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Victimization, Stress, and Psychological Well-being: An Analysis of the 2009 Canadian Victimization Survey

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Abstract

This study addresses several methodological and theoretical gaps in extant literature that has examined victimization and its correlation with resultant mental health outcomes. The 2009 Canadian GSS Victimization [cycle 23] survey, comprising of 19,422 participants aged 15 years or older, was used to examine: (1) the extent to which different forms of victimization are related to stress, psychological well-being (i.e., self-report mental health and life satisfaction), and substance abuse behavior; (2) whether stress acts as a mediator in the relationship between victimization and mental health outcome measures; (3) if low total household income moderates the association between victimization and mental health. It was found that several types of victimization significantly predicted greater levels of stress, poorer self-report mental health and lower levels of life satisfaction, as well as greater odds of engaging in alcohol and drug use behavior. It was also determined that perceived stress mediates (either fully or partially) the relationship between some forms of victimization and psychological well-being (i.e., measurement of self-report mental health and life satisfaction, but not substance abuse). Although very limited support is found for the third hypothesis, it was determined that low THI modifies the association between physical/sexual assault and life satisfaction to predict a stronger negative correlation, compared to the main effect; low THI modifies the association between personal victimization and high alcohol use to predict a stronger positive correlation. Agnew's General Strain Theory (1992), Pearlin's Stress Process (1981), and the causation hypothesis are used to inform the discussion of results. Future research/policy directions are discussed.

Keywords: personal victimization; household victimization; cyber-bullying; intimate partner violence; mental health; stress; life satisfaction; substance abuse.

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Preface

The interconnectedness and feedback looping nature of the association between victimization and mental health has provided criminologists, sociologists, and psychologists with a myriad of ideas for empirical examination. In other words, depending on what perspective a researcher takes, a different story may be told as to how one construct relates to the other. The current study takes the focus of victimization as a source of strain that correlates with worsened mental health outcomes as a result. Despite the fact that this relationship is well known in victimization literature, methodological and theoretical shortcomings pervade. On the one hand, research has too often analyzed a direct relationship between these constructs. On the other hand, theoretical frameworks have largely been neglected as a method for inferring findings. Primarily using Pearlin and colleagues' (1981, 1989) Stress Process paradigm (as well as Agnew's General Strain Theory [1992]), the relationship between victimization and subsequent mental health outcomes is portrayed in a new light in this thesis. Through the utilization of the theoretical and analytical assertions made by Pearlin, this relationship is not only interpreted through a sociological perspective of mental health but also in a more complex and 'fluid' nature than it has been previously presented (i.e., less attention to the direct relationship and more to the underlying social contextual factors that could play a part in the process of victimization leading to mental health outcomes). Based on this, it is hoped that the current research and discourse on this topic will not only lead to scholars acknowledging the necessity of including social contextual factors and recognizing an indirect relationship in future research, but also remodel the way that clinicians and mental health professionals manage patients who have also suffered from some type of victimization. Accordingly, this dissertation is original, unpublished, independent work by the author, Bryce E. Stoliker.

CHAPTER I: INTRODUCTION

It is, of course, hardly novel to suggest that victimization and mental health share an intricate relationship. For several years scholars have taken advantage of the multifaceted nature of the association between mental health and victimization, and have identified several pathways to explain how these constructs are related to one another. For instance, researchers have analyzed the extent to which individuals with a mental illness/disorder are more likely to be the perpetrators of violent acts—as opposed to have been victimized themselves (e.g., Link, Andrews, & Cullen, 1992; Link, Monahan, Stueve, & Cullen, 1999; Steadman et al., 1998). In contrast, a growing body of research has examined mental health as a predictor of experiencing victimization (for a review, see Brekke, Prindle, Bae, & Long, 2001; Goodman et al., 2001; Hiday, Swanson, Swartz, Borum, & Wagner, 2001; Hiday, Swartz, Swanson, Borum, & Wagner, 1999, 2002; Silver, 2002; Silver, 2006; Silver, Arseneault, Langley, Caspi, & Moffitt, 2005; Teasdale, Daigle, & Ballard, 2014). Finally, a greater proportion of studies have analyzed victimization as an antecedent to mental health problems of individuals (see Coker et al., 2002; Davis & Friedman, 1985; Dutton et al., 2006; Elgar et al., 2014; Eshelman & Levendosky, 2012; Hanson, Sawyer, Begle, & Hubel, 2010; Harrison & Kinner, 1998; Kilpatrick & Acierno, 2003; Michalos & Zumbo, 2000; Nada-Raja & Skegg, 2011; Norris & Kaniasty, 1994; Pico-Alfonso et al., 2006; Skogan, 1987; Solomon & Davidson, 1997; Sourander et al., 2010; Wirtz & Harrell, 1987).

