark” or “sucker”), or membership of a particular social or minority group. Physical proximity or “spatial proneness” between aggressors and their targets is a further determinant of violent behaviour. Further, Fattah noted that individuals who engage in “deviant activities” (e. g., drug dealing) within their social culture place themselves at risk for being targeted as they lack social protection and the resources to obtain them. The so-called routine activities theories emphasizing economic and social factors remain frequently posited explanations of violence in the community (e. g., Wittebrood and Neiuwbeerta, 2000).

By definition, incarceration places people in a situation in which they are exposed to others with a criminal lifestyle, dangerous settings, a “prison economy” which frequently places inmates in debt, and limited control over personal property. All of these conditions increase exposure to high-risk situations and thus elevate the likelihood of victimization experiences. As such, “routine activities” are too common in a prison setting to meaningfully distinguish a particular risk of victimization.

As such, victimization theories based on community samples are insufficient to understand such incidences in prison, and victimization risk may be best understood in terms of the prison context. Bowker (1985) and Irwin (1980) claimed that people who

become incarcerated have historically not been socialized to reject violence as a means of problem-solving, thus inmates tend to be violence-prone based on their pre-incarceration pasts. Bowker (1982) noted that recipients of physical and sexual victimization tend to be “lambs” in prison, victimized by “wolves”. “Lambs” tend to be white, small, young, and middle class. They have often been convicted of sex crimes or of minor property offenses, and may have a history of emotional disturbance. They thus come to prison unprepared to deal with institutional violence.

More recently, Edgar and O’Donnell (1998), in their discussion of prison violence, focused on individual characteristics of victims. In addition to prison lifestyle (for example, involvement in prison economics), the authors focused on the self-perception of inmates (“vulnerability”) as a risk factor for repeated victimization. For example, inmates who saw themselves as weak or not likely to fight back, showed fear, or lacked self-esteem to defend their interests tended to “attract” victimization. Consequently, submitting to an assault without successfully fighting back would indicate vulnerability and would thus increase the likelihood of future attack. While the authors did not focus on offense type, it is generally known that those incarcerated for sexual crimes are often inexperienced in incarceration and derided by the prison general population, who have been known to seek out information about the nature of inmates’ charges and target inmates accordingly.

Other researchers have emphasized the contribution of the generally oppressive prison environment to violent incidents (e. g., Scratton et al., 1991; Toch, 1985). Fuller

and Orsagh (1977) emphasized situational aspects of prison violence, noting that assault is frequently precipitated by an inmate interaction, typically over economic issues, such as debt. In particular with regards to sexually aggressive behaviour in prison, power, status, control, desire for domination, and self-protection from threat have been highlighted as contributing dynamics in prison (Lockwood, 1980; Nacci & Kane, 1984; Rideau & Sinclair, 1982; Starchild, 1990). Marron (1996) added that in general, prison violence may be precipitated by outside rivalry, gang-related affiliations, personal property, debts, or drug deals, as well as a desire to gain respect. He added that within the violent prison subculture, inmates need to be prepared for potential violence at all times.

Cooke (1992), in discussing case studies of prison violence, emphasized institutional factors such as staff-inmate communication; staff experience, training, and morale; visitors; crowding; and the level of purposeful, meaningful activities for inmates as important factors in institutional violence. Johnson (1987) compared the prison environment to that of an "urban slum", in that both environments tend to contain predominately individuals of lower socioeconomic class who divide themselves along ethnic lines and are generally hostile towards each other. Thus, individuals are compelled to either withdraw from social relations or bond with their counterparts from similar backgrounds for mutual protection. Lockwood (1991) noted that prison violence results from a cycle, wherein violent individuals from violent subcultures participate in a subculture where violence becomes acceptable behaviour. According to Welch (1996),

such violence becomes exacerbated by institutional conditions, such as overcrowding. Thus, the prison itself promotes a violent climate.

More recent research in the United States has focused on how the emergence of gangs within prison has substantially impacted on the subculture of prisons (e. g., Zaitzow & Houston, 1999). The authors indicated that prisons have become extensions of criminally oriented neighbourhoods, and serve to solidify gang structure and criminal processes. While the impact of gangs on American prisons may be expected to be greater because of sheer numbers and a custodial philosophy (e. g., Maghan, 1999), it should be noted that Prairie Region medium- and maximum-security institutions house members of gangs such as the Manitoba Warriors, Indian Posse, and Red Alert, for whom incarceration often represents social status.

Along similar lines, Cooley (1995) noted that the informal social “rules” of prison conduct (e. g., “Don’t trust anyone”) which are designed to promote order among inmates, also serve to alienate and endanger them, creating a “partially unstable” system always at risk for violence. Wright (1993), extending Forehand and Gilmer’s (1964) concept of “organizational climate” and its impact on individual behaviour, described the prison environment as a distinct type of organization. However, as Wright noted, there has been little empirical success in linking prison climate to inmate behaviour. In his own research with 942 New York State inmates, he found that although climate was significant in predicting inmate violence and disciplinary infractions, the proportion of variance explained was small. The aspects of the organizational climate that were significantly

associated with increased violence were increased perceived structure, and decreased perceived opportunities, freedom, and privacy. He noted that in addition to context, background/personality, organizational structure, crowding, support from family and community groups, and the presence of peers and enemies all contribute to various aspects of prison adaptation. A further factor which may account for his results is that he examined behaviour which reached the attention of staff, who in turn responded. This approach tends to incorporate only those behaviours which are on the extreme end of the continuum and may miss less observable and day-to-day violence.

While the above research contributes to our understanding of the broader dynamics of prison violence, it does not necessarily help us to understand the contributors to, experience of, and consequences of violence on an individual level. Cooper and Werner (1990) noted that people come into prison with specific characteristics which influence their response to the environment. These characteristics must be taken into account to understand an individual's adaptation to the prison environment. Although Cooper and Werner focused on demographic characteristics, one may extend their suggestion to include the fact that people also come into prison with psychological characteristics and predispositions which one would suppose impacts on their perceptions of and reaction to the prison environment. Zamble and Porporino (1990) emphasized that individuals do not passively respond to the prison environment, but rather engage in a process designed to cope with that environment. Thus, in understanding prison violence

it is important to examine the factors which contribute to the dynamic process of coping with the prison environment.

Defining Victimization

One of the most problematic methodological issues with prison violence/victimization research is the definition of victimization, as victimization can refer to any one of many different experiences to which people may be subjected. According to Fattah (1991), one of the core aspects of victimization is an imbalance of strength or power, and an adverse effect on the victim.

The definition of victimization in prison research is characterized by broad, inconsistent definitions and imprecise measures. For example, some researchers do not clearly distinguish between assault and mutual altercation, or fight (e. g., McCorkle, 1993a; Wright, 1991), calling into question the meaningfulness of the results. Cooley (1993) emphasized the importance of distinguishing between physical assaults and fights, using the Criminal Code of Canada as a guide. He considered an incident to be an assault as long as it did not contradict Sections 34-37 of the Canadian Criminal Code that deal with self-defence against an unprovoked assault, self-defence in the case of aggression, and the use of proportional force in the prevention of an assault. Thus, a potential assault incident was not considered "victimization" if the respondent indicated that the aggressor used force equal to or lesser than that of the recipient. There have been further difficulties with defining victimization. Wright (1991) defined "victims" in his study as primarily those who had attempted suicide or engaged in self-injury. He added categories of

individuals who had reported being “hurt” or “taken advantage of” in prison. Thus, different studies may be measuring quite different experiences, as will be apparent from the following discussion.

Targets of Institutional Violence: Demographic Characteristics

As has been suggested above, the finding of substantial repeat victimization experiences suggests the targeting of a particular group (Cooley, 1993; Struckman-Johnson et al., 1996). A number of researchers have attempted to identify demographic characteristics which distinguish targets of violence from non-targets, with decidedly mixed results. Wright (1991) noted that inmates who reported being taken advantage of tend to be imprisoned for the first time at an older age than their non-victimized counterparts, tend to be better educated and more likely to be incarcerated for a violent crime. Wright concluded that these inmates come to prison less equipped to cope with the violent and predatory prison environment, given their lack of prison experience. Inmates who reported being hurt by other inmates tended to be younger and enter prison at a younger age, but no other demographic information distinguished them from their counterparts.

Nacci and Kane (1984), in their American study of 17 prisons, identified a number of demographic characteristics of sexual assault targets, including a tendency to be incarcerated for non-violent offenses and to be more criminally sophisticated. Cooley (1995) noted that compared to non-victims, victims of violence and property offences in prison tended to be younger, near the beginning of their sentences, and housed in

maximum security prisons. However, Cooley noted that a discriminant function solution did not yield much discriminating power, indicating that only 16% of the variance between targets and non-targets was explained by the solution. Struckman-Johnson et al. (1996), in their study of 513 male inmates in the United States, noted that targets of sexual aggression were likely to be older, white, bisexual, and have a sex offense conviction in their criminal history (104 or 37%). Sexual offenders are perceived as occupying the lowest rank in the inmate social hierarchy, and are thus frequently targeted by other inmates (e. g., Edgar & O'Donnell, 1998). In many medium and maximum security prisons, sex offenders are segregated because the nature of their conviction renders them vulnerable to attack from others (e. g., McGee et al., 1998).

Targets of Institutional Violence: Psychological Characteristics

Much research has been devoted to identifying potentially violent and behaviourally difficult inmates in prison (e. g., Bonta & Gendreau, 1990; Kelln et al., 1999; Proctor, 1994). Fewer attempts have been made to identify potential targets of violence based on personality characteristics. Most typically, inmate targets of violence have been described as "lambs" victimized by "wolves" as noted above (e. g., Bowker, 1982). The importance of and practical issues in managing this group of individuals have been described in other research, for example, focusing on the impact of labelling individuals through administrative segregation (e. g., McGee et al., 1998).

Wright (1991) conducted one of the few studies which attempted to describe the personality profiles of inmate targets of violence. Based on MMPI Megargee types

(Megargee & Bohn, 1979) which were developed specifically for use in correctional settings, MMPI profiles indicated that inmates who reported having been hurt and taken advantage of were more likely to have profiles indicating poor social skills and suspiciousness of others. Inmates who were hurt also reported less of a need for structure and social stimulation than others, whereas inmates who were taken advantage of desired safer and less active settings than other inmates. One potential problem with the Megargee cluster analytic-based classification is that its applicability to minority groups is suspect (e. g., Carey et al., 1987). Not surprisingly, research has discovered that personality profiles, while important, are not sufficient to predict maladjustment to prison (e. g., Carbonell et al., 1984). A further complication is the high prevalence of antisocial personality characteristics among prison populations, in particular younger inmates (Schinka et al., 1998). As such, it is likely that a combination of factors, including personality, interact dynamically to contribute to an individual's adjustment to prison.

Psychological Impact of Violence

The experience of violence has most often been associated with negative psychological effects. Janoff-Bulman and Hanson-Frieze (1983), writing from a community perspective, noted that victimization experiences challenge three basic assumptions which humans hold about themselves, that we are invulnerable, that the world has meaning, and that overall we view ourselves in a positive light. Experiencing violence renders us vulnerable, may be difficult to make sense of, and may result in our wondering whether we contributed to that experience.

However, not all individuals who experience a criminal victimization respond by becoming psychologically traumatized. Responses to victimization experiences are determined by a number of factors, and under certain circumstances the psychological impact may be intensified. Walklate (1991) suggested that the negative psychological impact of a criminal victimization experience may be heightened if the victim personally knows the offender. In summarizing the research, she noted that approximately half of victims in the community whose aggressor was known to them were very much affected by the incident. In Walklate's study, men and people who had been burglarized were more likely to report feeling angry. Maguire and Corbett (1987) reported that 25% of their sample continued to feel the emotional effects of victimization between three and six weeks later, and as high as 20% of victims of serious violent crime and a small proportion of other offences continue to experience lasting effects through one year. The researchers concluded that criminal victimization "causes lasting changes in...personality and behaviour".

Psychological Impact of Violence in Prison

It has been suggested that victimization experiences may be more strongly correlated with resultant fear in prison than in the community (e. g., McCorkle, 1993b). As Smith and Hill (1991) noted, previous victimization experiences tend to be inconsistently related to fear in the community because consequences are often comparatively minor and people in the community engage in behaviours designed to reduce the likelihood of future victimization. As McCorkle pointed out, these mitigating

factors do not necessarily hold true for prison inmates, who likely sustain more serious physical injury and have a decidedly more limited range of precautionary behaviours from which to select. Further, in their community theoretical framework, Gold et al. (1999) speculated that psychological symptoms resulting from previous abusive experiences would render an individual at risk for future such experiences. Kupers (1996) suggested that experiences with violence in prison recapitulate traumas which inmates experienced earlier in their lives, thus resulting in a stress response syndrome which includes intrusive symptoms, denial, and numbing. Such a response is theorized to increase future vulnerability to traumatic experiences, thus repeating a cycle of traumatic experience and response.

The rather scant research on psychological responses to victimization experiences in prison supports the assertion that such events tend to bring about a traumatic response. However, it should be noted that imprecise definitions and measures plague the available research, rendering conclusions difficult. Ireland (1999) reported that inmates who were subjected to “bullying” reported crying, staying in their cells, and attempting to move to a different cell. While they did not examine specific psychological effects of sexually violent experiences, Struckman-Johnson et al. (1996) found that targets of sexual violence rated a “worst case incident” at an average of 6.3 on a 7-point scale, where 7 represented “great upset”. In rating the long-term effects of these incidents, inmates provided an average rating of 5.5 on a 7-point scale, where 7 referred to “severe bad effect”. Further.

the endpoint of 7 was indicated by 54% of respondents, indicating a substantial negative impact of violence experiences.

Similar to findings in the community described above, Lockwood (1980) noted that fear, anxiety, and anger were the most common emotional reactions to sexual harassment in prison. He added that typical responses were to become violent, join a clique, stay in one's cell, change jobs, cell blocks, or prisons, or move to protective custody. Ireland and Ireland (2000) also pointed to aggression as a response to victimization in prison. Although fear was not an integral part of Cooley's (1993) study, he pointed to cases where threats of assault led to intense fear on the part of some inmates. McCorkle (1993a) examined the impact of prison victimization experiences on the well-being of 300 inmates at a maximum-security state prison in Tennessee. Well-being was defined by scores on an 18-item scale (Lennon, 1987) which assessed general malaise, such as depression, anxiety, and psychophysiological symptoms. McCorkle found a small correlation between victimization experiences and psychological well-being ($r = -.14$). Unfortunately, McCorkle's four-item measure of prison victimization did not differentiate between mutual altercations (e. g., fights) and assaults, which likely accounts for the small correlation. Wooldredge (1999), in a study of 581 Ohio inmates, found that healthier attitudes corresponded with greater program participation, more frequent visits, and no experiences with victimization. Thus, limited research tends to support that violence in prison has a negative psychological impact on targets. However, the nature of the response to violent experiences has not been thoroughly examined.

Fear of Victimization in Prison

Given the frequency of violent acts in prison and a socio-environmental context for their potential, it would not be unreasonable to suspect concomitant fear even in the absence of actual violent incidents. McCorkle (1993b) noted that fear of victimization is more pronounced in prison than in the community. He cited that a US community survey in 1989 which indicated that 55% of women and 19% of men responded that they would be afraid to walk alone at night in any area within one mile of their homes. A comparable question of 300 maximum-security US male inmates yielded 45% who indicated that they felt unsafe in prison. Further, 47% of inmates reported worry about being attacked, and 55% felt that there was a moderate to high chance that they would be attacked during their present sentence. Harris (1993) similarly reported that only 32% of 942 male inmates in American prisons reported their safety needs as being met. By contrast, in a Canadian study (Zamble & Porporino, 1988), 12% of 133 Ontario inmates named concern about personal safety as a problem at the beginning of the prison term. One and one-half years later, that percentage dropped to 9%. The authors noted that over time, initial adjustment difficulties typically abate. This result is in dramatic contrast to the findings of the above-mentioned American studies, in which higher levels of fear are reported. This difference may be the result of differences between American and Canadian prisons, and one may wonder about the impact of differences between prisons within Canada. For example, Prairie Region federal prisons are noted to have a higher population of street gang members, which one may anticipate impacts on the fear level of inmates.

Fear has been examined in the context of a number of characteristics, with less than definitive results. Youth has most commonly been associated with increased fear, as with most other forms of prison maladjustment, however this is by no means consistent due to the likely impact of other factors. MacKenzie (1987) found in her study of 755 American inmates that fear of victimization was highest for inmates in their 20's, and institutional misconduct tickets were associated with fear of victimization only for inmates under 20 years of age. Hammens and Marquart (1999) noted that younger age had a strong association with inmates' perceptions of the level of violence and victimization in prison. Similarly, McCorkle (1993b) reported that youth was the only significant demographic predictor of fear in prison. However, older age was correlated with what he described as the use of avoidance coping techniques, which perhaps mitigated fear among older inmates. Thus, the implications of his results are not clear. Further, McCorkle focused only on behavioural aspects of coping and did not examine cognitive techniques employed to cope with fear.

In fact, older inmates may be just as fearful as younger inmates. For example, in his study of 25 elderly new offenders, Aday (1994) reported that older offenders believed that they should be grouped together for mutual safety and support. Aday pointed to the impact of the institution itself, noting the communal living, lack of privacy, and fragile relationships which exist in prisons, which result in many inmates living in a "defensive shell of isolation". Not surprisingly, prison security level appears to be a factor in fear. For example, Silverman and Vega (1988) found that young offenders housed in a closed

custody institution were significantly more anxious and vigilant than those in lower custody levels, and that inmates significantly differed from their community counterparts in level of anxiety, anger, and curiosity. Thus, the dynamics of fear in prison are complicated, and preliminary research would suggest that it is necessary to consider demographic, psychological, and institutional factors.

Psychological Correlates of Fear in Prison

Fear tends to bring with it other forms of psychological maladjustment. McCorkle (1993a) found a strong correlation ($r = -.50$, $p < .001$) between a three-item measure of fear of prison and poor psychological well-being as defined by psychological symptoms in the last month. In fact, fear was the most powerful predictor of psychological well-being in comparison with demographic factors, prison stresses, and violent experiences in prison. McCorkle (1993b) noted however, that the young, socially isolated, and frequent targets of victimization tended to report higher fear levels in prison.

Wright (1993), in his study of 942 American inmates, found that how unsafe inmates felt affected their perception of their interpersonal problems, in that inmates who reported feeling less safe reported increased interpersonal problems. It was not specified in Wright's research whether interpersonal problems included victimization experiences. Wright pointed to the importance of individuals' perceptions of safety, as opposed to the actual safety of the prison. Wright also noted that feeling unsafe was related to psychological symptoms, including anger, trouble sleeping, and discomfort around others. Similarly, MacKenzie (1987) found in her study of 755 American inmates that inmates

who were afraid of being victimized had more conflicts with guards and with other inmates. Ireland (1999), in her study of male and female young and adult offenders, found that while over half of inmates reported having been “bullied”, over half also reported having “bullied” others in the previous week. Thus, available research suggests that fear can have significant consequences on an individual’s psychological state and social functioning in prison.

Coping

Fortunately, people are not simplistically products of their environment, and a number of factors contribute to the differential impact of negative events and emotions. The effective use of coping strategies, i. e., efforts to respond to problem situations, has consistently been found to mediate negative psychological outcomes across a number of different life areas (Moos & Schaefer, 1993; Reid, 1999). Skodol (1998) similarly noted that personality and coping interact in such a way to either exacerbate or protect against psychopathology.

One of the most extensively researched methods of conceptualizing coping is the theory of Folkman and Lazarus (e. g., Folkman, 1982; Folkman & Lazarus, 1988; Lazarus, 1988). From this perspective, coping is defined as a process by which individuals manage external and/or internal demands which exceed their resources. The dynamic relationship between the individual and environment is highlighted. Folkman’s and Lazarus’ theory emphasizes the importance of distinguishing between efforts made to deal directly with a stressful situation (problem-focused) and those designed to manage

negative affect associated with the situation (emotion-focused). The theory further distinguishes between cognitive and behavioural strategies, recognising that coping encompasses both of these aspects of human functioning.

The data on coping in a prison setting provides an interestingly mixed picture due to the unique characteristics of prison and inmates, and different measures of coping employed. While it is clear that part of the reason for incarceration is that inmates cope poorly in the community at large, prison brings with it a new set of situations with which to cope, and functioning in that environment may require different skills. From available research, it is clear that inmates differ in their abilities to cope with the challenges of prison. Unfortunately and not surprisingly, inmates as a group have been found to possess notoriously poor coping skills. Zamble and Porporino (1990), in their study of 133 Canadian male inmates, examined coping with both external and institutional situations. They described "serious" and "widespread" coping deficits among the inmates in their study. For example, they noted that few inmates "planned ahead" at all. The authors found that while there was no real difference in coping strategies used for external versus institutional situations, the strategies employed were more successful for institutional situations, where there are more structures and constraints on behaviour. The authors suggested that "the prison environment is better suited than the non-prison community to the coping abilities of prisoners". The authors did note that coping with institutional situations worsened with number of times imprisoned, so that the more often people had been incarcerated, the more poorly they coped with the prison conditions.

Zamble and Quinsey (1997) replicated the thrust of these findings in the community, identifying that former inmates, in particular recidivists, demonstrated a poor quality of coping directed towards momentary alleviation of the problem, rather than analysis or consideration of consequences. The authors described the return to criminal means of problem resolution as a process involving cognitive and emotional reactions influenced by predisposing, dynamic, and situational characteristics. Thus, variables such as an individual's experience, values, coping ability, and perceived availability of behaviours influence coping responses, which in turn impact on the experience of future problem situations, appraisals, and reactions.

Zamble and Porporino (1990) concluded that teaching inmates to cope with real-life community situations would be more productive than teaching them to cope with institutional situations. However, one may argue that the relative priority of institutional versus community situations depends on the nature of the institution and its inmates. For example, if fear is a salient concern among many prison inmates, successful coping with the tribulations of the immediate prison environment would be an important precursor to learning to cope in other situations.