Although a significant amount of research has been conducted on the latter ‘pathway’ of victimization and mental health (i.e., incidents of victimization and how they relate to psychological well-being), there is still much to ascertain when it comes to this particular relationship in terms of methodological and theoretical explanations for its occurrence.

Accordingly, the purpose of this thesis research is to advance current discourse on the topic of victimization and subsequent mental health adversities by examining the extent to which different forms of victimization are related to stress, psychological well-being (i.e., self-report mental health and life satisfaction), and substance abuse behavior; whether stress acts as a mediator in the relationship between victimization and mental well-being; and, if total household income (hereafter also addressed as "THI") exacerbates the association between victimization and mental health. It is expected that, by increasing our knowledge on those dealing with victimization and associated psychological distress, the findings of the present study could be used to develop/restructure current intervention and prevention strategies in order to appropriately manage victimized populations.

1.1 Victims and Victimology

It is generally accepted that a *victim* is an individual or group of individuals who have experienced hardship, loss, or injury at one point or another due to any cause—a fairly broad definition of this term (see Scott, 2011). From a social theoretical perspective, the understanding of what being a victim entails may further be complicated when considering cultural perspectives of what may constitute a hardship or adversity. Not only that, but the operationalization of the term *victim/victimization* may vary with regards to what academic researchers are interested in capturing in relation to this construct and its associated variables. In any case, victims may range from those who experience physiological adversities, such as cancer, HIV/AIDS, or other diseases, to those who have been victims of genocide (for example, the Holocaust), natural disasters, drug addiction, wrongful conviction (Scott, 2011), and of course those who have been victims of criminal harm (i.e., assault, property crime, etc.). In addition to that, a victimizing event need not directly affect an individual in order for them to be considered a victim. In other

words, there are various ‘tiers’ of victims based on their direct (or indirect) involvement with victimization. Scott (2011) classifies three types of victims. *Primary victims* are the obvious victims who identify as such and who have experienced the harm directly. *Secondary victims* are those who are not directly involved in the victimization, but are emotionally close to the primary victim. “The closer the emotional ties, the more a secondary victim is said to ‘share the pain’ of the primary victim” (Scott, 2011, p. 19). *Tertiary victims* are those who are not proximally close to the primary victim, but may experience emotional or psychological hardship by the news of a victimizing event. Although further detached from the primary victim, the news could have a psychological impact, as these individuals may endure fears of being a victim of a similar accident/victimization.

Thus, the definition of a ‘victim’ rests on a continuum, as there is a wide array of victimizing incidents an individual or group may endure. Classification may also be further complicated by the chronicity, severity, co-occurrence, and proximal (or distal) experience of victimizing events one encounters. Accordingly, for the purpose of this thesis report, victims will be restricted to those who are directly exposed to personal victimization, household victimization/property crime, cyber-bullying, and spousal abuse (i.e., physical, sexual, and emotional abuse)—these variables are further discussed and operationalized throughout the literature review and methods section of this report.

Although this thesis is premised on sociological and criminological contexts, the report also relates closely to the fairly young field of *victimology*. This field emerged from the study of criminology, but differs largely in perspective. For criminology, the focus is primarily on the offender and relative crime trends, theoretical explanations for criminal activity, and efforts for reducing such social problems. Victimology takes the reverse perspective of criminology,

wherein the study of crime and related victimizing events/harms are from the victim's point of view, "providing insight to the challenges facing victims and potential victims" (Scott, 2011, p. 3). The study of victimology brings the victim into the forefront of analysis in the attempts to eradicate not only the likelihood of victimization, but also the related distresses surrounding such hardships. Scott (2011) defines victimology "as the study of victims and the social context in which they exist" (p. 3)—(for more detail on *victims* and *victimology*, see Scott, 2011). Thus, akin to the victimological perspective, another fundamental purpose of this research is to shed light on the "other side" of the victimizing event and shift attention towards those who have experienced these traumatic life events and associated psychological adversities. Albeit it is imperative to understand criminal events themselves, all too often are victims left on the sideline due to the sensationalism of crime and the criminal.