Coping deficits have been found to relate to poor adjustment in prison. For example, it has been suggested that aggressive behaviour in prison is a coping strategy employed by inmates to deal with a threatening environment (e. g., MacKenzie, 1987; McCorkle, 1992b). Paulus and Dzindolet (1993) found that among 106 male and female inmates in the United States, those who acknowledged more environmental, social, and

outside problems also reported higher levels of depression, anxiety, anger, and physical symptoms. By extrapolation, this would suggest relative ineffective coping with problems. Biggam and Power (1999) found that among 100 young, Scottish offenders, increased problem-solving deficits were associated with higher levels of distress. Cooper and Livingston (1991), in their British study, found that engaging in more coping strategies to deal with the most stressful encounter in prison over the last month was related to increased depression. The authors surmised that perhaps inmates chose not to actively employ coping strategies until depression became high and coping strategies ineffective. However, Paulus and Dzindolet (1993), employing a shortened scale based on that of Lazarus and Folkman (1984), found that the use of certain coping strategies did not change over time. The differences in results are likely due to differential conceptualizations and measurements of coping.

Other research suggests that the majority of inmates do cope successfully with their environmental conditions. Pugh (1993), in a study of locus of control among inmates, found that the inmates in his study demonstrated a generally internal locus of control and adequate problem-solving skills. As such, the program under study designed to improve these skills was deemed unnecessary. In fact, Pugh noted that the scores on the problem-solving questionnaire were actually higher than those obtained by undergraduate college students. Pugh speculated that inmates may gain their internal locus of control through prisonization, or absorption into the (nonconformist) subcultures

of the prison. From this view, successful adaptation to the prison environment is of questionable value.

Inmates do need to cope with their environment, and it has been noted that emotional state tends to improve over time (e. g., Zamble, 1992). This would suggest that inmates engage in some cognitive and behavioural strategies which facilitate positive coping in prison. Bonta and Gendreau (1990) challenged the conventional wisdom that incarceration is necessarily psychologically and physically destructive. In a review of the literature on solitary confinement, crowding, long-term and short-term incarceration, and death row, the authors concluded that the prison experience is not universally destructive to inmates. Bonta and Gendreau noted that both cognitive and biological factors may serve to moderate the potentially deleterious effects of prison. This would suggest that inmates cope differentially with the stresses they face in prison.

Smyth et al. (1994) came to a similar conclusion in their study of 33 male inmates who had engaged in parasuicidal behaviour early in their sentences. They found that while 66.7% reported clinical levels of depression on intake, most inmates demonstrated better psychological adjustment one year later. Thus, one may surmise that these inmates implement more successful coping strategies. However, there was a proportion of inmates (30%) who continued to report clinical levels of depression one year later. Thus, some inmates do not learn to cope successfully. While Smyth et al. did not examine which factors differentiated the two groups, they pointed to the individualistic nature of adaptation to incarceration, even among those significantly distressed on intake. Along

similar lines, coping styles have been found to be consistent within individuals, beyond situational and personality factors (Bijttebier & Vertommen, 1999). Personality and coping skills interact in complex ways, such that personality type has been associated with and assumed to influence patterns of coping strategies (e. g., Reid, 2000).

In non-prison samples, ineffective coping has been connected to mental health difficulties. For example, Endler et al. (1993) found that emotion-focused coping (which may be characterized in large measure as avoidance-oriented) was correlated with psychological symptomatology as measured by the MMPI-2 Content Scales. Vollrath et al. (1998) noted that the personality characteristic of Neuroticism (negative affect, emotional instability) as measured by the MCMI-II (Millon, 1987) predicted coping strategies of disengagement, emotional venting, and a lack of problem-focused coping. Associations have been found between psychopathology measures and methods of coping which would be characterized as maladaptive (e. g., Blanchard et al., 1999) and avoidant (e. g., Endler et al., 1993; Uehara et al., 1999). Bijttebier and Vertommen (1999) found that among psychiatric inpatients, personality disorder was related to less utilization of social support and increased use of avoidance coping. Although results are not directly generalizable to a prison sample on a number of dimensions, it seems reasonable to suppose that psychological factors have an influence on the methods by which individuals choose to cope, and thus, how successful their efforts are likely to be. Consequently, it is likely that coping efforts and their perceived degree of success then influence psychological states.

Results within prison support this assertion. Dear et al. (1998) examined coping strategies among inmates who had self-harmed, versus those who did not. They found that those who did not engage in self-harm were more likely to use situation redefinition, acceptance, and direct action to cope with stressors of the past week. Carlson and Cervera (1991) studied what was likely a higher functioning sample on the coping dimension to begin with, married male inmates with children who were either eligible for or who had received private family visiting privileges. They found that although the inmates reported generally adequate coping skills, inmates had deficits in the area of acquiring social support and seeking spiritual support. Inmates performed best at “passive appraisal”, which involved the ability to accept one’s circumstances.

Another method of examining coping with fear is to focus on the behaviours designed to prevent the feared experience. McCorkle (1992b), in his US study, examined the behavioural impact of fear in prison. In his study of 300 maximum-security Tennessee inmates, he documented a number of precautionary behaviours employed by inmates to cope with potential violence, divided into “passive” and “aggressive” precautionary strategies. He found that 77.7% of inmates believed that they could significantly reduce the risk of violence by “keeping to themselves”. Over 40% attempted to reduce risk by avoiding places such as mess hall, housing units, recreational areas, and the yard, locations where inmates tend to congregate with less supervision. Similarly, 39.5% stated that they spent more time in their cells to avoid victimization. Only 17.1% indicated that they avoided activities due to fear, and 5.4% reported having taken the

drastic step to protective custody. Avoidance behaviours were related to fear, older age, more time in prison, and being outside of the inmate subculture. In a stepwise regression, five variables explained 21% of the variance. These were fear, age, having been robbed, having no friends, and believing that another inmate would not help out if attacked were significant. The impact of these coping strategies on psychological adjustment was not clear.

In McCorkle's (1992) study, 69.6% indicated that they had had to "get tough" with another inmate to avoid victimization (aggressive precautionary behaviour), which included verbal as well as physical altercations, and 25.1% reported carrying a weapon. McCorkle further indicated that almost one-half of inmates reported lifting weights, which he also viewed as a precautionary behaviour. Fear was also related to aggressive precautionary strategies, and younger inmates, smaller inmates, those who had been at the prison longer, and those with fewer incarcerations tended to use these strategies. Fear, younger age, and total years in prison were significant in predicting the use of aggressive precautionary strategies, as was report of past threat or physical assault during their sentence. These variables explained 31% of the variance. However, it should be noted that McCorkle's study employed a four-item victimization section which did not distinguish between mutual altercations and victimization experiences. Thus, his scale may more accurately measure interpersonal conflict than victimization. Further, if one examines coping from the perspective of Folkman and Lazarus (1988), both passive and aggressive strategies as defined by McCorkle may broadly be viewed as avoidance

strategies. Thus, the efforts of inmates to directly deal with problems (approach strategies) were not addressed by McCorkle's research. Further, only behavioural coping strategies were examined, whereas cognitive strategies may play just as important a role in an inmate's coping with fear. For example, Koenig (1995), in his study of 96 American offenders aged 50 and over, found that religious commitment was reported by 32% of inmates to be the most important factor in their coping. Further, religiosity was inversely related to depressive symptoms.

MacKenzie and Goodstein (1986) conceptualized coping in prison within an "Undifferentiated Response Model", referring to individual differences in beliefs and stress responses in controlled environments. According to their findings, which corroborated that model, people who believe that their behaviour has an impact on their environment are more likely to feel less stress, focus on the problem at hand, and engage in efforts to resolve it. Conversely, those with an "external" orientation feel alienated and powerless in their environment. They are more likely to feel high levels of stress, impeding problem-focused coping. Rather, their coping efforts are dysfunctional and represent attempts to reduce their high stress levels. They are more likely to engage in hostile, conflictual behaviours and experience higher levels of depression and anxiety as indicative of their high stress. It may be that many of the antisocial and maladaptive coping efforts identified by other research projects are reflective of this external perspective.

It is difficult to draw conclusions about the coping skills of inmates generally due to the wide variety of different coping measures employed by different studies. It is clear that individuals differ in their abilities to cope with situations, both internal and external, while in prison. Conceptually, the violent and fearful atmosphere of prison may actually serve to enhance coping skills which were problematic in the community. However, when one looks more closely, environmental, social, and personal factors interact dynamically to determine individual responses. The manner in which these factors interact is as yet unclear and would likely have significant implications for intervention and treatment.

Social Support

Social support, both within and outside of prison, can act as a powerful mediator of problems in prison. In fact, social isolation has been associated with vulnerability to victimization in prison, (e. g., Fattah, 1991; Wright, 1991), thus having friends within the institution may have a substantial impact on perception of personal safety. Wooldredge (1998) discussed the concepts of individual differences and "social distance" as factors in inmate victimization. In prison, the physical confines of prison place many different types of people in close proximity to one another with few other options. Wooldredge noted that in prison, the risk of victimization may be increased for inmates who take relatively few risks and who do feel vulnerable: Inmates who are not integrated into a social system within the prison but rather, hold nonconformist attitudes and exist on the periphery, may be more likely to be targeted.

McCorkle (1993a) identified social support as a significant mediator of the effects of maladjustment in prison. He found that the presence of friends in prison, the presence of someone to talk to about problems, and visits from family or friends were all correlated with better psychological well-being ($r=.17, p<.01$; $r=.13, p<.05$; $r=.13, p<.05$, respectively.) However, it should be noted that the proportion of variance accounted for by social support variables was small. Maitland and Sluder (1996), in their study of young, medium-security inmates, found that a belief in help from friends and the ability to confide in friends related to well-being in prison. Kemp et al. (1992), in their study of 60 men in a minimum security detention centre, found that lower family conflict and higher family support were related to improved inmate adjustment to the correctional facility.

As Moos et al. (1990) and Valentiner et al. (1994) have noted, available social support can facilitate or encourage directly dealing with a problem. Monnier et al. (1998) further pointed out that coping strategies which serve to bolster support networks (for example, asking friends for advice) would likely provide additional resources enabling successful coping with stress over time. Positive use of social support will likely meet personal needs, build relationships, and enhance support networks to increase the availability of future support. However, coping strategies which strain support networks (for example, looking out for one's own best interests even if others are hurt) may deplete support resources in times of future stress.

Prison inmates by virtue of their characteristics may be less likely to attract and foster social support among their peers. Bijttebier and Vertommen (1999) found that

personality disorder, including Anti-Social Personality Disorder, is related to less utilization of social support. This likely speaks to the self-centred, hedonistic interactional style typical of those with antisocial personality characteristics, who also tend to act out in ways which alienate support systems. As such, it would not be surprising if such individuals perceived low levels of social support. In fact, that perception may be accurate given the nature of the psychopathology. As Greene (1991) noted, this antisocial style is more typical of younger inmates, with maturation through age attenuating antisocial characteristics.

Social support, particularly in prison, can take many forms. Federal prison life is often characterized by formal and informal subcultures, which may have either a positive or negative effect on inmate coping. As Winfree et al. (1994) pointed out, the impact of the general inmate code as a determinant of stress response in prison is likely affected by an increase in gang members, drug-related offenders, and minority groups. As Pugh (1993) noted, joining an anti-authority subculture may relate to an internal locus of control. While this strategy may mitigate the psychological effects of violence and its possibility, this means of coping is generally not viewed as positive from the perspective of prison authorities and society at large.

Summary and Hypotheses

The present study represented an attempt to examine the ways in which medium-security inmates cope with and respond to the possibility of violence in prison. Given the focus of much research on the aggressors and “trouble-makers” in prison, it was hoped

that the present study would expand current research with a focus on inmates in general, who all need to carry out their day-to-day functions in an environment where violence appears to be relatively common. Further, it was hoped that by examining the various facets of demographics, personality, coping, social support, and adjustment, potentially vulnerable inmates could be identified early and preventive mechanisms be put into place.

The overall model was originally intended to be presented in the form of a path diagram as it was hoped that the data would be analysed by structural equation modelling (Appendix A). However, due to insufficient sample size, structural equation modelling was deemed to be unfeasible, and as such, the hypotheses were reworded to reflect the necessity of a statistical approach more appropriate to the sample size. Although more piecemeal than the path diagram, the following represent the important hypotheses derived from the overall model and some brief statement of their rationales:

HYPOTHESIS 1: Younger inmates will tend to report higher levels of psychopathology, as measured by the MMPI-2.

The majority of research has suggested that among demographic characteristics, youth tends to hold an association with psychological symptomatology (e. g., MacKenzie (1987); McCorkle (1993b)). Although Schinka et al. (1998) noted that age is not the most powerful predictor of psychopathology relative to other variables, the researchers reported an association between youth and antisocial personality characteristics. Given the

forensic nature of the population under study, it is anticipated that this relation will be reflected in scores on the personality measure conducted at intake.

HYPOTHESIS 2: Younger age and elevations on the derived MMPI-2 factors will correlate with higher scores on the victimization experiences questionnaire.

It has been suggested by previous research that there exists a particular subgroup of individuals in prison who experience repeated victimizations (e. g., Cooley, 1993; Struckman-Johnson et al., 1996). As suggested by Kupers (1996) and Gold et al. (1999), previous traumatic experiences may be recapitulated by later traumatic aspects of the prison experience, thus exacerbating psychological symptoms and increasing vulnerability. Edgar and O'Donnell (1998) added that inmates' self-perceptions impact on their conduct in prison, which may further increase their risk of victimization. It is not unreasonable to suppose that previous traumatic experiences heighten negative self-perceptions (and thus psychopathology), thus further increasing vulnerability in a setting which may be reminiscent of previous trauma. With regards to the present study, the repeatedly victimized subgroup is expected to differ in important ways from those who have not been subjected to that experience. While research has focused on demographic predictors such as age (e. g., Cooley, 1995), the present research will also focus on the less consistently researched psychological characteristics which may be associated with vulnerability (e. g., Carbonell et al., 1984; Megargee & Bohn, 1979).

HYPOTHESIS 3: Younger age and higher scores on the factor analyzed MMPI-2 will correlate with avoidance coping strategies.

Like personality, coping styles have been found to demonstrate a degree of constancy, theoretically influencing psychological characteristics and being influenced by them (e. g., Bijttebier & Vertommen, 1999). Recent research has borne out a connection between personality style and maladaptive coping as described above (e. g., Blanchard et al., 1999; Uehara et al., 1999; Vollrath et al., 1998). Given the theoretical and empirical connection between personality and coping, it is anticipated that, in the present study, individuals who are younger and come into prison with higher levels of psychopathology will less effectively cope with problems.

HYPOTHESIS 4: Age and derived MMPI-2 factors will negatively correlate with perceived social support.

As much as psychological factors influence coping, it would be logical to suppose that level of psychopathology, in particular the alienating interactional style typical of Anti-Social Personality Disorder, also impacts on perceived social support available to individuals to help them cope (Bijttebier & Vertommen, 1999). As pointed out by Greene (1991), Scale 4 elevations on the MMPI-2 (which measure antisocial characteristics) tend to decrease with age, likely reflecting a slow maturational process. As such, the present hypothesis supposes that prison inmates who are younger and possess more pathological

personality characteristics will be less likely and able to behave in ways that would generate support from others.

HYPOTHESIS 5: Younger age and higher MMPI-2 scores will significantly correlate with poorer psychological adjustment, as measured by the BSI and Fear of Victimization questionnaire.

As discussed in the literature review, younger age has been fairly consistently associated with greater psychopathology (McCorkle, 1993b; Silverman & Vega, 1988), in particular with antisocial personality characteristics typical of a prison sample (Schinka et al., 1998). Given that the MMPI-2 is designed to measure psychological maladjustment and has been correlated with countless numbers of distress measures, it is anticipated that elevated scores will predict poorer adjustment as measured by the outcome measures in the present study.

HYPOTHESIS 6: Individuals who report victimization experiences will report a greater tendency to utilize avoidance coping strategies with the possibility of violence, whereas those who report no (or fewer) such experiences will tend to report approach coping strategies.

It may be that individuals who are victimized are so affected by their experiences that they cope ineffectively, in that they may attempt to deal with a problem but lack the appropriate personal resources to do so successfully. Perhaps they retreat from the

situation, further isolating and withdrawing (e. g., Ireland, 1999), or strike back to defend themselves, thus becoming assaultive themselves (e. g., Ireland & Ireland, 2000; McCorkle, 1992). In either case, the research of Zamble and Porporino (1988) certainly suggests that among prison inmates, adaptive coping strategies with stressful situations are highly limited, and may actually worsen the situation at hand. As understood by the victim characteristics theory presented by Edgar and O'Donnell (1998), avoidance behaviours may serve to identify victims as vulnerable and thus increase the risk of future victimization. As such, victimization in prison and avoidance coping may be cyclically intertwined.

HYPOTHESIS 7: Prison victimization experiences will correlate negatively with perceived social support.

As Wooldredge (1998) noted, inmates who are not integrated into a prison social system are more likely to be vulnerable to attack. Further, inmates who are vulnerable likely possess certain characteristics, such as low self-esteem, which render them less able to garner support from their institutional and external environments (Edgar & O'Donnell, 1998; Ireland, 1999). As such, they are hypothesized to be more socially isolated and vulnerable to negative experiences.

HYPOTHESIS 8: Greater victimization experiences will correlate with poorer psychological adjustment (BSI and Fear of Victimization).

Janoff-Bulman and Hanson-Frieze (1983) noted that our basic assumptions of sense and meaning in the world, as well as our view of ourselves, is challenged by experiences with violence. Not surprisingly, the literature has established a connection between victimization experiences and psychological trauma, including prison experiences (e. g., Ireland, 1999; McCorkle, 1993b; Struckman-Johnson et al., 1996). In particular, Kupers (1996) pointed to the traumatic response to prison violence experiences engendered by the recapitulation of earlier trauma. As noted above, such a traumatic response likely increases vulnerability to future attack. As such, it is anticipated that those in the present sample who have been victimized within prison will demonstrate similar negative psychological effects.

HYPOTHESIS 9: Avoidance coping (CRI) will correlate with lower levels of perceived social support.

Theoretically, available social support can enhance coping by the facilitation of directly approaching a problem (Moos, 1990; Valentiner, 1994). Thus, the individual has the opportunity to generate solutions, seek a “reality check”, increase confidence in problem solving, and further bolster social supports for future coping (Monnier, et al, 1998). As such, the lack of such resources likely leads to less successful coping efforts, which serve to further isolate those who cope ineffectively. One may extrapolate that those who perceive little social support are less likely to solicit and develop social

networks, thus leaving few social resources for future coping and continuing a pattern of ineffective coping.

In prison, one may expect that positive social support may be difficult to garner in prison given the proliferation of gang associations (Hunt et al., 1998) and the conflicting social expectations of inmates described by Cooley (1995). In this way, it may be that the prison setting serves to highlight coping and social support deficits. As such, in the present study it is anticipated that those who cope less effectively and in a manner which is self-isolating (i. e., avoidance) will perceive lower levels of social support.

HYPOTHESIS 10: Avoidance coping responses will correlate with higher levels of psychological maladjustment as measured by the BSI and Fear of Victimization questionnaire.

Coping strategies influence the manner in which stressors are approached, and can mitigate psychological outcome (Reid, 1999). As such, the psychological impact of the stressor to some degree depends on the relative success or failure of coping strategies. Poor use of problem-focused coping and excessive reliance on avoidance oriented coping can lead to the deterioration of mental health in the face of stress (Vollrath et al., 1998), including among forensic samples (Cooper & Livingston, 1991; Dear et al., 1998). Prison inmates as a whole have been found to display poor coping strategies (e. g., Zamble & Porporino, 1988). Consistent with theory and the suggestions provided by research on coping, it is anticipated that less effective coping strategies (i. e., avoidance oriented) will

correlate with higher levels of psychological distress among prison inmates in the present sample.

HYPOTHESIS 11: Lower levels of perceived social support will be related to higher psychological distress (BSI and Fear of Victimization questionnaire).

Social support has been viewed as an external resource which interacts with personal predispositions such as personality/coping style to influence psychological outcome (Skodol, 1998). Specifically, social support is supposed to facilitate better coping through assistance with the generation of problem-solving strategies (Moos, 1990). As such, the presence of support people can alleviate the impact of the stressor, and thus reduce distress. There is some support in the literature for this supposition among prison populations (e. g., Kemp et al., 1992; McCorkle, 1993a). As such, in the present sample, it is anticipated that perception of social support will relate to better overall psychological adjustment.

HYPOTHESIS 12: The two outcome measures (BSI and Fear of Victimization questionnaire) will be correlated, such that higher levels of fear will be associated with higher levels of symptomatology as measured by the BSI.

Previous research has shown a connection between fear and other psychological and behavioural difficulties, such as well-being (McCorkle, 1993a), self-reported personal problems (Wright, 1993), and conflicts with others (MacKenzie, 1987). Given the broad symptom dimensions covered by the BSI, it is anticipated that the fear measure will demonstrate an association with it.

Exploratory Analyses

Beyond the predicted relationships, the relationships between all of the variables in this study will be examined in such a way as to attempt to balance the risks of not overreporting chance findings versus disregarding relationships of potential heuristic interest to future research.

METHOD

Participants

Participants were recruited in three stages. First, volunteer participants were solicited from the general population at Stony Mountain Institution (N=300, approximately). In efforts to create a positive climate for the research project and thus encourage participation, the primary researcher worked with the Inmate Welfare Committee (IWC), an organization comprised of generally well-respected inmates who are elected to the committee by the general prison population. The IWC President and Vice-President were informed about the study and its goals, as well as the method of data collection. The IWC then assisted by distributing letters of explanation/requests for participation (Appendix B) to all general population inmates. These letters included information about the study and its goals, as well as provisions for confidentiality and anonymity. Specifically, potential participants were advised that the primary researcher, also an employee of Stony Mountain Institution, would not be able to identify them by name. Rather, they were told that a volunteer research assistant would assign them a number, and that only numbered data would be provided to the primary researcher. In addition, the package included an incentive statement that coffee and doughnuts (not available to inmates on a day-to-day basis) would be provided to participants. Inmates were asked to respond by mail either "yes" or "no" to participate in the project. The IWC was informed that should any potential participants have questions or concerns about the research project, they may refer to the researcher or research assistant. Unfortunately,

while over 100 participants were anticipated at the proposal stage of the study (and necessary for the data analysis proposed), only 38 actually participated.

As such, a second stage of data collection was undertaken. Following review/approval by the Human Ethical Review Committee (HERC) of the University of Manitoba, several individual counsellors and psychologists at Stony Mountain Institution agreed to solicit participation from inmates on their caseloads (Appendix C). It was hoped that a more individualized approach to recruitment would be more effective than the relatively anonymous approach of a letter. From this process, 15 additional participants were recruited.

As the total number of participants remained at only 53, data collection was expanded to include Saskatchewan Penitentiary in Prince Albert, Saskatchewan. Saskatchewan Penitentiary was selected given its similarity in size, security level, and population to Stony Mountain. Specifically, it is also a medium-security institution located in the Prairie Region, and as such, would be expected to house inmates who would be demographically and experientially similar to those at Stony Mountain. As little individual counselling is conducted at Saskatchewan Penitentiary, and thus an individualized approach to data collection was not available, participants were recruited by the same letters described above, sent to each inmate in the general population of the institution (N=400, approximately). In total, 38 additional participants were recruited. At that point, with 91 participants, it was considered that reasonable recruitment avenues were exhausted.

Once participants arrived at the data collection site (a room in the Psychology Department of both institutions), it was reiterated to them that they would be identified only by number, not by name, and they were asked to ensure that they did not identify themselves in any way on the questionnaire package. They were advised that only the research assistant would be able to match their names with their participant numbers. Inmates were then asked to sign a more formal consent form (Appendix D) to participate in the research, on which the nature of the study and its voluntary nature were explained. As part of the questionnaire package, inmates were asked to indicate whether their past psychological testing results may be used in the study, exclusively for research purposes. It was explained to the inmates that only the research assistant would match their psychological test scores to their questionnaire package, and that the primary researcher would not have access to their names. Participants were asked to indicate if they would like to receive general results of the study, and their names were collected by the research assistant.

Measures

Demographic Questions

Inmates were asked some general questions about their background and life in prison. These questions were loosely based on those developed by Zamble and Porporino (1988) in their study of coping among prison inmates (Appendix E).

Pre-existing Psychological Symptomatology

The MMPI-2 (Butcher et al., 1989) is a 567-item scale which measures psychopathology along 10 clinical scales. Three validity scales are included to assess response style. Items are answered in a True-False format.

The MMPI-2 has been used with a variety of samples, including forensic samples (e. g., Mann et al., 1992; Megargee, 1994). Von Cleve, Jemelka, and Trupin (1991) found among 44 male inmates that MMPI-2 scores were relatively stable over a one-month period from the first to fourth week of incarceration, with reliability coefficients ranging from .60 to .95. There are some qualifications about the utilization of the MMPI/MMPI-2 with non-Caucasian groups. For example, Greene (1987) noted that available literature suggested that Native Americans scored higher on most MMPI clinical scales than Caucasian Americans, with no significant differences on the validity scales. However, Greene also pointed out that studies conducted with psychiatric and substance abusing samples do not show this trend. Carey et al. (1987) found that for the Megargee classification of prison personality types (Megargee et al., 1979), MMPI score predicted institutional adjustment problems for white but not black inmates. Thus, the use of the Megargee classification with non-white populations may be questionable.

Factor analyses of the original MMPI have consistently resulted in two dimensions (Graham, 1990). The first dimension includes high scores on scales K (Defensiveness), 7 (Psychasthenia), and 8 (Schizophrenia) and represents general psychological maladjustment. The second dimension includes high scores on scales 1

(Hypochondriasis), 2 (Depression), and 3 (Hysteria) and a low score on Scale 9 (Mania), representing psychological defenses including denial, rationalization, lack of insight, and overcontrolled impulses. Graham noted that given the similarities between the MMPI and MMPI-2, there is unlikely to be a substantial difference in the factor structure between the two versions.

The MMPI-2 is routinely conducted with Stony Mountain Institution inmates at intake at approximately three weeks into their sentences. Given the availability of that measure and the context of additional variables, it was hoped that useful data may be obtained despite difficulties with the use of the MMPI-2 with forensic populations (e. g., Baxter et al., 1995). Given that the measure is administered shortly after intake, the time between the completion of the MMPI-2 and the time of study participation will vary from inmate to inmate. However, given that the MMPI-2 presumably measures characteristics which are generally stable over time, it was anticipated that the MMPI-2 would provide meaningful data. Given the number of participants, the MMPI-2 was factor analyzed on a scale level to reduce the number of factors to a manageable number.

Victimization Experiences

A scale was developed to assess prison victimization experiences (Appendix F). Experiences related to having been physically assaulted or threatened was assessed by questions based on those developed by Cooley (1995). The experience of being sexually threatened or assaulted was assessed by questions based on those employed by

Struckman-Johnson et al. (1996). Both of the above studies were conducted with prison populations. The items in the present scale were factor analyzed.

Inmates in the present study were asked to indicate victimization experiences which occurred throughout their present sentence, and the number of times which the incidents occurred in the last 12 months. McCorkle (1993) suggested the time frame of the inmate's entire present sentence because although time frames of six months or one year are often used for the purpose of accuracy, such time frames may understate victimization experiences. As previous research has shown (e. g., Walklate, 1991), victimization experiences may continue to affect individuals for extended periods of time.

Coping

Coping has most commonly been divided along two dimensions, efforts designed to approach, or directly deal with a problem and those designed to manage emotions in avoidance of directly dealing with the problem (e. g., Lazarus, 1977). The Coping Responses Inventory (Folkman & Lazarus, 1980) is a 48-item measure which views coping along those two dimensions, "approach" and "avoidance" and via two modalities, cognitive and behavioural. Respondents indicate their use of each coping strategy on a 4-point scale ranging from "not at all" (0) to "fairly often" (3). Six items each comprise eight subscales: Approach coping includes Logical Analysis (efforts to understand the stressor), Positive Reappraisal (attempts to positively restructure a problem), Guidance/Support (seeking information, guidance, or support), and Problem Solving (attempts to deal directly with the problem). Avoidance coping includes Cognitive

Avoidance (trying to avoid thinking realistically about the problem), Resigned Acceptance (attempts to cognitively accept the problem), Alternative Rewards (get involved in other activities), Emotional Discharge (express negative feelings). Moos et al. (1990) reported internal consistencies of between .61 (Emotional Discharge) and .74 (Positive Reappraisal) for each scale, with a moderate inter-scale correlation (average $r = .29$). Alpha reliabilities for the four Approach subscales ranged from .61 to .64, and those for the Avoidance subscales ranged from .62 to .72.

McCorkle (1992a) included items which were more related to the actual prison environment. These were added to the standardized measure of coping and are presented in Appendix G. Given the connection of aggressive behaviour and coping (e. g., MacKenzie, 1987), inmates were asked to indicate whether they have engaged in aggressive behaviours to cope with the possibility of violence. Additional items which were believed to be important to coping in a prison environment are carrying a weapon, using drugs/alcohol, and joining a gang.

Social Support

Inmates' perceptions of social support were assessed by an adaptation of the Social Support Appraisals Scale (SSAS; Vaux et al., 1986; Appendix H). The original SSAS has 23 items, which include an eight-item "family" scale and a seven-item "friends" scale. For the purposes of the present study, seven questions were added on the "friends" dimension and wording adjusted to all "friends" items, to create separate scales for friends in the community and friends inside prison. The remaining eight questions

refer more generally to “people” or “others”. The SSAS examines the perceived availability of social support, with the belief that social support is actually support only if the individual perceives it to be available. It is intended to tap the degree to which respondents believe that they are loved by, esteemed by, and involved with family, friends, and others. Items are rated on a four-point scale ranging from 1 (Strongly agree) to 4 (Strongly disagree). Scores are obtained by calculating totals in each domain.

The original sample for the SSAS consisted of five college student and five community groups. Both categories of groups were relatively heterogeneous. Alpha coefficients range from .80-.90. The family and friends subscales were correlated with each other .51 (student) and .52 (community), which supports that the two scales measure different constructs. Moderate correlations were found with other scales measuring social support.

O'Reilly (1995) employed the SSAS with 60 psychiatric inpatients with at least a 6th grade reading level. She found a mean score of 66 with a standard deviation of 12.7. Specifically, she reported the mean family subscale to be 22 (5.6) and the mean friends subscale to be 20 (4.9). Cronbach alpha ranged from .80-.89, with a moderate association between the family and friends subscales ($r = .37, p < .004$). She also reported a moderate correlation with another measure of social support.

Current Psychological Symptoms

Present levels of psychopathology were assessed by the Brief Symptom Inventory (BSI; Derogatis & Spencer, 1982). The BSI is a short form of the revised version of the

Symptom Checklist-90 (SCL-90; Derogatis, 1977) and consists of 53 items which assess psychopathology along nine dimensions: Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. Three global indices may be calculated from the raw scores: General Severity Index (GSI) which is a weighted frequency score based on the sum of ratings to each symptom, Positive Symptom Total (PST), representing the total number of reported symptoms, and Positive Symptom Distress (PSDI), representing the intensity of distress and corrected for the number of items endorsed.

Derogatis and Melisaratos (1983) reported test-retest reliability for the BSI to range from .68 (Somatization) to .91 (Phobic Anxiety). The stability coefficient of the GSI was .90, suggesting stability of scores over time. Internal consistencies ranged from alpha coefficients of .71 (Psychoticism) to .85 (Depression). Tate et al. (1993), in their study with 162 patients with spinal cord injury, reported reliability coefficients ranging from .74 (Paranoid Ideation and Psychoticism) to .87 (Depression), with a coefficient of .91 for the entire scale. Broday and Mason (1991) employed the BSI with 231 women and 112 men presenting to a counselling centre in the US. The authors reported alpha coefficients ranging from .70 (Psychoticism) to .88 (Depression).

In a sample of 501 forensic inpatients and outpatients with sexually deviant histories, Boulet and Boss (1991) found that subscale scores were significantly correlated with one another and that each subscale score on the BSI correlated highly with the total score. Further, one principal component explained over 70% of the variance in scores.

While this may be explained partly by the severity in psychopathology and homogeneity of their sample, these results suggest that the BSI may be used most appropriately as a measure of degree of distress as opposed to making finer discriminations among types of psychopathology. Tate et al. (1993) came to a similar conclusion, by their finding that no BSI scale measured an independent construct and that a high proportion of variance was explained by a single factor. Piersma et al. (1994) also supported this conclusion, in that although they found that the BSI was a sensitive measure of change between admission and discharge at a psychiatric hospital, they wondered at the utility of separating the BSI into its nine dimensions. It was anticipated that in the proposed study, the General Severity Index would be employed.

Fear of Victimization

MacKenzie and Goodstein (1985) measured fear of victimization with four questions, with response choices ranging from Strongly Disagree (1) to Strongly Agree (5), with item-to-total correlations reported in brackets in Appendix I. The maximum score is 20, with higher scores reflecting a higher level of fear. MacKenzie and Goodstein (1985) found that long-term offenders (sentence over six years) in the early stage of their sentence had a mean score of 14.8, long-term offenders late in their sentence scored a mean of 13.8, and short- and medium-term offenders (1-3 years and 3-6 years, respectively) scored a mean of 14.4.

RESULTS

Given that a number of participants requested to be informed of the overall findings of the study, a summary of the results as will be presented to them may be found in Appendix J. Participants will receive this feedback individually in the Psychology Department of Stony Mountain Institution, in efforts to preserve the confidentiality of their participation. At that time, they will be provided with an opportunity to ask general questions about the study.

Characteristics of the Sample

Demographic Information

Ninety-one inmates participated in the present study, with 53 from Stony Mountain and 38 from Saskatchewan Penitentiary. Seventy participants agreed to allow access to their file information. Age of participants ranged from 18 to 68 years, with a mean of 31.9 (median of 30) and standard deviation of 10.0 (of 86 valid cases). Given that the mean age of inmates currently in the federal system is 33, with a median of 32 (M. Nafekh, personal communication, November 16, 1999), the present sample generally resembles the Prairie Region medium-security prison population in age.

The distribution of ethnic backgrounds of the present sample is presented in Table 1, along with the ethnic background break-down of all offenders in the Prairie Region

medium-security prison population (M. Nafekh, personal communication, November 16, 1999). As can be seen from the table, it appears that First Nations and Metis offenders

Ethnic Background	Percent of Valid Sample	Percent of Medium-Security Prairie Region Inmates*
Caucasian	38.6	50
First Nations	34.1	28.2
Metis	23.9	12.4
African-Canadian	2.3	2.4
Other	1.1	6.2

* M. Nafekh, personal communication, November 16, 1999

were slightly over-represented in the present sample, in comparison with the totality of medium-security offenders in the Prairie Region. However, Stony Mountain Institution and Saskatchewan Penitentiary have a considerably higher inmate population of (self-defined) First Nations descent (61% and 45.8%, respectively) than other medium-security institutions in the Prairie Region (approximately 25%). Thus, the ethnicity results of the present study are consistent with the populations of the prisons under study.

Education levels reported by the sample may be seen in Table 2. As indicated, the majority of inmates reported having reached the high school level, with one-fifth of the sample indicating high school graduation. In comparison with education levels of Prairie

Table 2		
Education Level (n = 89)		
Grade Level	Percent of Valid Sample	Percent of Prairie Region Medium-Security Offenders*
< Grade 8	7.7	20.3
Grades 8-9	23.6	32.1
Grades 10-12	39.3	28.6
High school graduate and above	29.2	19

Mean Education Level = grade 9.8

* M. Nafekh, personal communication, November 16, 1999

Region medium-security offenders in general, the present sample reported themselves as better educated. It would be reasonable to suppose that individuals who agree to participate in a reading-dependent, questionnaire study tend to be better educated than the general prison population. However, it should also be noted that there was some ambiguity in the questionnaire item (i. e., "How far did you get in school?"). As such, participants may have responded with the highest grade attended as opposed to completed. Given that CSC statistics are based on grade completed, responses of the present sample may have been inflated. In the present sample, 37 inmates (40.7% of the total sample) reported having upgraded their education, the majority to the high school level.

With regards to geographic origins of the sample, almost two-thirds indicated that they come from a city. This is not surprising given the high proportion of urban residents in the Prairie provinces, association of cities with higher crime rates due to population

density and social/economic/political factors, and given the proximity of both prisons to urban centres.

Offense/Sentence-Related Information

Violent, non-sexual offenses (i. e., Robbery and Murder/Manslaughter) accounted for over half (58.6%) of the present primary offenses of the sample, generally consistent with the broader population of incarcerated federal offenders (Motiuk & Belcourt, 1998). It should be noted that the present sample consisted of relatively fewer sexual offenders (14.3% versus the 21.5% reported by Motiuk & Belcourt). This underrepresentation is likely due to the relatively high proportion of sex offenders who are placed in Administrative Segregation due to an inability to integrate into the general population. For example, Devenport (Personal Communication, November 6, 2000) reported that 33% of sex offenders at Stony Mountain and Saskatchewan Penitentiary are housed in Administrative Segregation.

Sentence lengths as obtained by file review as well as self-report are shown in Table 3. Sentence lengths obtained by the two methods are roughly comparable, particularly notable given the disparity in sample sizes. However, it should be noted that the overall mean determinate sentence lengths calculated from the two collection methods are quite disparate, with the mean sentence length obtained by file review being considerably lower at 5.6 years than that obtained by self-report (8.9 years). Available data for medium-security inmates in the Prairie Region indicate a mean sentence length of

5.4 years (M. Nafekh, personal communication, November 16, 1999), and data based on all federal admissions indicate a mean of 3.67 years (Boe et al., 1998). As such, it

Length of Present Sentence	Percent Valid Sample (from file, n = 70)	Percent Valid Sample (self-report, n = 87)
2-5.9 years	55.5	51.2
6-9.9 years	11.4	9.0
10 or more years	11.4	19
Indeterminate	21.4	19

Mean determinate sentence = 8.9 years
Range of Determinate Sentences = 2-25 years

seems most likely that the self-reported sentence lengths were inflated in comparison to the file review, most likely due to mistaken reporting by participants which was identified through a visual inspection of the data.

Also evident from the table, one-fifth of participants were serving life/indeterminate sentences. This appears to be an overrepresentation compared to the 12.6% of Prairie Region medium-security offenders serving life/indeterminate sentences (M. Nafekh, personal communication, November 16, 1999). While this difference may be in part due to the present sample size, it may also be supposed that "Lifers" have a greater investment in efforts to study and improve prison life, given the many years that most spend in the prison environment. As such, they may have been more likely to respond to a request to participate in the present study.

At the time of the present study, participants exhibited a range of current prison experience (Table 4), with just under half of inmates having served less than two years and a significant minority having served 10 or more years. Visual inspection of

Time served (years)	Percent of Valid Sample	Percent of Total Sample
Less than 2 years	43.1	41.8
2-3.9 years	23.7	23.1
4-5.9 years	5.6	5.5
6-7.9 years	8.9	8.8
8-9.9 years	3.3	3.3
10 or more years	13.2	13.2

Mean time served = 4.12 years

the data indicated that the relatively high proportion of “Lifers” contributed substantially to the group of individuals with the most prison experience on the current term of incarceration.

Previous Prison Experience

In terms of previous incarcerations, over two-thirds of the sample reported adult prison experience at the provincial and/or federal level. Just over one-half of inmates in the present sample reported previous federal incarceration. This finding is consistent with the current figures on the Offender Management System (OMS), which reports that 55% of inmates have had a previous federal sentence (M. Nafekh, personal communication, November 16, 1999). Among the present sample, a sizeable minority of inmates (over

one-third) were identified as having served multiple provincial sentences. This would suggest that many individuals in the present sample have over time amassed convictions resulting in provincial sentences, with progression to the present and likely more serious offenses resulting in federal incarceration.

Prison Organization/Gang Affiliations

Within the institution, most participants reported no membership in sanctioned prison organizations, with the majority of those that did belong indicating membership in the Native Brotherhood Organization (approximately 15% of the valid sample). In terms of non-sanctioned organizations, the vast majority of inmates indicated that they did not belong to any gang, which was also confirmed by available file information . However, a notable minority of inmates (one- sixth by self-report and almost one-quarter by file review) were affiliated with a gang, most significantly the Indian Posse and Manitoba Warriors. These figures closely resemble those for the Prairie Region medium-security institutions as a whole.

Only eight cases were available for examination regarding where the participant joined the gang. Of those, four (50%) had joined in the community, and two each (25%) in prison and the remand centre. While the available data are not sufficient to generate conclusions, it is evident that that at least some individuals choose to join a gang while incarcerated, likely in response to the substantial social pressure as identified above.

Institutional Infractions

With regards to negative institutional behaviour, over half (54.1%) of inmates have received some form of institutional charge, only a small proportion of which involves violence (7.9%). These results are generally consistent with other research, in which incidents of violence have been found to be relatively few. For example, Baskin et al. (1991), in their study of 3332 New York State prison inmates, found that 7.5 % of their sample had been involved in at least one institutional assault against another inmate, and 1.6% against a staff member. Similarly, Devenport (Personal Communication, November 6, 2000) reported that over the last year, 6% of medium security inmate infractions in Canada involved violence towards another person.

However, institutional infractions in general appear to be fairly common both within the present sample and in other research. For example, Carbonell et al. (1984), in their study of 1313 male youthful offenders, found that 30.77% had some form of institutional infraction incorporating a variety of violation types. There does appear to be a subgroup of individuals who tend to commit repeated institutional infractions, constituting approximately one-quarter of the present valid sample. Such a subgroup has long been identified in other research, examining so-called "intractable" inmates (e. g., Myers & Levy, 1978). The typical size of this subgroup is difficult to ascertain, given differing definitions of problem inmates in the literature. Using a relatively stringent criterion, over nine or more institutional infractions within a year, Toch et al. (1987)

found that 9.5% of their sample would be considered as having a “high rate” of institutional infractions.

Family, Friends, and Contact

With regards to family, just over two-thirds of inmates (67.8%) reported that their mother had died when the inmate was at a mean age of 24.7 years, in contrast to over one-third (37.2%) reporting the death of a father at a mean age of 25.6 years. As such, within this relatively young sample, parental loss appeared to be the norm rather than the exception. As can be seen in Table 5, number of siblings was fairly evenly distributed across the sample, with over one-third of inmates acknowledging that at least one sibling had also served a jail/prison sentence. One participant each reported that 11 and 14

Number of Siblings	% Reporting Brothers* (n=90)	%Reporting Sisters** (n=90)	%Reporting a Sibling who has been in Prison (n=83)
0	20	15.6	62.6
1	21.1	23.3	18.7
2	22.2	26.7	8.8
3	20	18.9	2.2
4 or More	16.6	15.5	6.6

*Mean Number of Brothers = 2.2

**Mean Number of Sisters = 2.1

siblings had been in prison. Although retrospective, these data loudly speak to the family of origin loss and dysfunction which may create a context for the development of criminal behaviour.

With regards to present family life, 38 participants (57.3% of the valid sample of 89) indicated that they were presently in a significant relationship. This finding is generally consistent with previous research. For example, Foran (1995) reported that among men in federal institutions in Canada, 44.6% are in a marital/common-law relationship. Table 6 delineates the duration of the relationships, with nearly three-quarters of the relationships between one and five years. Results from Grant et al. (1996)

Relationship Duration*	%Valid/Applicable Sample	%Total Sample	%Grant et al. (1994) Married Sample
< 1 Year	11.2	4.4	36.1
1-2.9 Years	44.4	17.6	19.4
3-4.9 Years	25	9.9	38.9
>= 5 Years	19.6	7.7	

*Mean Relationship Duration = 4.1 Years, Median relationship duration = 2.5 years

are presented alongside the present results. It should be noted that Grant et al. examined marital relationships only. However, results are reasonably comparable, with over half of inmates in the three or fewer years categories. This may be a function of the age of the samples, or may reflect the instability in the lives of many inmates.

Thirty-five individuals provided information on amount and type of personal contact with their significant other. While nearly half (45.7%) of those inmates do not see their partners in person, there is frequent phone contact, with over half of inmates with partners reporting daily or more frequent phone calls to their partners. Family contact is viewed as an important component of an inmates' rehabilitation, given its association with decreased recidivism, improved mental health of inmates and family members, and increased probability of family reunification following prison (Hairston, 1991). Of some concern is the frequency of many inmates' phone calls to their partners, averaging three times per day. Anecdotally, it has been observed that some inmates have tended to use frequent phone contact in efforts to exercise personal control over their partners, for example, by ensuring that they know where the partner is at various times of the day.

Table 7 indicates that well over half of inmates reported having at least one child. In comparison to Grant et al.'s (1996) results with married inmates with minor-aged children, a larger proportion of the present sample reported having no children. This is not surprising given that the present sample was heterogeneous with regards to marital status. Among the offenders with children, the vast majority (39 or 76.5%) reported that they were in contact with them.