1.2 Victimization Rates in Canada

In a Statistics Canada study, Perreault and Brennan (2013) utilized General Social Surveys on victimization (primarily the 2009 GSS victimization cycle; the survey used in the current study) in order to report on characteristics associated with criminal victimizations, socio-demographic factors and their relation to victimization, consequences of victimization, and victims' police reports of victimizing incidents. This article primarily focused on two major classifications of (criminal) victimization, which are relevant to the current study. On the one hand, there is *violent victimization*. This includes three sub-groups of victimization: sexual assault (i.e., forced sexual activity or unwanted sexual touching); robbery (i.e., theft or attempted theft where the perpetrator used a weapon and/or violence, or a threat of violence); physical assault (i.e., any physical aggression, threat of physical harm, or incident with a weapon). On the other hand, there is *non-violent victimization*. This type of victimization was primarily sub-

classified into household victimization/property crime, such as: break and enter (i.e., illegal entry into victim's residence); motor vehicle/parts theft (i.e., theft of a motor-vehicle or its parts); theft of household property (i.e., theft of any household items); vandalism (i.e., damage of victims' property); theft of personal property (i.e., theft of victims' personal items [money, bank cards, etc.] without confrontation of the victim; making it different from robbery). With respect to geographical prevalence of victimization, Perreault and Brennan (2013) found that in 2009 both violent and non-violent crime/victimization were highest in western Canada. These trends were greatest in Manitoba and Saskatchewan. However, New Brunswick showed an exception to this trend with respect to violent victimization, as this province displayed rates closely related to those in western locations.

These authors discuss trends in violent victimization in relation to socio-demographic factors. In general, Perreault and Brennan argued that, in 2009, 6% of the population aged 15 and over in Canada reported having experienced violent victimization (i.e., sexual assault, robbery, or physical assault) in the 12 months prior to the administration of the survey, which parallels the rates in 2004. Physical assault was the most commonly reported victimizing incident, followed by sexual assault, and robbery. This survey also captured incidents of poly-victimization, wherein 74% reported being victimized once, 16% reported being victimized twice in the preceding 12 months, and 10% indicated they had been victimized 3 or more times. With regards to age, it was determined that younger Canadians were at greater risk than older Canadians to be violently victimized, with those aged 15 to 24 years to be 15 times more likely to report being a victim of violent victimization compared to those aged 65 and older.

Rates of violent victimization were higher among single people and lower for those who were married; those cohabiting also indicated higher rates when compared to married

individuals. With respect to ethnic/cultural factors and how they relate to victimization, it was determined that rates of violent victimization among Aboriginals were double those who identified as non-Aboriginal. Additionally, rates of violent victimization were lower for visible minorities compared to non-visible minorities, as well as lower for immigrants compared to non-immigrants. Perreault and Brennan state that the trend for sexual assaults has been relatively similar over the 1999, 2004, and 2009 victimization cycle surveys. Unsurprisingly, the rates of sexual assaults were higher among females. These authors report that, in the 2009 cycle, the rate of sexual assaults for females was double the rate of male reports. Of the sexual assaults reported, 70% involved a female victim. Over half of the sexual assaults (54%) reported by respondents occurred in a commercial or institutional establishment. Furthermore, it was determined that a victim's consumption of alcohol put them at a greater risk of violent victimization (particularly, physical assault). Specifically, rates of physical assault were approximately 3 times higher for those who had consumed 5 or more alcoholic drinks in one sitting compared to those who drank fewer beverages or none at all. Likewise, those who used drugs were approximately 8 times more likely to be a victim of physical assault compared to those who did not use drugs (Perreault & Brennan, 2013).

Perreault and Brennan further discuss non-violent victimization and its correlation with socio-demographic factors. These authors state that the rate of household victimization in Canada has remained stable since 2004. With respect to the prevalence of household crimes, theft of household property (35%) and vandalism (31%) were reported the most, with break and enters (20%) and motor-vehicle theft (14%) not far behind. It was found that, in 2009, Canadians who rented households were more likely to report a break-in than those who owned their home. In terms of motor-vehicle theft, theft of household property, and vandalism, it was indicated that

rates were comparable for owners and renters. Additionally, those who lived in their house for a shorter period were more likely to experience household victimization compared to those who have resided longer. Being a victim of motor-vehicle theft was correlated with the number of people residing in a given household, with those living in a larger household at greater risk of victimization than those in a smaller household. For instance, households with three or more people were twice as likely to report motor-vehicle theft compared to a household of one. Perreault and Brennan attribute this to the fact that larger households may simply have more vehicles, thus increasing opportunity for this type of victimization. Place of residence appears to play a role in the likelihood of household crimes. In this case, it was indicated that those living in a high-rise apartment building (five or more storeys high) had lower rates of victimization than those in houses. Also, those living in apartments were less likely than those in single-detached houses to report being a victim of household theft. It appears that being a victim of vandalism is correlated with household income. Here, report of vandalism for households with an annual income of $100,000 or more was roughly 1.5 times higher than those with an income of under $20,000. Theft of personal property (i.e., theft of money, clothing, or jewellery wherein the perpetrator does not confront the victim) accounted for over one-third of victimizing incidents reported to the survey.