Number of Children	%Valid Sample	% Total Sample	%with non-adult children (Grant et al., 1996)
0	42.5	40.7	68
1	20.7	19.8	23
2	17.2	16.5	
3	6.9	6.6	9
4+	12.5	12.1	

Table 8 delineates inmates' self-reported friendships in prison and the community. As the table indicates, a significant minority of inmates reported no friendships in either setting, with another peak occurring at two/three friends in both settings and a third peak at the other extreme of six or more friends in both settings. Of those reporting friends in the community (n=74), 68.9% (n=51) reported being in contact with them, leaving nearly one-third (23 or 31.1%) with no such contact. Thus, by the descriptions of the sample, a sizeable minority of inmates is without peer social support.

Number of Friends	Prison Friends: Percent of Valid Sample (n=65)	Community Friends: Percent of Valid Sample (n=52)
0	29.2	19.2
1	3.1	1.9
2	20.0	21.2
3	9.2	5.8
4	3.1	0
5	9.2	9.6
6+	25.8	42.2

Physical Health

In terms of physical health, 21 individuals (23.9% of 88 valid and 23.1% of total) reported having physical problems, primarily injury related. Additional ailments included heart problems, infectious disease, and arthritis. In total, 20 individuals (22% of the total sample) reported being on medication for physical or mental health problems.

Mental Health

Twenty-three individuals, 25.6% of the total sample, reported mental health problems. The most common problem identified was depression (30.4% of the applicable sample, 7.7% of the total sample), although a specific mental health problem was not identified by nearly half of the applicable sample (12% of the total sample). Schizophrenia (two participants), attention deficit, anxiety and anger (one participant each) constituted the remaining identified mental health difficulties. The finding for

depression prevalence is similar to that identified by Motiuk & Porporino (1992) in their report on Canadian prison inmates. Those authors reported substantially more common anxiety disorder, unlike the present sample. It may be that such disorders were underreported by the present population, perhaps due to the amorphous symptomatology, shifting nature of the problem over time, or a perception that anxiety is normal under the circumstances of prison. As pointed out by Roesch et al. (1995), comparison of mental health problem prevalence between institutions may be impractical given differing methods of assessments and population differences.

Individuals reported a range of treatment duration, with nearly half reporting treatment for a moderate length of time (six months to one year). Well over three-quarters of mental health treatment involved a psychiatrist, while one-fifth of individuals reported exclusive treatment by a psychologist.

In terms of suicidality, 21 individuals (23.1% of the total sample) reported having had serious thoughts of suicide in their lifetimes, with 12 participants (13.2% of the total sample) acknowledging suicidal thoughts in the last year. The vast majority of inmates who acknowledged suicidal ideation indicated only one serious suicidal thought in the last year (75%). However, one individual acknowledged 10 incidents of serious suicidal ideation in the past year.

With regards to suicide attempts, 18 or one-fifth (20.7%) of participants reported having made at least one suicide attempt in their lifetimes. Most of those inmates reported between one and three attempts, with one individual reporting four suicide attempts in his

lifetime. These numbers suggest that suicidal ideation is considerably underestimated in comparison to OMS data (M. Nafekh, personal communication, November 16, 1999), which indicates that on intake, only 4.7% of individuals are identified as suicidal or having expressed suicidal ideation/plans.

Child Abuse History

Sixty-seven individuals responded to the item asking about child abuse history, with results presented in Table 9. Notably, most inmates reported some form of abuse in their histories, with the majority of those reporting physical abuse. Unfortunately, a fairly substantial minority (nearly one-tenth) of the present sample reported having experienced both physical and sexual abuse. Physical abuse rates obtained in the present study were quite similar to those reported in a file review of 935 Canadian federal offenders (34.6%; Robinson, 1995). However, Robinson reported a sexual abuse rate of 12.0%, which suggests that sexual abuse in the present study may have been underreported.

Abuse History	%Valid Sample	%Total Sample
No Abuse	35.8	26.4
Physical Abuse	47.8	35.2
Sexual Abuse	3	2.2
Both Physical and Sexual Abuse	13.4	9.9

Demographic Characteristics of Stony Mountain Institution versus
Saskatchewan Penitentiary Participants

In order to ascertain whether there were fundamental differences between the two samples, independent sample t tests were conducted with a number of the demographic items, and a chi-square test was performed with regards to ethnic background. Results are presented in Table 10. As is evident from the table, there were no significant differences between the two prison samples in terms of the demographic factors observed, including

Variable	Stony Mountain Institution	Saskatchewan Penitentiary	Significance (P)
Mean Age	30.8	33.5	.22
Ethnicity:			
Percent Caucasian	44.0	31.6	.35*
Percent First Nations	30.0	39.5	
Percent Metis	20.0	28.9	
Percent African-Canadian	4.0	0	
Other	2.0	0	
Mean Education in Years	10.1	10.2	.84
Mean Sentence Length in Years	10.0	13.2	.17
Mean Years Served (Present)	3.5	4.9	.15
Mean Previous Number of Sentences	2.8	2.7	.96

*Significance (P) reported resulted from Chi Square test across all ethnicity categories age, ethnicity, education level, sentence length, time served in prison, and previous number of sentences.

Descriptive Psychological Test Results

Prior to reliability analysis, the scales of each questionnaire were submitted to Principal Components Factor Analysis in order to reduce the number of variables to a manageable number (described more fully under each relevant questionnaire heading). Factor analysis was deemed to be appropriate given that the majority of the questionnaires were developed with non-prison populations. As Kazdin (1998) indicated, factor analysis is desirable under conditions where questionnaire norms are obtained outside of the population under study. Factor analyses of the MMPI-2, BSI, CRI, and SSAS were performed at the scale score level, given the importance of maintaining an acceptable ratio of participants to observed scores. Such an approach is certain to result in the extraction of fewer factors than analyses conducted at the item level. The extraction of fewer factors was considered to be desirable for the present study in order that variables employed in subsequent multivariate analyses be kept at a manageable number given the limitation of sample size.

Raven's Progressive Matrices

A file review to examine scores on a brief cognitive measure (Raven's Progressive Matrices; Raven, 1994) indicated that over half of the 56 participants for whom that information was available scored within the average range of cognitive functioning (25th to 75th percentiles), with one-third in the above average range. Only one-tenth of the sample was classified in the below average range of functioning, with the mean cognitive functioning percentile at 60.3. It should be noted that the present study employed a test

which is not language/verbal dependent. Thus, in comparison with other studies which have found verbal skills deficits among prison inmates (e. g., Baxter et al., 1995; Carvajal et al., 1989), cognitive functioning in the present study may have been over-estimated. However, the finding of an average range of intellectual functioning among prison inmates is not unusual within psychiatric (Borzecki et al., 1988), diverse (Myers & Ellis, 1992), and prison reception centre (Tammany et al., 1990) samples.

MMPI-2

Means and standard deviations of T scores for the three validity and 10 clinical scales are presented in Table 11, along with the MMPI-2/MMPI (Hathaway & McKinley, 1983) means and standard deviations from two other prison samples (Megargee et al., 1999; O'Sullivan and Jemelka, 1993).

It should be noted that no MMPI-2 profile from the present sample was excluded from any analysis based on validity scale scores. Existing research suggests that elevations on the traditional validity scales do not necessarily invalidate a profile, especially in offender populations. For example, Greene (1991) pointed to research connecting high F (Infrequency) scores to antisocial attitudes of juvenile delinquents. Baxter, Motiuk, and Fortin (1995) added that among offender populations, antiauthority attitudes, hostility/aggression, and substance abuse may elevate the F scale, especially given the item overlap between F and Pd (Psychopathic Deviate), Ma (Mania), and Sc (Schizophrenia). Baxter et al. added that an elevated F scale may be a fairly accurate reflection of an inmate's experience, especially in situations (like the present) in which the

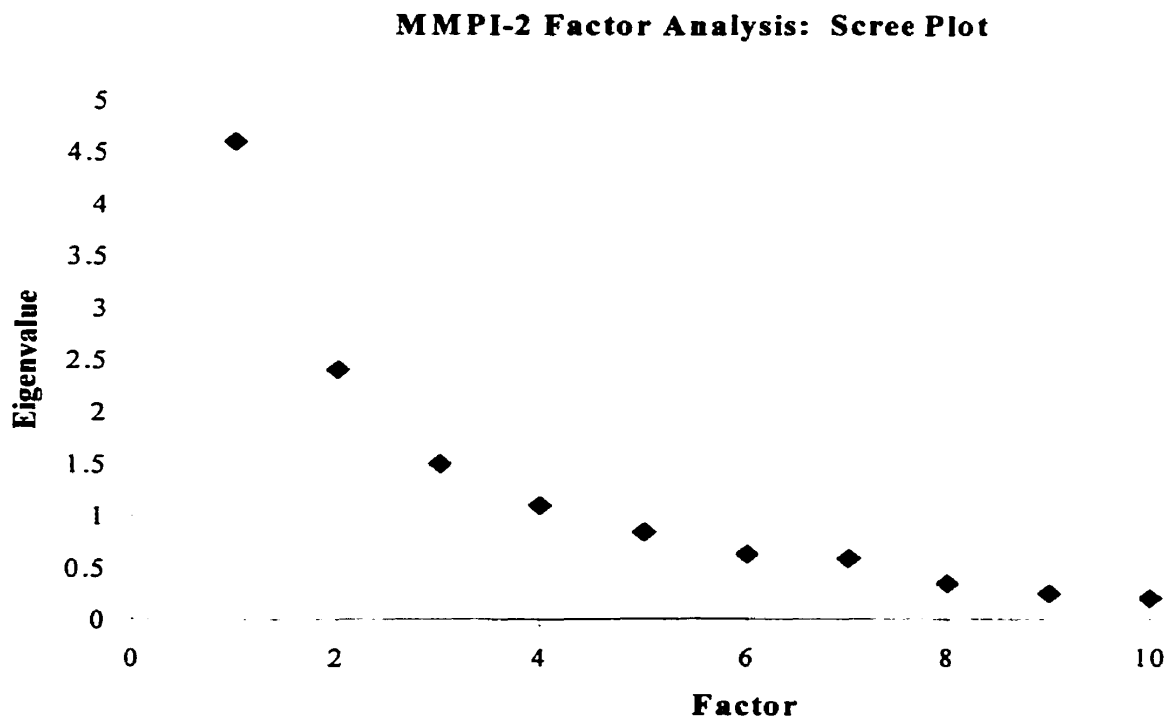
MMPI-2 Scale	Present Sample Mean (Standard Deviation)	O'Sullivan & Jemelka (1993) Non- 34/43 Codetype Inmates Mean (Standard Deviation), n=94	Megargee et al. (1999) Male Prison Inmate Mean (Standard Deviation), n=364
Lie (L)	55.9 (10.2)	54.1 (8.5)	58 (10.4)
Infrequency (F)	60.9 (18.9)	58.0 (7.4)	56 (15.2)
Defensiveness (K)	50.9 (10.5)	56.6 (8.4)	50 (9.9)
1: Hypochondriasis (Hs)	55.3 (10.5)	55.5 (11.4)	54 (12.2)
2: Depression (De)	54.3 (10.9)	60.8 (10.4)	56 (11.0)
3: Hysteria (Hy)	50.9 (9.6)	59.8 (10.0)	53 (12.9)
4: Psychopathic Deviate (Pd)	67.0 (9.7)	69.0 (12.5)	63 (11.6)
5: Masculinity/Femininity (Mf)	45.2 (8.6)	60.6 (10.6)	47 (9.3)
6: Paranoia (Pa)	61.0 (9.7)	59.2 (7.9)	58 (14.1)
7: Psychasthenia (Pt)	57.9 (11.8)	59.7 (10.8)	55 (12.4)
8: Schizophrenia (Sc)	60.1 (17.3)	61.1 (11.7)	56 (13.9)
9: Mania (Ma)	61.0 (13.6)	63.9 (11.1)	56 (11.6)
0: Social Introversion (Si)	48.7 (10.1)	49.5 (9.1)	52 (10.2)

MMPI-2 has been administered shortly after admission to prison, a time when personal distress and thus profile elevations may peak. Finally, given the exploratory and correlational nature of the present study, profiles with varying degrees of validity were viewed as important sources of data. As noted in the table, all scores obtained from the present sample were within the average to moderate ranges, with the exception of the Pd (Psychopathic Deviate) scale, which surpassed the point of clinical significance (designated as a T score of 65). It should be noted that the mean T scores obtained in the

present study closely approximate the T scores reported in the other two prison research projects presented for comparison (Megargee et al., 1999; O'Sullivan & Jemelka, 1993).

Principal Components factor analysis of the MMPI-2 standard clinical and validity scale scores with a Varimax Rotation yielded the eigenvalues presented in the scree plot of Figure 1. While the Kaiser-Guttman criterion of employing eigenvalues greater than

Figure 1



12

one indicates the existence of four factors, the scree criterion suggests the appropriateness of a two-factor solution, which accounts for the bulk of the variance (54.4%). In selecting the two-factor solution, consideration was given to the principle of parsimony. Given the amount of variance accounted for, limited sample size, and potential difficulties with the

manageability of the numerous variables under study in further analyses, the two-factor solution was considered the most suitable and appropriate.

As such, a principal components analysis with Varimax Rotation was conducted, restricting the solution to two factors. Factor loadings of the MMPI-2 scales on the two factors are presented in Table 12. As can be seen from the table, Factor 1, accounting for 36% of the variance, consists of scales representing psychological distress and behavioural maladjustment, specifically physical problems, depression, suspiciousness,

Variable	Loading on Factor 1	Loading on Factor 2
F	.79	-.30
Hs	.61	.39
Hy	.45	.75
K	-.48	.68
L	.00	.60
Ma	-.42	-.56
Mf	.32	.49
De	.56	.30
Pa	.78	.10
Pd	.42	.18
Sc	.91	-.18
Si	.60	-.28
Pt	.81	.08

antisocial attitudes/behaviour, poor reality contact, interpersonal estrangement, and anxiety. In subsequent analyses, this factor will be referred to as Maladjust. Factor 2, accounting for 18% of the variance, appears to relate to defensiveness/denial of problems.

lack of motivation, personal interests, and generally nondistress-related elevations. This factor will be referred to as Denial in subsequent analyses. Standardized reliability coefficients (alpha) for the two factors were .85 (Maladjust) and .62 (Denial).

Brief Symptom Inventory (BSI; Derogatis & Spencer, 1982)

The BSI was scored using Adult Non-Patient Norms provided in the BSI Administration, Scoring, and Procedures Manual (Derogatis, 1993). Means and standard deviations for T scores of the nine BSI symptom dimensions and three global indices are presented in Table 13, along with means and standard deviations for adult male psychiatric inpatients on admission to hospital (Piersma et al., 1994). Given a standardized mean of 50 and standard deviation of 10, the table indicates that most scale mean scores are within one standard deviation of the mean, with five scale mean scores between one and two standard deviations above the mean (Depression (DEP), Paranoia (PAR), Psychoticism (PSY), General Severity Index (GSI), Positive Symptom Total (PST)). This would, on average, suggest a sample that feels generally lonely, hopeless, distrustful, blaming, and disconnected from others. The elevations on two global indices (GSI and PST) suggest a fairly high level of psychological distress. It is interesting to note that the present sample reported slightly higher levels of distress on all sub-scales than did the comparison psychiatric inpatients.

Principal Components Analysis of the BSI resulted in the extraction of one general factor with an eigenvalue greater than one, which accounted for 65% of the variance of all of the subscales. Factor loadings for the symptom scale scores ranged from .56 (Phobic

Anxiety) to .88 (Depression). The standardized reliability coefficient (alpha) was .92 for the one factor. Not surprisingly, as the GSI represents the total of all items, it loaded almost perfectly (.99) on this one general factor. Given the nearly perfect loading, the GSI will be used in all subsequent analyses pertaining to the BSI. The finding of one general factor is highly consistent with previous research utilizing the BSI (e. g., Boulet & Boss, 1991; Tate et al., 1993).

Scale	Present Sample Mean	Present Sample Standard Deviation	Psychiatric Inpatient Mean*	Psychiatric Inpatient Standard Deviation*
Somatization (SOM)	56.0	11.6	51.7	8.07
Obsessive/Compulsive (O-C)	57.8	10.3	56.3	8.61
Interpersonal Sensitivity (I-S)	59.3	10.2	57.7	9.2
Depression (DEP)	63.0	10.2	57.9	7.8
Anxiety (ANX)	58.5	12.5	55.4	8.5
Hostility (HOS)	57.8	11.5	57.3	9.3
Phobic Anxiety (PHOB)	55.9	10.1	54.9	7.0
Paranoid Ideation (PAR)	62.6	10.6	56.0	9.4
Psychoticism (PSY)	63.9	10.5	58.3	7.8
General Severity Index (GSI)	62.8	11.6	56.8	7.6
Positive Symptom Total (PST)	62.1	11.3	58.1	8.6
Positive Symptom Distress Index (PSDI)	56.5	7.8	54.2	7.2

Taken from Piersma et al., (1994), n=217 (89 men, 128 women)

Coping Responses Inventory (CRI; Folkman & Lazarus, 1980)

Percentage of responses to the nature of the stressor (the possibility of violence in prison) is presented in Table 14. As is indicated by the table, most inmates reported having had some experience with a potentially violent atmosphere, with the majority considering it both a threat and a challenge. The sample overwhelmingly attributed the problem to someone else, indicating that it was generally resolved with an outcome that was favourable to the respondent.

Question About Stressor	Yes	No
Faced a problem like this before?	60.9	39.1
Know the problem was going to occur?	51.8	48.2
Enough time to get ready for the problem?	47.7	52.4
Think of the problem as a threat?	65.9	34.1
Think of the problem as a challenge?	61.5	38.6
Problem caused by something you did?	28.5	71.4
Problem caused by something someone else did?	62.2	37.8
Did anything good come out of it?	51.8	48.2
Was the problem resolved?	67.5	32.6
Did it turn out all right for you?	69.6	30.4

The CRI was scored utilizing T score conversion tables provided in the CRI – Adult Form Professional Manual (Moos, 1993), in which Average T scores are between 46 and 54 (percentile equivalents 34 to 66). In the present sample, approximately half of

the scale scores fell within the Average range of T scores, evenly distributed between approach and avoidance strategies (i. e., Positive Reappraisal – 47.4, Problem Solving – 48.0, Cognitive Avoidance – 51.6, and Resigned Acceptance – 51.5). However, participants' responses departed from average along both theoretical dimensions. Specifically, inmates scored in the "Somewhat Below Average" range along two Approach coping categories, Logical Analysis (T score=43.1) and Seeking Guidance and Support (T score=44.8). Similarly, participants scored in the "Somewhat Above Average" range on the Avoidance coping categories of Seeking Alternative Rewards (T score=55.8) and Emotional Discharge (T score=56.4). As such, generally speaking, participants tended to report some greater use of avoidance as opposed to approach strategies.

The additional coping items presented in Table 15 asked whether individuals had used drugs and/or alcohol, carried a weapon, got aggressive with someone, or joined a

Coping Strategy	Total Number	Percent of Valid Sample	Percent of Total Sample
Alcohol only	3	6.8*	3.3
"Soft" drugs+ only	10	22.7*	11
Both drugs++/ alcohol	31	70.4*	34.1
Carried a weapon	23	27.7**	25.3
Got aggressive first	32	38.1***	35.2
Joined a gang	12	13.2**	12.2

*n = 44, **n=83, ***n=84

+ included marijuana, hashish

++ included morphine, valium, and cocaine

gang to cope with the possibility of violence in prison. As is evident from the table, the most popular of these coping responses (all of which may be considered antisocial) were using substances, carrying a weapon, and becoming aggressive with someone. These results are consistent with previous research (e. g., MacKenzie, 1987, McCorkle, 1992b), which suggests that avoidance and aggression tend to be consequences of fear in prison. A sizeable minority of participants acknowledged having joined a gang in response to the possibility of violence, presumably, for self-protective reasons. Over one-half (n=6) of the 11 inmates who indicated that they had joined a gang in order to cope with the possibility of violence in prison responded that they had joined the Manitoba Warriors.

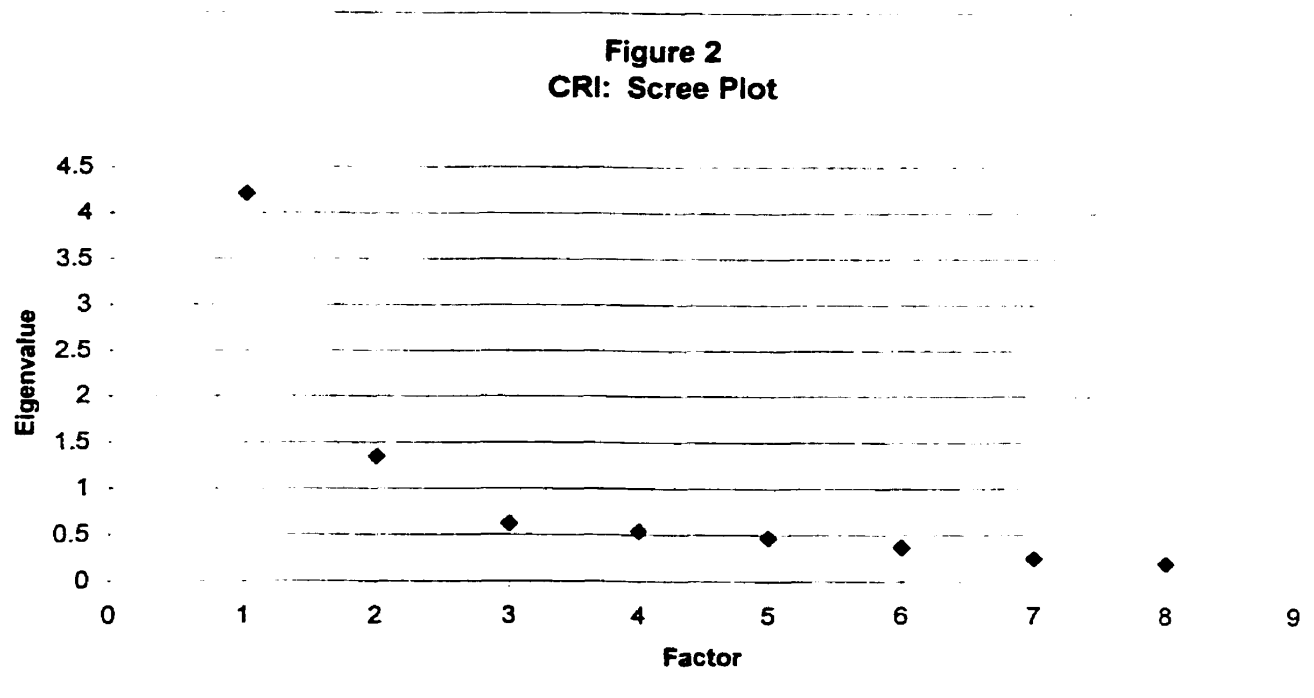
Table 16 illustrates the intercorrelations between the prison-specific items added to the coping questionnaire. While not formally part of the coping factor, it was hoped that these items may help to further specify the coping practices of the inmates under study. As is evident from the table, becoming aggressive first, carrying a weapon, and

Item	Used Drugs/Alcohol	Got Aggressive First	Carried Weapon	Joined Gang
Used Drugs/Alcohol	1.00			
Got Aggressive First	.16	1.00		
Carried Weapon	.20	.58**	1.00	
Joined Gang	.08	.45**	.39**	1.00

**Significant at $p \leq .01$ level

joining a gang are (expectedly) significantly associated. Interestingly, using drugs/alcohol to cope with the possibility of violence did not correlate significantly with any of the violence-related items.

The Coping Responses Inventory scale scores were factor analyzed using Principal Components Analysis, resulting in the extraction of two factors with an eigenvalue greater than one (Factor 1 value = 4.2; Factor 2 value = 1.35), also supported by a scree test (Figure 2). Together, the two factors account for 69.6% of the total variance. As such,



a further Principal Components Analysis was conducted, restricting the solution to two factors. Loadings of each scale/variable on the factor are presented in Table 17.

Although a two-factor solution is consistent with the theory behind the CRI, the present results place an avoidance coping strategy (Seeking Alternative Rewards) onto a factor

consisting of all approach coping strategies. Thus, with the present sample, seeking rewarding experiences elsewhere was more associated with the directed efforts of approach coping than with the modulation of thought and affect characteristic of the remaining three avoidance coping responses. For clarity, Factor 1 will be referred to as Active and Factor 2 as Escape. The standardized reliability coefficients (alpha) for the two factors were .91 (Active) and .71 (Escape).

Variable	Loading on Factor 1	Loading on Factor 2
Resigned Acceptance	.05	.80
Cognitive Avoidance	.27	.75
Emotional Discharge	.23	.77
Logical Analysis	.86	.15
Positive Reappraisal	.88	.17
Problem Solving	.88	.13
Seeking Guidance and Support	.79	.23
Seeking Alternative Rewards	.75	.23

Social Support Appraisals Scale (SSAS; Vaux et al., 1986)

Table 18 displays scale means, standard deviations, and percents on the SSAS, as well as means and standard deviations for O'Reilly's (1995) psychiatric sample. With a maximum score of 32 on the family and others in general subscales and 28 on the two

friends subscales possible, reported levels of social support were decidedly mediocre, with the least amount of support being reported from family. Notably, social support levels reported were considerably lower than those for the psychiatric sample, indicating that prison inmates perceived that they had less social support than did psychiatric inpatients.

Scale	Mean Score (Standard Deviation)	Mean Percent Score	Psychiatric Inpatients' Mean Score (Standard Deviation): O'Reilly., 1995)
Family (max=32)	16.1 (5.1)	46.9	22 (5.6)
Friends in prison (max=28)	15.3 (5.4)	54.6	N/A
Friends in community (max=28)	15.4 (4.9)	55	20 (4.9)
Others in general (max=32)	17.2 (3.7)	53.8	N/A
Total (max=120)	63.5 (15.5)	52.9	66 (12.7)

When the SSAS scale scores were submitted to Principal Components Analysis, one factor was extracted, which solution accounted for 62.6% of the total variance. The extraction of only one factor was not surprising given the scale (as opposed to item) level analysis. Loadings ranged from .73 (Friends in Prison) to .87 (Others in General), with a standardized reliability coefficient (alpha) of .80. Given the high loadings of scale scores

on the one factor, the SSAS total score will represent social support in all subsequent analyses, and will be labelled SSAS.

Fear of Victimization Scale (MacKenzie & Goodstein, 1985)

Results for the Fear of Victimization scale are presented in Table 19. As is evident from the table, participants' responses clustered around the mean, indicating a generally neutral response with regards to fears of violence in prison. Perusal of the present raw data indicates that scores ranged from 4 (the lowest possible) to 20 (the highest possible), suggesting considerable variability on the fear dimension.

Item	Mean	Standard Deviation
The odds of getting hurt while you're pulling time here are pretty high.	3.1	1.2
I worry a lot about getting beaten up or attacked before I get out of here.	2.5	1.4
One of the worst things about being in prison is that you never know when somebody might try to really hurt you.	3.4	1.4
You can't help feeling like a caged animal in a place like this.	3.8	1.4
Total	12.8	3.9

* Scale anchor points were 1 = Strongly Disagree, 5 = Strongly Agree

The FOV Scale was factor analyzed utilizing Principal Components Analysis, resulting in the extraction of one factor (Eigenvalue=2.17). The one-factor solution accounted for over half of the total variance (54.2%). Factor loadings were .58 ("You

can't help feeling like a caged animal in a place like this"), .75 ("I worry a lot about getting beaten up or attacked before I get out of here"), .78 ("The odds of getting hurt while you're pulling time here are pretty high") .82 ("One of the worst things about being in prison is that you never know when somebody might try to really hurt you"). Given the low loading of "You can't help feeling..." (.58) relative to other items and the correspondingly low face validity of the item with regards to fear, this item was omitted from future analyses. When Principal Components Analysis was conducted with the remaining three items, factor loadings were .79 ("One of the worst..."), .81 ("I worry..."), and .82 ("The odds...") on one factor. Since these remaining items demonstrated high loadings on the one general factor, subsequent analyses will employ the total score of the three items as representative of fear of victimization, with the label Fear. The standardized reliability coefficient (alpha) for the Fear variable was .73

Victimization Experiences

Self-reported experiences with non-sexual victimization are documented in Table 20. The table illustrates that the majority of participants denied having directly experienced robbery, threatened assault, or assault in prison within the previous year. However, one-third of participants acknowledged having received physical threats, and one-quarter reported having been physically assaulted on at least one occasion in the last year. These results are relatively consistent with other Canadian research on the prevalence of non-sexual victimization in prison as discussed in the literature review above (e. g., Cooley, 1993, Robinson & Mirabelli, 1996). Further examination of the

table suggests a subgroup of individuals who reported repeated victimization experiences, consistent with observations by Cooley (1993).

Number of Experiences	Something Taken by Force (Total Number)	Something Taken by Force (Percent Valid Sample, n=85)	Threatened with Assault (Total Number)	Threatened with Assault (Percent Valid Sample, n=87)	Physically Assaulted (Total Number)	Physically Assaulted (Percent Valid Sample, n=87)
0	73	85.9	55	64	67	77
1	6	7.1	16	18.6	11	12.6
2	2	2.4	9	10.5	6	6.9
3+	4	4.8	8	7.1	3	3.4

It should be noted that of the 10 sex offenders identified by file review, 30% indicated that they had been assaulted or had something taken from them by force within the last year. Sixty percent reported having been threatened with assault over the last year, with reported frequencies ranging from 1 to 12 times. The frequencies of having something taken by force and being threatened with assault, although based on a very small sample size, are considerably higher than those for the overall sample. As such, it appears that at least among the present sample, inmates were targeted based on the nature of their offense. This admittedly modest finding is consistent with other research which

indicates targeting of sex offenders by general population inmates (e. g., Edgar & O'Donnell, 1998; Struckman-Johnson et al., 1996)

Table 21 documents sexual victimization experiences acknowledged by participants. Similar to the Canadian research conducted by Robinson & Mirabelli (1996), it is evident that very few participants acknowledged such experiences. However, several individuals indicated repeated incidents of sexually coercive behaviour, suggesting the presence of a targeted group as discussed in Struckman-Johnson et al. (1996). It should be noted that no sex offenders acknowledged sexual victimization experiences.

Number of Experiences	Someone Tried to Sexually Touch You	Someone Sexually Touched You	Someone Made You Touch Him Sexually	Forced Oral Sex	Forced Anal Sex
0	96.6	96.6	97.8	97.8	96.6
1	2.3	0	0	1.1	1.1
2	0	1.1	2.3	1.1	1.1
3+	1.1*	2.3**	0	0	1.1***

*Actual number of experiences reported (by one participant) were 10

*Actual number of experiences reported (by two participants) were 3

***Actual number of experiences reported (by one participant) were 3

Due to the very few affirmative responses to any question on the sexual victimization section of the victimization experiences questionnaire, the items in that

section could not be included in factor analysis. When the factor analysis (Principal Components) was conducted with the sections examining assault, threat, and having something taken by force, a one-factor solution resulted using the Kaiser-Guttman criterion (eigenvalue=3.30). Item loadings on that factor were high and uniform, ranging from .70 (physical assault/threat) to .82 (number of times something taken by force), with a standardized reliability coefficient (alpha) of .83. Subsequent analyses will employ all six items additively combined to form the factor subsequently referred to as Vict.

Scale Intercorrelations

The intercorrelations among all factors/scales derived from the factor analysis procedure, as well as age, are presented in Table 22. As can be seen from the table, a number of variables correlated with the outcome variables. Specifically, Maladjust, Escape, and SSAS all significantly correlated with the GSI. As Maladjust and the GSI are both measures of psychological symptoms, their significant positive correlation is not surprising. SSAS and Vict correlated with the fear score. The two outcome variables (GSI and Fear) also evidenced a significant correlation with one another. Additionally, personality factor Maladjust demonstrated significant correlations with Escape and SSAS. The two coping factors, Active and Escape, correlated with one another. Denial did not exhibit any significant correlations with other variables.

Table 22
Intercorrelations among Factors/Scales

	Age	Maladjust	Denial	Active	Escape	SSAS	Vict	Fear	GSI	Amount of Time Served
Age	1.00									
Maladjust	-.22	1.00								
Denial	.12	.27	1.00							
Active	.20	.00	.17	1.00						
Escape	-.10	.34*	.04	.40**	1.00					
SSAS	-.12	-.33*	-.12	.00	-.12	1.00				
Vict	-.05	.14	.16	.05	-.02	-.17	1.00			
Fear	.15	.26	.21	.15	.20	-.22*	.29**	1.00		
GSI	-.16	.38**	-.04	-.14	.36**	-.27**	.22	.32**	1.00	
Amount of Time Served	.37**	-.16	.23	-.14	-.22	-.10	-.06	-.12	-.13	1.00
Number of Past Prison Terms	.10	.13	.12	.16	.16	.05	-.10	.17	-.01	-.19

* Significant correlations ($p \leq .05$)

** Significant correlations ($p \leq .01$)

In terms of demographic variables, age did not demonstrate significant correlations with any other variable except (understandably) with amount of prison time served to the date of the study. Perhaps due to the fact that 82% of inmates were under age 45, variability may have been too limited for meaningful comparison. Sentence-related variables did not correlate significantly with any target variables.

To provide further information on possible relations among variables, Table 23 illustrates the Pearson correlation between the additional coping items created for the

present study and all other variables. Age and Maladjust were found to correlate with scores on the additional coping items, in that younger inmates were more likely to become aggressive first, carry a weapon, and join a gang. In addition, inmates reporting higher levels of pathology on intake (Maladjust) were more likely to indicate that they have become aggressive first and joined a gang. The factors derived from the coping measure also correlated somewhat with the additional coping items. In particular, becoming aggressive first was negatively associated with an active approach to coping (Active),

Variable	Used Drugs/Alcohol	Got Aggressive First	Carried Weapon	Joined Gang
Age	.00	-.32**	-.25*	-.26*
Maladjust	.04	.29*	.01	.36**
Denial	-.07	-.15	-.25	.00
Vict	-.15	-.05	.17	-.08
Active	-.07	-.27*	-.12	-.13
Escape	.21	.11	.08	.27*
SSAS	-.03	.05	.11	.19
GSI	.11	.19	.05	-.04
Fear	-.10	.08	.05	-.05
Time Served	.20	-.06	-.04	-.19
Number of Past Terms	-.09	.13	.10	.11

*Significant at $p < .05$ level

** Significant at $p < .01$ level

and joining a gang with an escape mechanism (Escape). It should be noted that the correlation between gang membership and other variables may be unreliable given the uneven distribution of scores, i. e., only 14.5% of respondents acknowledged gang membership in response to the possibility of violence. As such, these results should be viewed with considerable caution.

Multiple Regression

In order to conform as much as possible to the hypothesized path analytic framework, a Stepwise Regression was conducted first on the GSI (Table 24), with variables forced in blocks into the equation at the appropriate step. As such, Age, Maladjust, and Denial were forced as the first block, Vict as the second, and the Active, Escape, and SSAS as the third. As can be seen from the table, only Maladjust (in the first and second blocks) and Escape (in the third block) were significant predictor variables.

When the same Stepwise Regression procedure was conducted on Fear, none of the variables reached the significance level of .05. As such, no variable could be entered into the regression equation. In order to take into account the possible influence of other demographic variables, specifically those related to prison, Stepwise Regression analyses were conducted with the addition of variables measuring prison time served to the date of the study and previous number of sentences. In that regression analysis on the GSI, only Maladjust was significant in the first block ($T=2.13$, $p=.04$), with no variables significant in the second and third blocks. When the sentence-related variables were added to the Stepwise Regression on Fear, no variables were significant.

Variables	Beta	T(P)	R	R ²	F(P)
Block 1:					
Age	-.14	-.91 (.37)			
Maladjust	.45	2.70 (.01)			
Denial	-.20	-1.22 (.23)	.48	.23	3.30 (.03)
Block 2:					
Age	-.11	-.73 (.47)			
Maladjust	.38	2.26 (.03)			
Denial	-.21	-1.30 (.20)			
Vict	.26	1.64 (.11)	.54	.29	3.27 (.02)
Block 3:					
Age	-.13	-.78 (.44)			
Maladjust	.15	.74 (.46)			
Denial	-.11	-.67 (.51)			
Vict	.17	1.05 (.30)			
Active	-.33	-1.76 (.09)			
Escape	.43	2.13 (.04)			
SSAS	-.17	-.97 (.34)	.63	.40	2.72 (.03)

Exploratory Correlational Analyses

In order to elucidate decidedly equivocal relations among variables, Pearson correlations were conducted between all variables. A criterion of .40 level of absolute correlation was considered meaningful for the purpose of the present analysis, in order to balance statistical significance with sample size differences among variables. Given the substantial volume of unique correlations (i. e., approximately 2,250) and differing sample sizes within each correlation, such a criterion allows for inclusion of correlations based on smaller sample sizes. For those correlations based on larger sample sizes, this criterion would include correlations stringently beyond the .05 level of significance.

Demographic Variables. Among demographic variables, age evidenced a number of unremarkable correlations. Specifically, older inmates were more likely to report the loss of a mother ($r=.47$, $p=.00$) and father ($r=.55$, $p=.00$). Age was also correlated with length of significant other relationship, in that among inmates reporting present relationships, older inmates tended to report involvement of longer duration ($r=.69$, $p=.00$). Older inmates reported having more children ($r=.53$, $p=.00$) than younger inmates. Further, older inmates reported having been at prison for a longer period of time than younger participants ($r=.49$, $p=.01$).

Education level and upgraded education level were understandably highly correlated ($r=.86$, $p=.00$), and education level also positively correlated with scores on the cognitive measure, Raven's Progressive Matrices ($r=.50$, $p=.00$). Those with higher upgraded education levels tended to report being treated for mental health problems for a

longer period of time ($r=.52$, $p=.29$, $n=6$), likely suggesting an openness to psychological interpretations and intervention. Higher education level was also associated with the presence of fewer sisters ($r=.41$, $p=.01$) and romantic relationships of shorter duration ($r=.47$, $p=.10$, $n=13$). Interestingly, neither geographic origins (rural versus city) nor ethnicity demonstrated any significant correlation with other variables.

In terms of prison specific variables, those who had served the most time of their sentences at the time of the study were understandably Lifers ($r=.55$, $p=.00$) and those serving longer determinate sentences ($r=.77$, $p=.00$). File and self-report data were significantly correlated with regards to sentence length for both Lifers ($r=.82$, $p=.00$) and those with determinate sentences ($r=.87$, $p=.00$). The Lifers in the study reported being in prison for a significantly longer time than non-Lifers ($r=.70$, $p=.00$). Lifers tended to report seeing their partners at visits significantly more often than non-Lifers ($r=.44$, $p=.01$), perhaps suggesting more stability in relationships for individuals for whom incarceration has become a way of life. Those who reported a longer period of incarceration were also more likely to have been charged with assaultive behaviour against institutional staff ($r=.47$, $p=.00$).

Mental Health. In terms of mental health, those who reported a history of emotional problems were also more likely to report more lifetime suicide attempts ($r=.40$, $p=.00$) and reported receiving more letters from their significant other ($r=.41$, $p=.01$). Those who reported a longer period of treatment for mental health problems also reported a higher frequency of lifetime suicide attempts ($r=.46$, $p=.08$, $n=16$), more physical

problems ($r=.54$, $p=.04$, $n=15$), as well as medical treatment for physical problems ($r=.44$, $p=.09$, $n=16$). Thoughts of suicide were associated with a greater likelihood of a suicide attempt ($r=.53$, $p=.00$), and with more frequent lifetime suicide attempts ($r=.45$, $p=.00$). Similarly, higher frequency of suicidal thinking was correlated with number of attempts in the past year ($r=.66$, $p=.00$). Length of treatment for mental health problems was also associated with a number of family variables. Specifically, longer treatment correlated significantly with younger age at the time of mother's death ($r=.71$, $p=.18$, $n=5$).

Family/Community Contact. Correlations between self-reported family and community contact provided interestingly dual results, in that some correlations appeared related to stability in lifestyle and relationships, while other forms seemed to be associated with behavioural problems. In terms of contact with a significant other, letters written were not surprisingly positively correlated with letters received ($r=.67$, $p=.00$). More frequent phone contact was associated with lengthier time at prison at the time of the study ($r=.66$, $p=.15$, $n=6$), fewer previous provincial sentences ($r=.47$, $p=.06$, $n=16$), as well as incarceration at Stony Mountain Institution as opposed to Saskatchewan Penitentiary ($r=.50$, $p=.00$). Further, those treated for a longer period of time for emotional problems tended to report a longer current romantic relationship ($r=.51$, $p=.24$, $n=7$), however less contact in the form of visits ($r=.56$, $p=.19$, $n=7$) and phone calls ($r=.61$, $p=.20$, $n=6$). A lengthier present romantic relationship was also associated with a greater number of previous federal sentences ($r=.58$, $p=.00$) as well as fewer institutional charges ($r=.48$, $p=.02$). More frequent visits from significant other were associated with self-

reported participation in legitimate prison organizations and fewer previous provincial sentences ($r=.49$, $p=.04$, $n=17$), again suggesting some stability in life through or despite incarceration.

On the less positive front, a number of community contact items seemed related to more irresponsible behaviour on the part of inmates. For example, number of letters written and received per month were associated with more institutional charges generally ($r=.44$, $p=.04$; $r=.41$, $p=.05$, respectively). More letters received from significant other was also associated with increased acknowledgement of gang membership ($r=.41$, $p=.02$). Further, having more children was associated with more frequent previous provincial incarceration ($r=.42$, $p=.00$), which may suggest less responsible behaviour on both dimensions. Friendship was also associated with imprisonment, in that inmates who reported having no friends in the community were more likely to have been identified by file as having had previous provincial incarcerations ($r=.42$, $p=.00$). These findings may be a reflection of the possibly unhealthy social support in the community, which would support antisocial rather than prosocial behaviour.

Self-reported gang membership was associated with having joined a gang in order to cope with the possibility of violence ($r=.82$, $p=.00$). Self-reported membership in legitimate prison organizations was associated with incarceration at Stony Mountain Institution ($r=.41$, $p=.00$) and having been incarcerated longer at the time of the present study ($r=.61$, $p=.00$), suggesting greater investment in contributing to the prison environment in a positive way.

Family of Origin Experiences. Earlier family experiences, specifically relating to parental death, evidenced a number of correlations with other variables. Whether both parents were living were moderately correlated ($r=.51, p=.00$), as were earlier versus more recent loss of mother and father ($r=.74, p=.01, n=12$). Inmates who had lost a mother at an earlier age were more likely to have reported the death of their father ($r=.43, p=.07, n=12$). Having experienced maternal death did not significantly correlate with any other variable, and paternal death correlated with few variables (more frequent imprisonment: $r=.44, p=.00$; length of present imprisonment: $r=.44, p=.02$). However, loss of a parent at an earlier age was significantly associated with a number of other variables. Specifically, inmates who had lost their mother at an earlier age reported a longer present romantic relationship ($r=.69, p=.04, n=9$) and more children ($r=.69, p=.00, n=20$). Those who reported losing their mother at a younger age also tended to report having been at the prison for a longer period of time presently ($r=.83, p=.38, n=3$). Loss of a father at an earlier age was associated with writing more letters to the present significant other ($r=.45, p=.26, n=8$), as well as receiving more letters ($r=.49, p=.21, n=8$). Those who had lost their father at a younger age also tended to report having been at prison longer at the time of the study ($r=.88, p=.31, n=3$), and scored higher on the cognitive screen ($r=.63, p=.04, n=11$).

Number of self-reported brothers was associated with increased difficulty on a number of dimensions. Specifically, more brothers were associated with more frequent previous imprisonment ($r=.72, p=.00$), as well as more frequent institutional charges in

general ($r=.49$, $p=.00$) as well as institutional assault charges against staff ($r=.43$, $p=.00$). As number of siblings who have been imprisoned increased, so did a number of other problems, such as having fewer friends in the community ($r=.51$, $p=.00$), lengthier time at prison at the time of the present study ($r=.44$, $p=.02$), as well as institutional charges generally ($r=.54$, $p=.00$), institutional assault charges generally ($r=.60$, $p=.00$), as well as against inmates ($r=.42$, $p=.00$) and staff ($r=.73$, $p=.00$).

Target Variables. In terms of psychological target variables, a higher level of upgraded education was associated with less pathological scores on Maladjust ($r=.70$, $p=.00$) and Denial ($r=.48$, $p=.02$). Those who reported being treated for longer periods of time for emotional problems were also less likely to report using drugs and alcohol in order to cope with the possibility of violence ($r=.57$, $p=.01$, $n=17$). Loss of a father at a younger age was associated with less pathological scores on the MMPI-2 Maladjust ($r=.59$, $p=.09$, $n=9$).

DISCUSSION

The present study was designed as an exploration of demographic and psychological variables as they relate to experiences with violence and psychological adjustment within a prison setting. The current section begins with a discussion of the sample and their characteristics. In particular, family of origin difficulties and mental health concerns are highlighted. Second, responses to the various measures employed are examined and compared with the research literature. Specifically, issues with regards to the applicability of measures to the prison population are emphasized. Third, the hypotheses of the present study are discussed, along with issues related to the sample, measures, and research design which likely impacted on the results. Fourth, results of exploratory analyses are examined and highlight the importance of family background and social relationships in the lives of inmates. Fifth is a discussion of the comparability of the present results to the original model, along with limitations of the current research. Finally, the goals of the present research are assessed and suggestions for future research directions are offered.

Demographic Information

Comparability of the Sample

The present research sample was demographically comparable to Canadian inmates as a whole, with the notable exception of the higher proportion of Aboriginal offenders typical of Manitoba and Saskatchewan prisons. Further, the present sample consisted of comparatively better educated and more indeterminate offenders than the

Canadian average, which possibly relates to the increased likelihood of such individuals to participate in a research project. The participants as a whole were fairly experienced with regards to prison, with many of them having served previous provincial and/or federal terms.

Anecdotally, the present study found a substantially higher number of gang members than is indicated by official intake statistics. Given the scant data available on where individuals join gangs, it does appear that there are those who join in response to the prison environment. Specifically, the present data suggested that the gang of choice to join in prison appears to be the Manitoba Warriors. Despite the proliferation of gang membership in Manitoba and Saskatchewan institutions, the rate of institutional infractions remains comparable to the national average, suggesting either that gang members are involved in no more nor less inappropriate behaviour than other inmates, or also possible, that gang members are able to conceal their institutional misbehaviour. For example, it is known that there are many situations in which an individual is a victim of a suspected gang-related incident, but does not identify the perpetrator out of fear of further victimization.

The similarity of the sample to the overall prison population in Canada is particularly significant given the difficulties with participant recruitment for the current project and the reliance on counselling clients for part of the data collection process. Reasons for the difficulties with data collection are likely multiple, and the Inmate Welfare Committee (IWC) at Stony Mountain Institution was able to provide some

feedback with regards to factors which they believed discouraged participation among inmates. Most notably, general apathy among the prison population to participate in a project which would hold little relevance for them personally resulted in Request for Participation letters simply being discarded. The IWC also noted that the lack of positive reinforcement, general distrust of “the system”, and unnecessary activity outside of a normal routine likely influenced inmates to not participate. Anecdotally, when staff counsellors were asked to solicit participants from their caseloads, many participants solicited had already agreed to participate in the project via the mass letter approach. As such, it may be that inmates most likely to participate in such a research project were those who have presumably positive (therapeutic) relationships with staff and who have been working towards a better understanding of themselves.

Beyond inmate/prison characteristics, the fact that the primary researcher was a Correctional Service of Canada staff member and that the research project was widely publicized within the prison (through the mass effort at data collection and the IWC) may have resulted in reluctance and distrust on the part of some inmates. This supposition is supported in that mass letter recruitment at Saskatchewan Penitentiary, where the primary researcher would be less familiar to inmates and no efforts to enlist IWC support were sought, resulted in equivalent participation to Stony Mountain Institution.

Family of Origin

Inmates in the present sample reported notable family of origin difficulties. In particular, the number of inmates who had lost parents was substantial given the relatively

young age of the sample, and the connection between earlier parental death and later experiences/behaviour, although tentative, was difficult to ignore. Recent community studies have documented the psychological impact of early parental loss, including psychological disorder onset (Wheaton et al., 1997), as well as anxiety, desire to die, persistent guilt, compulsive self-reliance, and aggressive outbursts (Dilworth & Hildreth, 1998). One may suspect that the impact of parental loss on individuals who have other risk factors for criminal behaviour (for example, existing behavioural problems), would be compounded.

Parental death in the present study is likely important as one component of parental absence/loss generally. Other studies have certainly highlighted parental absence during childhood among prison samples. For example, Motiuk (1995) reported that of 103 Canadian inmates, 13.3% had no mother present during childhood and 36.3% lacked a paternal presence. It should be noted that while present sample figures were similar to those of Motiuk for paternal absence, a much higher proportion of inmates in the present sample (over two-thirds) reported maternal death. Similarly, Loucks and Zamble (1994) reported that from birth to age 5, 10% of the male inmates in their study were not living with biological parents, which increased to 20% between ages six and 11.

To further compound family of origin problems, approximately one-third of the present sample reported that at least one sibling had been imprisoned. This finding is fairly consistent with other research which has identified that approximately half of

inmates have had a family member involved in crime (Motiuk, 1995; Zamble & Quinsey, 1997).

While the present study was not designed as a thorough examination of family of origin difficulties and child abuse histories of inmates, it should be noted that the brief questioning in this area provided very high affirmative responses, with nearly two-thirds of participants acknowledging physical and/or sexual abuse histories. This figure included approximately 16% of the sample reporting sexually abusive experiences. It has previously been found that over half of sex offenders have histories of sexual abuse, and that 20% of non-sex offenders may have such a background (Dhawan & Marshall, 1997). These proportions are in contrast to community figures in which eight percent of Canadian men in nonclinical samples have been identified with sexually abusive histories (Finkelhor, 1994).

Other research has also identified the high prevalence of abusive childhood experiences within prison populations. Eisenman (1993) found that over half of the 43 young offenders he studied were criminally oriented and had been subjected to physical, psychological, or sexual abuse, usually by a family member. These individuals also tended to be members of a minority group and gang members. Lake (1995) found that among 205 inmates, a history of child abuse was associated with a younger first arrest and greater involvement in crime. Again, these negative family experiences are in contrast to figures from the community. Marquis (1992) compared the self-reported family backgrounds of college students with 118 maximum security Canadian prison inmates,

finding that prison inmates tended to report considerable greater family of origin dysfunction than did college students. Specifically, prison inmates in Marquis' study reported high levels of parental break-up (55%), parental alcoholism (37.3%), foster care history (25%), and physical abuse (17%). As Haycock (1991) pointed out, the individuals who enter prison do so with a set of characteristics which place them at risk in an environment whose difficult conditions tend to exacerbate that risk.

Psychological Symptomatology

Given chaotic backgrounds, criminality, and imprisonment, it is not surprising that approximately one-quarter of the sample reported mental health difficulties, including depression and a history of suicidality. As previously noted, these numbers are substantially higher than those identified by official statistics compiled by the Correctional Service of Canada (RADAR). It may be that some inmates experience substantial suicidal ideation following the intake process and during incarceration. This would be consistent with research which has found ongoing psychological distress among some groups of inmates in the course of their sentences (e. g., Cooper & Livingston, 1991; Paulus & Dzindolet, 1993; Zamble & Porporino, 1990). In fact, the rate of mental disorder among prison inmates has been identified at two to three times higher than the general population (e. g., Jacoby & Kozie-Peak, 1997). Further, as Haycock (1991) pointed out, prison tends to present a high risk factor for suicidality, given that people who enter prison tend to possess characteristics which place them at increased risk for suicide (e. g., male, lower socioeconomic status, substance abuse, history of child abuse,

impulsivity), and that prison tends to have “suicidogenic effects” (e. g., overcrowding, lack of privacy, deprivation, threats).

Descriptive Psychological Test Results

MMPI-2. The MMPI-2 was employed in the present study given the availability of test scores and the hope that in the context of other variables, personality and psychopathology as measured by the MMPI-2 would have some utility in predicting vulnerability among inmates. However, it should be noted that the use of the MMPI-2 has certainly been questioned in forensic settings. Recent research suggests that prison inmates and their non-criminal peers may be differentiated by MMPI-2 profiles (Megargee et al., 1999), and the MMPI-2 may be able to differentiate broad groups of poorly adjusted prison inmates from their better adjusted counterparts (Baxter et al., 1995). However, predictive utility with regards to violence (O’Sullivan & Jemelka, 1993) and prison adjustment (Carbonell et al., 1984) has been disappointing, and the MMPI-2 has not been particularly useful in distinguishing groups of violent offenders (e. g., Nesca, 1998). Baxter et al. (1995) noted in their literature review that methodological and conceptual difficulties have plagued research with the MMPI-2 in forensic settings, yielding mixed and contradictory results. As such, the practical utility of the MMPI-2 in prison environments remains questionable. However, given its availability on file for most of the current participants and the emphasis of the present study on psychological symptomatology, it was hoped that useful information might be derived from this measure.

Overall, the present sample produced an average profile typified by numerous moderate scores and a clinically significant Scale 4 (Psychopathic Deviate or Pd) elevation. This clinical peak is consistent both with other prison research studies (O'Sullivan & Jemelka, 1993; Panton, 1973) as well as with MMPI/MMPI-2 theory. The MMPI-2 Pd scale was normed on individuals between the ages of 17 and 22 diagnosed with psychopathic personality, asocial and amoral type (Greene, 1991). According to Greene, the MMPI-2 Pd scale is designed to measure conflict with authority, self and social alienation, boredom, as well as social ease. Individuals with a Pd elevation are described as generally socially maladjusted and lacking in pleasant experiences. They tend to be unreliable, egocentric, and irresponsible, with difficulties in learning from experience and planning ahead. Given that these adjectives are generally descriptive of many prison inmates, it is logical that prison inmates' MMPI/MMPI-2 profiles reflect a Pd elevation.

The average profile was indicative of some degree of psychological distress, including suspiciousness and distrust, avoidance of reality through fantasy, and high energy levels which likely lead to agitation given the external constraints of prison. The mean profile also suggested an orientation to traditionally masculine interests, with a balance between extroverted and introverted behaviours. The moderate elevations are generally consistent with available research. For example, Megargee, Mercer, and Carbonell (1999) found that among the Validity and Basic Scales, F (Infrequency), 4 (Psychopathic Deviate), 6 (Paranoia), and 9 (Mania) were prominent for both male and

female offenders. It should further be noted that in the present sample, the MMPI-2 was completed within one month of entry into prison, and increased levels of psychological distress are fairly typical of inmates at the beginning of incarceration (e. g., Smyth et al., 1994; Zamble, 1992).

Factor analysis of the MMPI-2 resulted in the extraction of two factors, Maladjust and Denial with high (standardized item $\alpha=.85$) and moderate (standardized item $\alpha=.62$) levels of internal consistency, respectively. This higher consistency of Maladjust is understandable given the primary focus of the MMPI-2 on psychopathology and distress-related items. It should be noted that the two factors derived from the present study closely resemble those of Welsh's (1956) Anxiety and Repression. Specifically, Welsh labelled "A" or Anxiety a factor which represented general maladjustment in thinking, anxiety, depression, pessimism, over-sensitivity, and poor reality contact. The second or "R" (Repression) factor encompassed health/physical symptoms, denial of problems, emotionality, relations with others, and personal interests. This classic finding has been well established in factor analyses at the scale level (e. g., Block, 1965; Eichman, 1962), and has been employed in at least one forensic study of prison adjustment (Carbonell et al., 1984). As such, the factor analysis of the present study appears to resemble patterns observed in previous research.

Brief Symptom Inventory (BSI; Derogatis & Spencer, 1982). Examination of the properties of the BSI yielded results which were excellent with regards to internal consistency (standardized item $\alpha=.92$) and relatively distressed with regards to scores.

Participants' performance on the BSI suggested above average levels of depressive, isolated, and paranoid symptoms. This finding is consistent with studies which report relatively high levels of psychological distress among prison inmates (e. g., Cooper & Livingston, 1991; Paulus & Dzindolet, 1993). It should be noted that other research has suggested that psychological symptomatology among prison inmates decreases over time (e. g., Smyth et al., 1994; Zamble, 1992). It is likely that numerous factors contribute to inmates' emotional functioning in prison, including characteristics of the institution (Paulus & Dzindolet, 1993), perceptions of the environment (e. g., Bernstein, 1989), and personal characteristics (e. g., Bonta & Gendreau, 1990; Silverman & Vega, 1990; Walters, 1987). In comparison with psychiatric inpatients (Piersma et al., 1994), the present prison sample evidenced wider variability in their degree of symptomatology. This likely underscores the heterogeneity of the prison sample and the fairly wide range of psychological adjustment found among prison inmates. Finally, the finding of one general psychological distress factor is consonant with previous research findings with the BSI (e. g., Boulet & Boss, 1991; Tate et al., 1993).

Coping Responses Inventory (CRI; Folkman & Lazarus, 1980). As previously noted, participants scored in the "Somewhat Below Average" range along two Approach coping strategies, Logical Analysis, and Seeking Guidance and Support. Alternately, inmates scored in the "Somewhat Above Average" range on the Avoidance coping strategies of Seeking Alternative Rewards and Emotional Discharge. These results suggest coping deficits as highlighted by Zamble and Porporino (1990), although perhaps

not to the degree they discovered. It may be that the limitations of a structured coping questionnaire minimize coping deficits which their more behaviourally focused approach was able to tap. This argument would be strengthened by the reliance of inmates in the present study on antisocial methods of coping (such as using substances or carrying a weapon). As noted by Zamble and Quinsey (1997), maladaptive responses of criminals are perpetuated via a cycle which includes the contribution of individual characteristics (e. g., temperament, cognitive abilities) and available responses (e. g., coping ability, values, criminal thinking) to the perception of and response to threat in problematic situations encountered. An individual's response, according to Zamble and Quinsey, impacts on further problematic situations faced and thus the cycle of criminally oriented behaviour continues. Given a group of individuals unified by criminal decisions in the first place, it is not surprising that antisocial decisions continued to be made within prison. As suggested by Zamble and Porporino (1990), perhaps inmates' coping strategies are better suited to the prison environment than to the community. In the present study, it may be that when asked about the specific problem of coping with the possibility of violence, inmates manage to cope somewhat more successfully as a whole, which may be necessary for survival in the prison environment. This would be consonant with the situation-by-person approach advocated by Bonta and Gendreau (1990) and Silverman and Vega (1990).

Factor analysis of the CRI suggested a two-factor solution as predicted by the theory behind the questionnaire (Folkman & Lazarus, 1980), however, the solution

differed slightly from what would be anticipated. Specifically, Seeking Alternative Rewards, an Avoidance strategy, clustered with the four Approach coping strategies. As such, in the present sample, the factors appeared to reflect a differentiation between active cognitive and behavioural efforts at coping (Active) versus passive and escape-based strategies aimed at modulating affect (Escape). This slightly different emphasis may be an artifact of the present sample, or may reflect the unique nature of the prison population.

Alternately, it may be that the questionnaire does not adequately relate to the coping experiences of prison inmates, at least those in the present sample. For example, the CRI does not include any items relating to antisocial coping practices, such as substance abuse and physical violence. However, as indicated by respondents on additional coping items, such responses were fairly common. Similarly, it is important to note that the questionnaire measure does not capture the quality or efficacy of coping responses. As Zamble and Porporino (1990) noted, what inmates consider to be appropriate problem solving may, with further investigation, actually be antisocial or aggressive and serve to worsen the situation. For example, the most common antisocial coping response was to "get aggressive first". As such, there remains a question as to whether inmates were responding to actual threat situations, were distorting ambiguous situations into potential threats (e. g., Zamble & Porporino, 1990), or were attempting to establish status through aggressive behaviour (e. g., Toch, 1998). As such, the reliance of the CRI on self-perceptions of coping likely limited its utility in a population which may have significant distortions about its ability to cope with stressful events. Thus, given the

preponderance of unhealthy coping strategies identified in prison inmates in the present sample and elsewhere (e. g., McCorkle, 1992a; Zamble & Porporino, 1990), it is likely that the strategies itemized in the CRI did not adequately examine the coping practices of the population under study, and may have provided an inaccurate picture based on distorted self-perceptions.

Social Support Appraisals Scale (SSAS; Vaux et al., 1986). Overall, inmates reported relatively low levels of social support, in particular from family. This result is highlighted in the present study by the findings with regards to significant other contact. Nearly half of inmates reported no visits from their significant other, with the majority of contact being over the phone. This finding is consistent with other research which has noted deficits in social support among inmate populations. In a literature review, Hairston (1991) pointed out that the maintenance of family ties is desirable for future stability, but extremely difficult due to the disruptive influence of incarceration and practical difficulties with family contact. Paulus and Dzindolet (1993), in a study of 106 male and female American federal inmates, noted that the number of support people available to the participants decreased over a four month period early on in incarceration, as did participants' level of satisfaction with the support. Cooley (1995) focused his research on the double-edged nature of social support from fellow inmates, given the complex and contradictory social expectations of prison which serve to both draw together and isolate inmates from each other. Given what are likely support people's emotional stress with regards to having a family member/friend incarcerated for criminal behaviour,

inconvenience of phone and personal contact, a preponderance of depressive symptoms among inmates, as well as a need for the inmate to navigate the complicated social expectations of prison, it is not surprising that inmates have generally perceived diminishing and low levels of social support.

Fear of Victimization Scale (MacKenzie & Goodstein, 1985). Inmates in the present sample reported slightly lower levels of fear vis a vis another prison sample (MacKenzie & Goodstein, 1985), with fear scores hovering around the neutral mean. It should be noted that scores on the fear dimension exhibited considerable variability, emphasizing differences in this experience among prison inmates. While some inmates reported a high degree of fear, it is important to acknowledge the numbers of inmates who reported relatively low levels of fear. As McCorkle (1993) pointed out, the possibility of violence may be underreported, or may be something to which prison inmates become adjusted. As such, self-reported fear levels as measured fairly obviously by direct question might be expected to be low. Alternately, it may be that fear of victimization is not a pervasive concern for many inmates in their day-to-day lives, at least in the prisons under study. The Fear of Victimization scale factor analyzed into one general fear factor with moderate internal consistency (standardized item alpha = .71), as would be anticipated for a brief measure.

Victimization Experiences. Non-sexual victimization experiences reported by the present sample were generally consistent with other research (e. g., Cooley, 1993, Robinson & Mirabelli, 1996), with a significant minority of the respondents

acknowledging physically assaultive and threatening experiences during incarceration. However, it is important to note that the majority of inmates reported no or very few victimization experiences in prison. Along similar lines, very few participants evidenced assaultive charges on their files. This was somewhat surprising given the medium security classifications of the prisons, the presence of gang members in the inmate populations, and anecdotal reports by staff that there is much inmate discontent with the potential for an outbreak of violence. Whether incidents were underreported, results were an artifact of self-selection of research volunteers or demand characteristics, or responses accurately reflected the experiences of inmates is unclear. One modest but notable finding was that sex offenders tended to report more experiences with victimization than did the overall sample. This finding is consistent with the placement of sex offenders on the lowest "rung" of the inmate social ladder, as well as recent literature (e. g., Edgar & O'Donnell, 1998, Struckman-Johnson et al., 1996) suggesting the vulnerability of this particular group.

It was originally anticipated that factor analysis of the victimization experiences questionnaire would yield at least two factors, for example, sexual versus non-sexual victimization experiences in prison. However, given the (possibly underreported) few affirmative responses to sexual victimization items, these experiences were unable to be included in factor analysis. As such, one general victimization factor emerged, with adequate internal consistency (standardized item $\alpha=.83$).

Hypotheses

While the overall model proposed by the study was not supported, the following discussion will underscore the importance of personality characteristics and escape-based coping in predicting psychological adjustment among the sample. Also notable is the significant degree of social isolation, coping deficits, and psychological symptomatology among the present prison sample. The explanation of the findings which follows is organized in order of the proposed hypotheses. Given the equivocal results of the study, post hoc Pearson correlations were conducted between all variables in order to elucidate and expand on the results. While any relations suggested by such an exploratory approach are highly tentative, this approach did assist in clarifying and generating possible explanations for the results of the present study. Results relevant to the hypotheses of the study are presented within the hypotheses discussion. Additional results are discussed following the presentation of hypotheses.

HYPOTHESIS 1: Younger inmates will tend to report higher levels of psychopathology, as measured by the MMPI-2.

Previous research supports the association between youth and higher levels of psychopathology, in particular with regards to the MMPI-2 (e. g., Greene, 1991; Schinka et al., 1998). In the present study, age did not significantly correlate with either of the two MMPI-2 factors. As suggested by the conflicting research in the area, the relation between age and psychopathology is likely complex. For example, McCorkle (1993a),

with an American sample slightly older than the present, found that older inmates tended to report better mental health. However, Gallagher (1990) discovered that older inmates reported approximately the same levels of psychological symptomatology as younger inmates. Aday (1994) found that new elderly offenders typically reported family conflict, depression, suicidal thoughts, and a fear of dying in prison. As such, it may be that variables such as life history, prison experience, and other demographic and environmental factors complicate this correlation. For example, exploratory correlational analysis indicated that among demographic variables, a higher level of upgraded education was associated with less pathological scores on Maladjust and Denial. As such, it tentatively appears that among inmates in the present study, taking steps to further one's schooling may have been protective with regards to psychopathology (or, that inmates who experience less distress have better personal resources to pursue education). Interestingly, higher education level also correlated with lengthier treatment for mental health problems. One may speculate that, as within the general population, higher levels of education are associated with increased willingness to seek and perhaps benefit from mental health support. A final mitigating factor relates to the composition of the present sample. Specifically, as 82% of the present sample were under age 45, there simply may not have been sufficient "older" offenders in the sample to provide adequate variability in age, thereby truncating its correlation with any other variables.

HYPOTHESIS 2: Younger age and elevations on the derived MMPI-2 factors will correlate with higher scores on the victimization experiences questionnaire.

This hypothesis was not supported by the present study, in that neither age nor MMPI-2 factor scores correlated significantly with victimization experiences. This lack of significant result may reflect the relatively low variance of both variables in the present study. Most participants were in their 20's and 30's, and acknowledged low rates of victimization experiences. As such, there may have been insufficient variability along both dimensions to effect a significant correlation. It should also be noted that there are contradictory findings in the area of prison victimization, which suggest that both older and younger inmates are vulnerable to victimization experiences. For example, Wright (1991) described that victimized inmates tended to be older when first imprisoned, while Cooley (1995) found that victims of violent and property crimes in prison tended to be younger than their counterparts. However, age demonstrated poor discriminating power between those victimized and those who did not have such experiences in Cooley's study. Similarly, demographic variables have been found to contribute little variance for validity and clinical scales of the MMPI-2, with gender being the most potent demographic influence (Schinka et al., 1998). Further, results of the present study suggested that sex offender status may be related to the experience of victimization. As such, the importance of age may be diminished in comparison with other demographic variables.

While not examining victimization experiences specifically, other studies have found that personality variables as measured by the MMPI/MMPI-2 also demonstrated poor predictive power with regards to later prison behaviour and adjustment factors (e. g., Carbonell et al., 1984, O' Sullivan & Jemelka, 1993, Walters, 1987). For the purposes of the present study, it was hoped that the addition of demographic and personal variables would provide a broader context and significant results. However, given the present results and the equivocal role of age and personality in predicting prison adjustment factors, it is likely that environmental (e. g., Wooldredge, 1998) and situation specific (Marron, 1996; Steinke, 1991) factors predominate over individual personality in determining the likelihood of victimization.

A contributing factor to the poor predictive power of personality factors in prison may be the consistent prominence of Scale 4 (Psychopathic Deviate) across entire prison samples (e. g., O'Sullivan & Jemelka, 1993; Panton, 1973). While Scale 4 loaded on the MMPI-2 Maladjust in the present sample (as it does reflect social maladjustment and unhealthy attitudes/behaviour), Scale 4 is typically associated with an absence of distress or if present, situational distress. As such, Scale 4 elevations typically represent levels of personality disorder (Greene, 1991). The pervasiveness of personality-related difficulties in prison samples (including the present) may thus muddy the impact of other forms of distress apparent on intake to the prison system. As such, measures which better distinguish personality pathology from psychological distress may be more useful in establishing vulnerability. Further, given the paucity of responses on the sexual

victimization questionnaire in the present sample, such experiences may have been underreported, and as a result, information about significant victimization experiences may not have been available for analysis.

HYPOTHESIS 3: Age and MMPI-2 scores will correlate with scores on the CRI such that younger age and higher scores on the factor analyzed MMPI-2 will correlate with avoidance coping strategies.

This hypothesis was partly supported by the present study in that although age evidenced no correlation with coping, the MMPI-2 Maladjust correlated significantly ($r=.34$) with the coping factor Escape, which includes three of the four avoidance coping strategies (acceptance/resignation, cognitive avoidance, and emotional discharge). As such, it appears that individuals who report increased psychological symptoms on intake are more likely to engage in escape-related coping rather than make active efforts to cope with the possibility of violence. This result is consistent with recent theory on personal characteristics and coping (Reid, 2000; Skodol, 1998). From the perspective of Zamble and Quinsey (1997), it may be that the available response mechanism (coping ability) was limited by the individual's psychological difficulties, resulting in a maladaptive coping response. Interestingly, the MMPI-2 factor Denial evidenced no significant correlation with coping, which may again reflect difficulties with the nature of the MMPI-2 and CRI and their applicability as described above.

The converse that older and better adjusted inmates would report more approach coping strategies was not found. In fact, scores on the MMPI-2 factor Maladjust were completely uncorrelated ($r = .00$) with the active-based coping strategies (which include all of the Approach coping strategies of the CRI) identified by the present study. The significant correlation ($r = .40$) between the coping variables Active and Escape, as well as the potential irrelevance (and perhaps inaccurate self-perceptions) of the coping strategies on the questionnaire, likely contributed to this lack of result.

Interestingly, age did correlate with three of the four additional (and antisocial) coping items asked of participants. Specifically, younger inmates were more likely to report becoming aggressive first, carrying a weapon, and joining a gang in order to cope with the possibility of violence. Similarly, those who were maladjusted on intake were more likely to become aggressive first and join a gang as coping strategies. Thus, it appears that younger inmates and those with psychological symptoms on intake were more susceptible to joining in the violent atmosphere of prison, likely as a form of self-protection. As such, there do appear to be "lambs" (Bowker, 1992) who enter the prison system with psychological vulnerabilities. These vulnerabilities may render them more susceptible to gang recruitment pressures.

With regards to antisocial coping practices, a longer period of treatment by a mental health professional correlated with self-reported lack of reliance on alcohol and drugs to cope with the possibility of violence. As such, from the perspective of Zamble and Quinsey (1997), it may be that in a limited way in the present sample, professional

intervention allowed for an expansion of response mechanisms which were available to the respondent. Alternatively, it may be that contact with a mental health professional and a tendency not to cope by substance use reflect some positive effort or dispositional quality on the part of those inmates.

HYPOTHESIS 4: Age and derived MMPI-2 factors will negatively correlate with perceived social support.

This hypothesis was somewhat supported by the present study. Although the MMPI-2 Denial factor and age did not, Maladjust did significantly correlate with social support in the expected direction ($r = -.33$). Thus, it appears that individuals who enter prison as socially maladjusted, suspicious, depressed, anxious, and avoiding of reality are less likely to perceive social support, even from antisocial peers. The lack of social support these individuals perceive likely contributes to (or is a function of) their psychopathology, cyclically rendering them even less able to attract social support.

In the present sample, the highest levels of social support were reported to be from friends in the community and in prison, while the lowest level of support was perceived to be from family. Perception of low levels of support by family may be related to the dysfunctional and chaotic experiences reported by prison inmates with regards to family of origin (e. g., Marquis, 1992). It should be noted that the overall social support perceived by inmates was actually quite low, even lower than the psychiatric sample (O'Reilly, 1995) presented for comparison, which speaks to the level of isolation

experienced by inmates. As noted above, perceived decreasing social support is fairly typical within inmate samples (Paulus & Dzindolet, 1993) and those with personality disorder (Bijttebier & Vertommen, 1999). Numerous variables in addition to personality likely contribute to the isolation of prison inmates, including the disruptiveness of prison and inconvenience of contact (Hariston, 1991), and the conflicting social expectation of the prison environment (Cooley, 1995).

HYPOTHESIS 5: Younger age and higher MMPI-2 scores will significantly correlate with poorer psychological adjustment, as measured by the BSI and Fear of Victimization questionnaire.

This hypothesis received some support in the present study, in that the MMPI-2 factor Maladjust significantly correlated ($r=.38$) with the General Severity Index of the BSI (Derogatis & Spencer, 1982), although age did not. Neither Maladjust nor age significantly correlated with Fear. As such, psychopathology as defined by the MMPI-2 did predict later psychological maladjustment. It should be noted that given both measures examine similar psychological symptoms, this correlation is rather unremarkable and likely reflects the similarity of the two questionnaires. However, it may be worthwhile to note the ongoing stress reported by inmates, which goes beyond the initial intake process.

A similar conclusion may be drawn from previous research. Carbonell et al., (1984) employed Welsh's (1956) Anxiety (A) and Repression (R) factors (similar to the

Maladjust and Denial factors of the present study) with a prison population, to predict behavioural correlates of adjustment. The authors reported that while A significantly correlated with several indices of adjustment to prison (measured by staff ratings, disciplinary infractions, days in segregation, and sick days), R was essentially uncorrelated. This is not surprising given that A represents distress-related elevations, which would be expected to have a correlation with inmate behaviour and adjustment, whereas the non-distress elevations of R would not be expected to be expressed in adjustment problems. It should be noted that while some correlations with adjustment were significant in the Carbonell et al. study, the researchers noted that the predictive utility of the personality dimensions alone was decidedly weak.

As is clear from an examination of the prison violence literature, many factors contribute to psychological adjustment in prison beyond personality, including situational aspects to the risk of prison violence (e. g., Steinke, 1991) and the prison climate itself. Specifically, imprisoned individuals are asked to adapt to a severe disruption in life, including sharp decreases in heterosexual contact, emotional support, self-esteem, autonomy, responsibility, privacy, safety/security, property, structure, activity, and freedom (Harris, 1993). Given the psychopathology identified in the present prison sample and the amount and nature of life disruption with which inmates are required to cope, it is not totally surprising that psychological adjustment among prison inmates is poor and remains so following entry into the general population.

HYPOTHESIS 6: Individuals who report victimization experiences will report a greater tendency to utilize avoidance coping strategies with the possibility of violence, whereas those who report no (or fewer) such experiences will tend to report approach coping strategies.

In the present sample, this hypothesis was found to have no support. In fact, the correlation between Active and Escape coping responses with victimization experiences was near zero ($r = .05, -.02$, respectively). It should be noted that victimization experiences also evidenced no significant correlation with antisocial coping practices. As such, in the present sample, coping strategies were irrelevant to reported victimization. Again, the limited variability of the victimization questionnaire responses given relatively few self-reported victimization experiences likely impacted on the lack of significant result. Further, this correlation may have been confounded by the focus of the CRI on self-perceptions of coping, subject to cognitive distortions, as identified above. As noted by Zamble and Porporino (1990), self-perceptions of inmates' coping abilities may be inaccurate and overly favourable. As such, any actual significance in the relation between coping and victimization in the present study may have been further clouded by inmates' distortions of their coping.

Finally, it should be noted that behavioural avoidance coping strategies specific to prison were not included in the present study. McCorkle (1992b) found that most inmates believed that they could reduce the risk of violence by "keeping to themselves", and many believed they could reduce risk by avoiding populated areas of the prison and by staying

in their cells. As such, it may be that coping strategies relevant to inmates' efforts to avoid certain situations in order to reduce the risk of victimization were not tapped by the present study.

HYPOTHESIS 7: Prison victimization experiences will negatively correlate with perceived social support.

This hypothesis was not supported by the present project, as the correlation between victimization experiences and social support, while in the expected direction, was statistically insignificant. Rather, it appears that participants perceived low levels of social support generally, regardless of victimization experiences (which, as noted previously, were relatively few). As such, the limited variability of both variables likely contributed to the low correlation. Given these overall low levels of social support, it may be that healthy social support is not a sufficient presence in the prison environment to assist in preventing or mitigating victimization experiences. Rather, the frequency and impact of victimization experiences may be more importantly associated with environmental factors such as higher security level (Cooley, 1993).

HYPOTHESIS 8: Greater victimization experiences will correlate with poorer psychological adjustment (BSI and Fear of Victimization).

This hypothesis was partially supported in the present study, with a statistically significant correlation between victimization experiences and the fear

measure ($r = .27$), however no significant relation between victimization experiences and the General Severity Index (GSI) of the BSI. The significant relation between victimization experiences and fear is particularly striking given the limited victimization experiences reported by the present sample. The relation of fear to adjustment is consonant with established literature, indicating that prison victimization experiences have negative effects on fear and well-being (Maitland & Sluder, 1996; McCorkle, 1993a) as well as degree of emotional upset (Ireland, 1999; Struckman-Johnson et al., 1996). Further, as Kupers (1996) noted, victimization by assault in prison tends to recapitulate childhood traumas typically experienced by prison inmates. While not the primary focus of the present study, the majority of those responding to the child abuse items reported a history of physical and/or sexual abuse, and it would be reasonable to suspect that these experiences influenced their traumatic response to victimization experiences in prison.

HYPOTHESIS 9: Coping and social support are anticipated to correlate.

This hypothesis was not supported by the present project, in that the correlations between social support and Active and Escape were near zero. Further, social support was unrelated to the additional coping items created for the study in efforts to examine antisocial coping practices. Given the well-established connection between social support and coping in the literature (e. g., Monnier et al., 1998; Moos et al., 1990), it is likely that the generally low levels of social support reported by participants were insufficiently variable for meaningful analysis. A further caution is the potentially distorted self-

perceptive evaluations of coping strategies employed in the present study. If self-reported coping strategies did not reflect the actual coping abilities of inmates, as is suspected, the lack of significant result is not surprising.

In the present study, the well-established relation between coping and social support may also have been compromised by the antisocial nature of the social “support”. According to Moos et al. (1990), social support is beneficial to coping in that it facilitates positive problem solving. Monnier et al. (1998) added that effective coping strategies tend to strengthen social support. If the nature of social support is that it facilitates antisocial problem solving, as may be suspected in the present study, it is not particularly surprising that the present finding is opposite to that hypothesized based on the theory. Other research projects (e. g., Cooley, 1993, Winfree et al., 1994; Zaitzow & Houston, 1999) have suggested that the social environment of prison may not be conducive to positive social support, in particular at higher security levels where the pressures of conformation to the “inmate code” are prevalent. For example, Cooley noted that the social expectations of prison tend to simultaneously draw inmates together and isolate them, creating a “partially unstable” atmosphere. Winfree et al. pointed to the increase in gang members, drug-related offenders, and minority group cliques as factors influencing the acceptance and impact of an inmate code. Hunt et al. (1998) pointed to the confusion on the part of inmates as to how to negotiate the prison environment with the burgeoning influence of gangs. Given the medium security level of the current prisons under study and the characteristics of the present sample described above (for example, gang

membership), it may be reasonable to assume that these ambiguous social expectations exist for the inmates under study, thus rendering social support an equivocal and perhaps dubious resource.

HYPOTHESIS 10: Avoidance coping responses will correlate with higher levels of psychological maladjustment as measured by the BSI and Fear of Victimization questionnaire.

This hypothesis received mixed support in the present study, in that escape-based coping was significantly correlated with higher levels of psychological maladjustment ($r = .36$). Further, when all variables were regressed onto the General Severity Index of the BSI, only escape-based coping was significant. It should be noted that the converse was not true: There was no significant correlation between active-based coping strategies and positive adjustment/less fear. As such, it appeared that individuals who tend to be resigned, utilize cognitive avoidance, and engage in emotionally discharging behaviours were more likely to report psychological symptoms. This finding flows with the theoretical basis for the coping questionnaire (Moos et al., 1990) as well as with previous research which suggests a connection between poor coping in prison and higher levels of psychological maladjustment (e. g., Biggam & Power, 1999; Negy et al., 1997). Potentially inaccurate self-perceptions of active and presumably more positive forms of coping may have been subjected to distortion as described above and confounded any actual significant relation with psychological adjustment.

HYPOTHESIS 11: Lower levels of perceived social support will be related to higher psychological distress (BSI and Fear of Victimization questionnaire).

This hypothesis received some support in the present study, in that social support was significantly and negatively correlated with psychological symptomatology on the General Severity Index of the BSI ($r = -.27$), and with the fear measure ($r = -.22$). Other studies have identified a connection between social relationships and psychological adjustment. For example, Maitland and Sluder (1996) discovered that the ability to confide in friends was predictive of psychological well-being among prison inmates. Other studies with prison inmates have highlighted the importance of prison relationships in mitigating psychological distress, with a focus on the importance of inmate-staff relationships (e. g., Biggam & Power, 1997), not examined in the present study. It should be noted that although the correlations between social support and the outcome variables were significant, social support failed to emerge as a significant predictor in any of the regression equations. As such, the practical utility of the significant result is questionable, and social support is likely overshadowed by other variables in determining adjustment.

HYPOTHESIS 12: The two outcome measures (BSI and Fear of Victimization questionnaire) will be correlated, such that higher levels of fear will be associated with higher levels of symptomatology as measured by the BSI.

This hypothesis was supported by the present study, with a significant correlation between the BSI and fear scale ($r = .36$). This result has received support from previous research which has related fear with adjustment problems (e. g., Aday, 1994; Maitland & Sluder, 1996; McCorkle, 1993a). Given that the magnitude of the correlation was relatively low, it is apparent that the fear scale taps a construct which is meaningfully different from that of the GSI.

Exploratory Correlational Analyses

Most striking among the exploratory analyses was the significance of family of origin dysfunction and loss in relation to later behaviour and experiences. Merely the existence of brothers was, for the present inmates, associated with more frequent past imprisonment and more institutional charges, including assaultiveness towards staff. Having siblings who had been incarcerated further exacerbated the difficulties of inmates in the present sample. Specifically, the greater number of siblings incarcerated related to participants' being more likely to report no friends in the community, and more likely to receive institutional charges, including assaultiveness towards inmates and staff.

Parental loss at an earlier age was also associated with prison-specific variables. In particular, loss of a mother or father at an earlier age was associated with a longer period of imprisonment by the time of the present study. Paternal death generally was associated with more frequent past imprisonment and longer present imprisonment.

The role of early family experiences in later imprisonment was examined to a limited extent by Marquis (1992). He reported that prison inmates acknowledged greater

family dysfunction than did college students in the areas of parental break-up, alcoholism, foster care history, and physical abuse. Of note is that 17% of his sample of 118 inmates reported physical abuse, whereas well over half of the present sample considered themselves to have been physically abused. Motiuk (1995) examined the Marital/Family domain of difficulty among 103 Canadian federal offenders. It should be noted that this domain represents present as well as family of origin experiences. Motiuk found significant correlations between deficits in the familial area and conditional release failure. As such, it is likely that certain earlier experiences of inmates have a bearing on their later experiences with antisocial behaviour and imprisonment, which is fairly well supported in the literature (e. g., Quinsey, 1996).

The present project also suggested the dual nature of social support in the community, in that some forms and frequency of contact related to behavioural acting out whereas other forms of contact seemed to promote stability within some inmates' lives. It would be suspected that rather than the forms of contact being consequential, for example, letters versus visits, other and more important information about the nature of these relationships underlies these behaviours. While it has been argued that family support is important for decreased recidivism, improved mental health of inmates, and increased likelihood of family reunification following imprisonment (Hairston, 1991), other research has pointed to the potentially precarious nature of these relationships and questioned their utility in predicting later behaviour, such as parole success (Schafer, 1994).

Comparability of Results to Originally Proposed Model

The originally proposed model for the study, presented in a path analytic framework, anticipated that age and personality variables would impact on present psychological adjustment and fear through the influence of prison victimization experiences, coping, and social support. In the forced Stepwise Regression equation, Maladjust significantly predicted psychological adjustment (General Severity Index of the BSI only) during the first two blocks, and when all variables were entered in the third block, only Escape emerged as a significant predictor. As such, within the present sample, it appeared that coping to a limited extent mitigated the impact of personality characteristics on psychological adjustment. However, the substantial overlap in constructs measured by the MMPI-2 and BSI cannot be ignored, and likely contributed to the significance of the MMPI-2 in the regression equation. Further, as noted by Carbonell et al. (1984), personality scales may be useful in differentiating large groups which may differ in prison adjustment. However, additional information is necessary to consider when making decisions about individuals. Notably, of those who responded to the additional coping questions in the present study, the vast majority reported having used drugs and/or alcohol to cope with the possibility of violence. In fact, one may consider that substance use provides a mechanism by which to escape from problems. As such, the utility and impact of Escape and related coping is certainly emphasized by the present study.

Of note is that the majority of inmates did not report experiences with victimization in the medium-security institutions under study, even given a range of potential experiences including robbery, threat of assault, assault, and sexual assault. Similarly, the vast majority of the inmates under study did not incur institutional charges against other inmates. Further, fear, although highly variable among the present sample, averaged around the neutral mean of the questionnaire. These findings may reflect the actual situation in the prisons, i. e., that victimization and fear may not be a significant presence in the prisons under study, or alternatively may reflect the self-selection of research participants or demand characteristics of the straightforward questionnaire items. For example, it may be that those who are the most afraid or who have been most victimized by prison violence would be too intimidated to attend a group questionnaire session at the Psychology Department. Additionally, the variability in responses to the fear questionnaire may be accounted for by the direct questions about fear and prison violence. Specifically, the items may have elicited an exaggeration in some and a minimizing response in others. Given the connection of the study to the Psychology Department, it may be that some inmates who were connected to that department and felt more vulnerable were more likely to participate in the study and emphasize their difficulties. Conversely, Toch (1998) pointed to the “hypermasculinity” typical of many prison inmates, which relates to overcompensation for low self-worth as a result of negative life circumstances. According to Toch, this exaggeration of stereotypical masculinity is strongest in younger inmates and brings with it status, self-worth, and

insulation from harm. If such a mentality pervades the institutions under study, it may be reasonable to suspect that inmates may have minimized the dangers they faced. Although it is unclear whether either or both of these mechanisms affected the variability of responses in the present study, the possibility of their influence given the transparent nature of the questionnaire items warrants consideration.

A further notable result was that victimization experiences were relatively few and acknowledged by a minority of the prison population. From the results of the present study, it is not clear whether the actual rates of fear and victimization are relatively low, or whether other factors contributed to the variability and perhaps minimization of responses on those measures. As Cooley (1995) noted, being "solid" and not a "rat" are integral aspects of the inmate code of conduct which requires inmates to not report illicit inmate activities to staff. For example, the author is aware of a number of incidents in which inmates have clearly been assaulted but refused to identify the assailants, and at times even deny having been assaulted despite medical evidence to the contrary.

The other variables examined by the present study unexpectedly did not have the degree of predictive value anticipated. There are a number of possible explanations for this lack of result. First, a number of complications with regards to the measures used may have impacted on the results, particularly in relation to the sample. First, as noted previously, research with the MMPI-2 has yielded equivocal results in forensic populations, and is highly suspect with regards to predictive utility. In the present sample, the predominance of Scale 4 (Psychopathic Deviate) suggests personality pathology

(Greene, 1991), which may have distinct effects from other aspects of psychological distress. As such, given the confounding of antisocial personality characteristics and other psychological symptoms, the MMPI-2 may not have been sufficiently sensitive to meaningfully impact on the regression equations. The limited impact of the MMPI-2 most likely reflected similarity to the symptoms measured by the Brief Symptom Inventory.

Second, it appeared that the Coping Responses Inventory may not have tapped relevant coping dimensions used by inmates, and may have been subject to cognitive distortion as described above. As Zamble and Porporino (1988) noted, the efficacy of inmates' responses does not necessarily match their own favourable perceptions. Unfortunately, efficacy of coping responses was not tapped by the coping measure employed in the present study. In fact, it appeared that self-reported antisocial coping mechanisms were popular among the present sample. Therefore, it becomes less surprising that the influence of coping (derived from the standardized coping measure) on the overall regression model was decidedly weak.

The restricted range of responses on the social support measure revealed that the majority of inmates perceived very little social support overall, and this limited response range would understandably have little impact on the regression equation. The same issue holds true for the fear questionnaire, where responses were based on only three of the four items for the purpose of the present study. Given that the regression equation on Fear was

not significant, it is apparent that while related to psychological adjustment, it did not in itself constitute an adequate measure of adjustment.

Second, specific issues with the sample likely impacted on the nature of the results found in the present study. As noted, most participants were relatively young, rendering age variability limited, and contained a fairly substantial minority (approximately one-fifth) of gang members. The added dynamics which gang members bring to variables such as coping, social support, and victimization likely complicate their co-relationships.

Some of the limitations in response ranges of the questionnaires may have been due to the self-selective nature of the research volunteers. It may be that inmates who are willing to participate in research projects share certain characteristics: long-term offenders who are not coping particularly well, have few social supports, and experience some psychological symptoms. Given that the present project was conducted through the Psychology Department and that numerous of participants were taken from individual caseloads, it may be that the present sample psychologically represents that group of inmates who are more likely to seek treatment.

Summary and Conclusions

Although the thrust of the hypotheses was not supported by the present project, results did illuminate the struggles faced by the inmate population under study.

According to the present results, inmates as a group suffer from personality disorder, engage in few prosocial coping efforts in their environment, and are generally a socially isolated group. It appears that their inability to cope in a prosocial manner impacts on

their ability to garner support from those around them. As Zamble and Porporino (1990) pointed out, inmates' coping has tended to make difficult situations even worse. This is not surprising if it is considered that inmates bring with them their historically maladaptive appraisals of problem situations, antisocial personality characteristics, and limited range of coping responses into prison with them, as would be implied by the theory of Zamble and Quinsey (1997). Further, given the unhealthy lifestyles of criminals and the results of the present study, it is likely that available social supports were not prosocial nor particularly "supportive" in nature. The impact of a gang subculture as a form of social support both within prison and in the community has been recently documented (Zaitzow & Houston, 1999), and researchers have identified that the increased dominance of the gang subculture has resulted in changes in inmates' perception of social support within prison (Hunt et al., 1998). Somewhat understandably, the prison inmates of the present study are also a fairly depressed, suspicious group prone to fantasy and substance abuse as an escape from the realities of their situation.

It should be noted that inmate characteristics are likely not sufficient to explain the broad difficulties experienced by the sample. Rather, a situation-by-person approach is likely the most fruitful in understanding inmate behaviour (Bonta & Gendreau, 1990), including one taking into account the institutional environment or climate (McGee et al., 1998). The prison social environment itself likely feeds into individual psychopathology. As Cooley (1995) pointed out, there exists a set of "informal rules of social control" for inmates, including doing one's own time, avoiding the prison economy (i. e., not

borrowing goods from others), not trusting anyone, and behaviourally showing “respect” to one another. Given that these rules are typically enforced through potential or actual physical violence, they actually serve to foster social isolation, antisocial methods of coping, and a profound sense of distrust in others. As such, behaviours which might better serve psychological adjustment are discouraged. Wooden and Ballan (1996) described a process by which inmates adapt to prison by first learning the system and adapting to the “convict code”, assuming dysfunctional roles to enable survival, and acquiring power and status through manipulation of the system as one rises in the inmate social ranks. Only then does the individual begin the process of maturing/accepting responsibility and re-entering society. As such, inmates’ coping skills (or lack thereof) appear to be a reflection of the interaction between unhealthy personal characteristics and a confusing, potentially violent environment .

Inmates in the present study reported fairly high levels of distress, both on the MMPI-2 on intake and on the BSI in the course of the present research. In particular, depressive symptoms, interpersonal suspiciousness, and reality contact remained issues for individuals following entry into the general prison population. Thus, contrary to the views of Bonta and Gendreau (1990), some degree of psychological maladjustment appeared to be the norm for the present sample as individuals proceeded through their prison sentences.

The primary goal of the present study was to identify a mechanism by which to intervene with potentially vulnerable individuals at the early stage of their sentences, i. e.,

intake. This goal was met by the present study. In particular, high levels of distress on the MMPI-2, including social maladjustment, depression, rumination about problems, psychosomatic problems, suspiciousness, avoidance of reality through fantasy, and a perception of social alienation were predictive of some later difficulties. These difficulties included perception of little social support, greater psychological symptomatology, a tendency to use escape based coping strategies, and aggressiveness and association with a gang in response to the possibility of prison violence. Contrary to what was hypothesized by the present study, psychological symptomatology as measured by the MMPI-2 was not predictive of later victimization experiences. In fact, victimization experiences were reported by a minority of the present sample. Further, the difficulties identified above with the predictive utility of the MMPI-2 in forensic populations may have complicated the results. The defensive elevations of the MMPI-2 were not predictive of later difficulties in the sample. In spite of these difficulties, this information is potentially valuable to psychology intake staff, who would be in a position to identify and recommend monitoring or special placement of potentially vulnerable inmates in the general population. Given the social isolation of these individuals, it may be useful to connect them with those general population inmates who are observed to better cope with the dynamics and tribulations of prison.

The present study also suggests that staff involvement is particularly important in the management of inmates' safety in the prison environment. It is staff who have the responsibility of identifying potentially vulnerable inmates and taking steps to manage

their safety. Research supports the assumption that effective staff involvement has an impact on the well-being and level of violence within the prison population (Cooke, 1992; Farmer, 1994), as well as improved coping and psychological distress (Biggam & Power, 1997).

This project suggests that future directions for research and practice aim at the development of healthier, prosocial coping efforts and problem resolution at an early stage of incarceration. Empirical observations of coping would serve to increase the accuracy of determining an individual's coping skills (e. g., Zamble & Porporino, 1988). Together with coping skills, the present study suggests that an important area of research is in the nature and amount of social support both perceived and experienced by those in prison. In particular, it will be important to delineate the positive versus deleterious forms of social support available to inmates. Examining the differential impacts of these forms of social validation would be expected to have implications for experiences in prison as well as vulnerability to recidivism in the community.

Finally, significant family of origin loss and dysfunction, although only cursorily examined in the present study, appears to be an area which warrants further examination, in particular with regards to the interaction with inmates' personality styles and propensity for antisocial difficulties which extend into prison. The relation of inmates' current social relationships with personal stability versus antisocial practices is an important and related area, into which further research may suggest valuable strategies for intervention and perhaps prevention of later problems.

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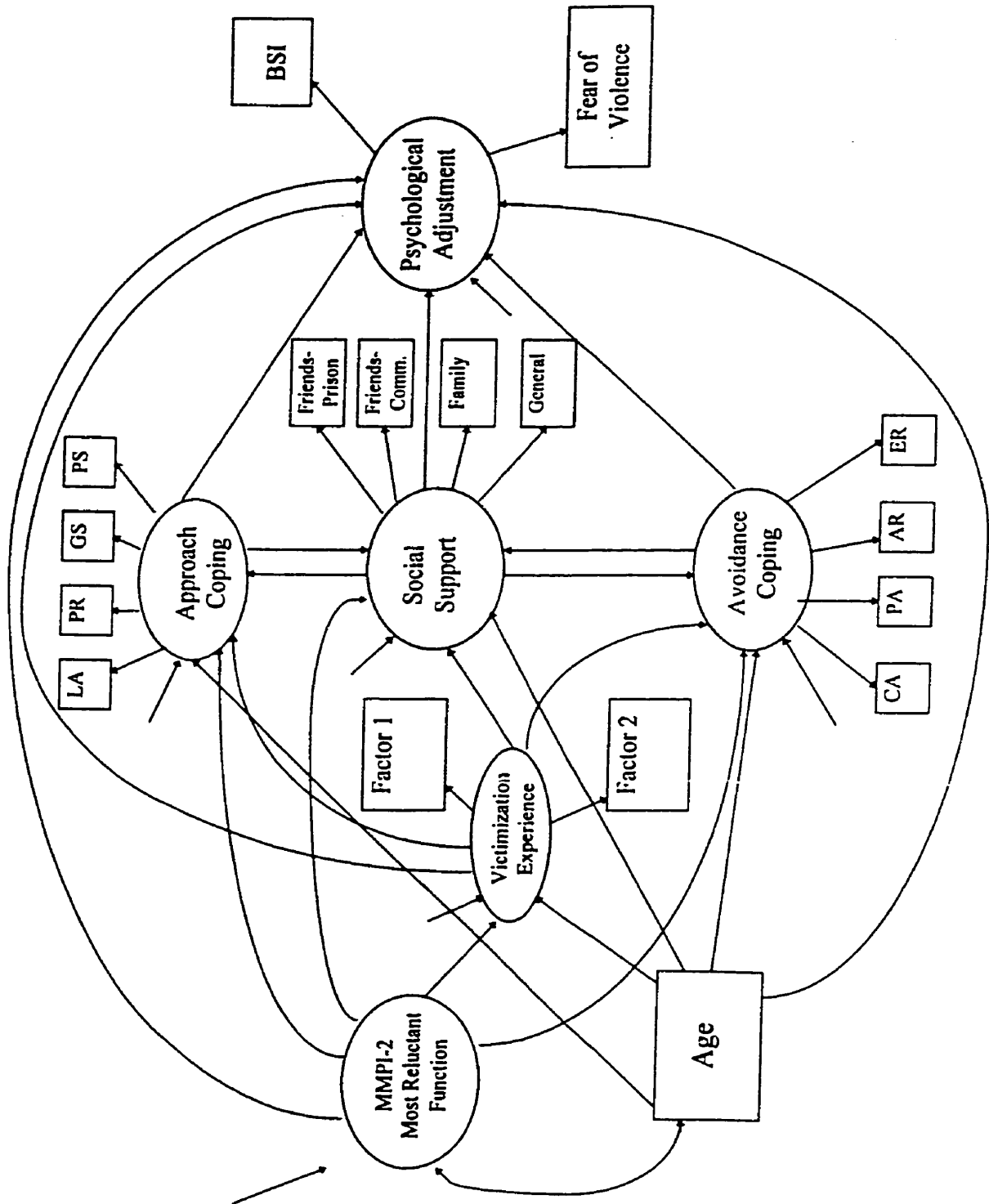
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APPENDIX A: Proposed Structural Equation Model



APPENDIX B: Letter of Explanation/Request for Participants

Research Project – SMI (SP)

This letter is to let you know that I am preparing to conduct a research project for my Ph. D. thesis within the prison. My study will be on inmates' experiences, adjustment, and coping with aspects of the prison environment. Participation involves filling out a questionnaire, which should take about an hour of your time. One of the focuses is people's experience with violence in prison. On questions such as these, no specific information about any incidents you may have experienced will be asked. You will only be asked about your experiences in general, behavioural terms, which would not identify you or anyone else personally. You will also be asked if your file information may be accessed to obtain further data, which is again totally up to you. You may participate in the questionnaire part of the study and refuse access to file information if you choose. Participation is completely voluntary, and even if you do agree to participate, you can withdraw from the study at any time and for any reason. It is hoped that the data collected for the study will be able to provide information on people's experiences and coping with the issue of violence and its possibility in prison. As a result, hopefully individuals who would be vulnerable to difficulties will be able to be identified earlier, and they can be connected with appropriate supports. As such, it is hoped that participation in this project will be of benefit to future inmates.

Participation is confidential, and will in no way affect your treatment within the prison or your release. As I am a staff member here as well as the researcher, I am taking steps to ensure that I will not be able to identify participants with their questionnaires. I am professionally and ethically bound to be unaware of who has provided what information, both as a staff member and researcher. In fact, if I do not keep this distance, it would be a violation of my professional ethical requirements, and I would likely not receive my doctoral degree nor be able to be registered as a psychologist if I were to commit such an ethical violation. As such, a volunteer research assistant (Trisha Fedorowich) who is not a staff member will be dealing with the questionnaires and any file information which would identify participants in the study. Once your data are collected, she will ensure that any information which would identify you by name is removed. When I see the data, all information will be identified by number only, without names. Other staff members of the Psychology Department (not myself) will be supervising small groups of individuals completing questionnaires. Staff members will be there to address any problems or questions which arise, and will not have access to your data, again in compliance with professional ethical guidelines. Following data collection, all questionnaires will be kept in a locked cabinet in the psychology department (identified by number only, no names), then destroyed in compliance with the University of Manitoba regulations. When the study is completed, I will make available a general summary of the results of the study (with no individuals identified) to anyone who would like feedback.

If you agree to participate, you will receive a pass within the next few weeks to come to the Psychology Department for a specific time. Questionnaire sessions will be held in the classrooms in the Psychology Department, and coffee and doughnuts will be provided for participants. Again, at any point you may withdraw from the study.

Please check off one of the two options below:

_____ Please send me a pass to participate in the research project.

_____ I do not wish to participate in the research project.

If you wish to participate in the research project and have a preference for the time of day, please indicate the time that is best for you by checking off one of the following. Trisha will do her best to accommodate you according to your availability:

_____ Morning

_____ Afternoon

Please return this form to the Psychology Department, with Trisha's name (which is typed on the back) facing the outside. It may be returned either through your IWC representative or through the institutional mail.

If you have any questions or concerns about the research project, please feel free to ask your IWC representative. If he cannot answer your question, he (or you) may contact either the research assistant (Trisha Fedorowich) or myself in the Psychology Department.

Thank you in advance,

Donna E. Chubaty, Ph. D. (Cand.)
Graduate Student, University of Manitoba

John R. Schallow, Ph. D., C. Psych.
Supervising Psychologist, University of Manitoba

APPENDIX C: Individual Counsellors' Script

“Donna Chubaty in Psychology is still accepting participants for her research project, and she has asked some staff members to see if inmates they have contact with would still be interested in participating. She asked me to send names of anyone interested to Trisha, the research assistant (not to Donna directly), and a pass could be sent out for you if you would be willing to participate but have not sent in a form. I won't keep any record myself of whether you are willing to participate or not, and it won't go on your file. The idea is to protect your privacy as much as possible.”

APPENDIX D: Consent Form for Research

The attached questionnaire is for the purpose of my Ph. D. thesis in Psychology. My research topic involves people's experiences in prison, how they cope, and how they adjust. Participation in the study is completely voluntary and in no way affects your release nor treatment in the institution. The questions which follow ask about your experiences in the above areas. Some of the questions are of a personal nature. If you are uncomfortable answering any of the questions, you can skip questions and still hand in the questionnaire. (I would rather have "some" data than "no" data.) If you find that you are upset as a result of answering some of the questions, please place a request in to the Psychology Department and someone will speak with you.

Every effort has been made to ensure that your answers are anonymous. Please do not put your name or any identifying marks anywhere on the questionnaire package, other than the signature line below. This form will be separated from your questionnaire information. Your name will not be used in any published or unpublished papers associated with this project. You will notice that your questionnaire is numbered. A volunteer in the Psychology Department has access to which number has gone to which individual, but the principal researcher (Donna Chubaty) does not have access to this information. Only the volunteer can match your name with your questionnaire. This is because I would like to be able to have access to file information to obtain additional data, other than your answers on the enclosed questions, if you allow. This information will include scores on psychological questionnaires completed at Intake, as well as additional background and security information. If you do not wish file information to be used but are willing to complete the questionnaire, please circle the following:

NO FILE INFO

If you agree to participate in the study, please indicate by signing your name below:

Signature

If you do not agree to participate in the study, please return this form and questionnaire to the staff member attending your session. There is no penalty for not participating.

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APPENDIX E: Demographic Questions

First, I'm going to ask you a few questions about your background and your life here.

1. How old are you?
2. Where are you from? (circle) CITY TOWN RURAL/FARM
3. How far did you get in school?
4. Have you done any upgrading since school? (circle) YES NO
 (a) If YES, to what level did you upgrade?
5. Are you (please check one): White
 First Nations
 Metis
 African-Canadian
 Other
6. How long is your present sentence? Years, Months
7. How far are you into your present sentence? Years, Months
8. Have you ever been in a prison before? (circle) YES NO
 (a) If YES, how many times?
 (b) If YES, (circle one or both) PROVINCIAL
 FEDERAL
8. Have you ever been treated for serious psychiatric or emotional problems? (circle)
 YES NO
 (a) If YES, who treated you? (circle) PSYCHOLOGIST
 PSYCHIATRIST PHYSICIAN OTHER
 (b) What was the diagnosis or problem?
 (c) How long were you treated for? Years, Months, Days
9. Have you ever seriously thought of suicide? (circle) YES NO
 (a) If YES, how often? Times in the last year
10. Have you actually attempted suicide? (circle) YES NO
 (a) If YES, how many times in the last year?
 (b) If YES, how many times over your lifetime?
11. Have you ever had any serious physical or health problems? (circle) YES NO
 (a) If YES, what kind?
 (b) If YES, are you currently being treated for your physical/health problems?
 (circle) YES NO
12. Are you on any medication now? (circle) YES NO
 (a) If YES, what kind?
 (b) If YES, for what reason?
13. Is your mother still living? (circle) YES NO
 (a) If NO, how old were you when she died?
14. Is your father still living? (circle) YES NO

APPENDIX F: Victimization Experiences

(entire present sentence)

1. During your present sentence, did anyone take something from you by use or threat of force or did anyone attempt to take something from you by use or threat of force? (circle)

YES

NO

(a) If YES, how many times did this occur in the last year?

2. An assault has occurred if you were kicked, slapped, punched or hit with an object. During your present sentence, were you assaulted? (circle)

YES

NO

(a) If YES, how many times in the last 12 months?

(b) If YES, please check off the statement that best describes the incident:

- The other person(s) hit first, and I took it
- The other person(s) hit first, and I tried to fight back, but couldn't
- The other person(s) hit first, and I was able to fight back successfully
- We started fighting at the same time, and it was hard to tell who hit first

3. During your present sentence, did anyone threaten to assault you? (circle)

YES

NO

(a) If YES, how many times did this occur over the last 12 months?

4. During your present sentence, has anyone pressured or forced you to have sexual contact, which involves the behaviours listed in (a) below? (circle) YES NO

(a) If YES, which of the following types of contact? (check off and write the number of times this occurred in the space provided)

- Tried to touch you, but was prevented, ___ times during this sentence
- Touched your sexual parts, ___ times during this sentence
- Made you touch his sexual parts, ___ times during this sentence
- Made you engage in oral sex, ___ times during this sentence
- Made you engage in anal sex, ___ times during this sentence

(b) How many different people have pressured or forced you into sexual contact during your present sentence? (check off)

- 1
- 2
- 3
- 4
- more than 4

(c) What kind of pressure or force was used by this person(s) to have sexual contact with you? (check all that apply)

- Persuasion - talked you into it
- Bribe
- Blackmail
- Threatened to withdraw affection/friendship
- Got you drunk or high
- Threatened to harm you
- Scared you because they were bigger or stronger
- Physically held you down or restrained you
- Physically harmed you
 - Used a weapon
 - Other:

APPENDIX G: Additional Coping Items

- used drugs/alcohol (What kind? _____)
- joined a gang (Which one? _____)
- got aggressive with someone before they got aggressive with me
- carried a weapon

APPENDIX H: Social Support Appraisals Scale

Below is a list of statements about your relationships with family and friends. Please indicate how much you agree or disagree with each statement as being true.

(Circle one number in each row)

Strongly Agree	Agree	Disagree	Strongly Disagree
1	2	3	4

1. My friends on the street respect me.
2. My friends in this prison respect me.
3. My family cares for me very much.
4. I am not important to others.
5. My family holds me in high esteem.
6. I am well liked.
7. I can rely on my friends on the street.
8. I can rely on my friends in this prison.
9. I am really admired by my family.
10. I am respected by other people.
11. I am loved dearly by my family.
12. My friends on the street don't care about my welfare.
13. My friends in this prison don't care about my welfare.
14. Members of my family rely on me.
15. I am held in high esteem.
16. I can't rely on my family for support.
17. People admire me.
18. I feel a strong bond with my friends on the street.
19. I feel a strong bond with my friends in this prison.
20. My friends on the street look out for me.
21. My friends in this prison look out for me.
22. I feel valued by other people.
23. My family really respects me.
24. My friends on the street and I are really important to each other.
25. My friends in this prison and I are really important to each other.
26. I feel like I belong.
27. If I died tomorrow, very few people would miss me.
28. I don't feel close to members of my family.
29. My friends on the street and I have done a lot for one another.
30. My friends in this prison and I have done a lot for one another.

APPENDIX I: Fear of Victimization

Please indicate on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree) with the following statements:

1. The odds of getting hurt while you're pulling time here are pretty high (.64).
2. I worry a lot about getting beaten up or attacked before I get out of here (.53).
3. One of the worst things about being in prison is that you never know when somebody might try to really hurt you (.56)
4. You can't help feeling like a caged animal in a place like this (.57).

APPENDIX J: Summary of Results for Participants

The following is a summary of the study in which some inmates agreed to participate in the summer/fall of 1998:

The main purpose of the study was to investigate violence, fear, and coping in a prison setting. In particular, the study looked at how people in prison deal with the possibility of violence. Some inmates may have experienced violence themselves within prison, and how individuals have coped with that experience was also relevant to the study. Generally, the theory was that individuals come to prison with unique personality characteristics, which impact on their experience of prison. As such, measures of personality gathered at the Intake stage were important. As well, measures of psychological symptoms and fear were taken to assess individuals' psychological adjustment and perception of danger in their environment. Two other measures looking at coping and social support were included, as these variables have been shown to have an impact on psychological effects of negative experiences, such as violence. The main hypothesis was that certain personality characteristics would impact on a person's experiences with violence and adjustment/Fear in prison, mitigated by coping strategies and social support. The hope is that in the future, people at risk for experiencing violence or for difficulties in coping with the prison environment could be earlier identified and assisted.

The following is a general summary of the results:

Overall, personality factors and a tendency to use escape to cope with the possibility of violence were associated with later adjustment difficulties. Characteristics like unreliability, self-centredness, difficulties in planning ahead, and feelings of disconnection from others predicted later psychological symptoms, as did being resigned to potential violence, avoiding thinking about the problem, and discharging feelings. There were a number of things that were striking about the findings. First, as a group, the sample seemed to feel quite socially isolated and fairly emotionally stressed. A substantial minority of people indicated that they had been either threatened or assaulted in prison. Involvement with a mental health professional appeared to help some individuals with their coping. Another interesting finding related to family backgrounds of participants. In particular, many inmates reported having had a sibling incarcerated, and many reported having lost a parent earlier in their lives.

The primary goal of the study was met: It was possible to identify early on inmates who may have later difficulties in the general prison population. Specifically, it seems that people whose personality test scores indicate more distress on intake tend to have more difficulties in the prison population, as do those who tend to avoid dealing constructively with the potential violence in their environment.

If, after reading this, you are concerned that you may have been negatively affected by your own experiences with violence in prison (or its possibility), please feel free to send a request to the Psychology Department, and someone will speak with you.

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