Undoubtedly, experiencing violent or non-violent victimization can have an adverse effect on victims whether it is emotional/psychological problems, financial issues, or inability to carry out daily activities (Perreault & Brennan, 2013). These authors discuss the impact that the aforementioned forms of victimization have on the victim. In general, 8 in 10 victims reported that a victimizing incident had an emotional effect on them. The most common emotional consequences were anger (34%), feeling upset/confused/frustrated (22%), annoyance (14%),

becoming more cautious/aware (9%), and fear (10%). Less common reports of emotional consequences included shock/disbelief (7%), hurt/disappointment (7%), feeling victimized (6%), and feelings of depression/anxiety (2%). Finally, these authors discuss respondents' perceptions of safety. A large proportion of Canadians (93%) reported that they were satisfied with their safety in 2009, similar to the rates in 2004. With respect to specific situations, 90% indicated that they felt safe when walking alone at night in their neighbourhood, and 58% of those who use public transit indicated that they were not worried at all when waiting for these services at night. Further, 80% of Canadians reported that they had no concern about their safety when alone at home during the evening.

With the advancement in communication technologies, as well as information technology, we witness a fairly new breed of victimization. The Internet, computers, and smartphones have provided a range of benefits, from the ability to connect us worldwide with others on social levels (via social media or instant messaging), to the exchange of goods and services at the global level, as well as the ability to manage finances via online banking—to name a few. However, the benefits that these technologies (and their services) have provided are also associated with new opportunities for crime and the risk for new forms of victimization (Elgar et al., 2014; RCMP, 2011; see also Perreault, 2013). One such form of victimization associated with online activity that has grown in popularity in both public and academic spheres is that of cyber-bullying.

Using the Canadian GSS victimization survey, 2009, Perreault (2013) examined the prevalence, as well as associated socio-demographic factors, of cyber-bullying among youths and adults. It was determined that 7% of Internet users 18 and older have been cyber-bullied. Receiving threatening or aggressive e-mails or instant messages was the most commonly

reported form of cyber-bullying experienced (73%), followed by being the target of hateful comments (55%), and 8% had someone send out threatening e-mails under his or her identity. The risk of being cyber-bullied was increased for those who used chat sites or social networking sites, wherein users were roughly three times more likely than non-users to be cyber-bullied (14% and 11% compared to 4% and 3%, respectively; Perreault, 2013). Moreover, younger adults run a greater risk of being cyber-bullied. Specifically, Perreault indicated that those between 18 and 24 years of age were three times more likely than those 25 and over to report being a victim (17% versus 5%). Single individuals were more than three times as likely than those who were married or cohabiting to be a victim of cyber-bullying (15% versus 4%, respectively). With respect to sexuality, it was stated that those who identified as homosexual or bisexual were more likely to be cyber-bullied compared to heterosexual respondents (18% and 24% versus 7%, respectively). Those with some form of mental or physical condition/limitation or health problem were also at greater risk of being cyber-bullied, as it was reported that 22% of those between ages 18 to 34 with a limitation experienced cyber-bullying, compared to 10% of those without a limitation.

Furthermore, when it comes to children and cyber-bullying it was indicated that approximately 9% of adults with a child/children had known about any cyber-bullying incidents that their child might have encountered. Roughly 15% of adults reported that more than one child living in their household had been the victim of cyber-bullying. For children, the most prominent form of cyber-bullying included being the target of threatening messages or e-mails (indicated by 74% of adults), followed by receiving hate comments (72%), and using the child's identity to send threatening messages (16%). Unsurprisingly, 71% of adults reporting on cases of cyber-bullying or luring against a child living in their household indicated that the victim was female.

1.3 Rates of Mental Illness and Disorders in Canada

Using the 2012 Canadian Community Health Survey-Mental Health (CCHS-MH), Pearson, Janz and Ali (2013) report on prevalence of mental health disorders and substance abuse disorders in Canada. Specifically, this survey collected information on Canadians 15 years and older based on both lifetime and 12-month rates of selected mental health and substance abuse disorders. The authors state that, in 2012, roughly 9.1 million Canadians (1 in 3 persons) displayed symptoms of at least one of the six mental health or substance abuse disorders measured in the survey. With respect to the lifetime prevalence of disorders, 21.6% of Canadians met criteria for substance use disorder. Specifically, 18.1% of Canadians were dependent on or abused alcohol, 6.8% abused or were dependent on cannabis, and 4% were dependent on or abused other drugs (excluding cannabis). In terms of mental disorders (lifetime prevalence), 12.6% of respondents met the criteria for a mood disorder, with 11.3% having exhibited symptoms of a major depressive episode, and 2.6% having suffered from bipolar disorder. In addition to that, 8.7% of Canadians met criteria for generalized anxiety disorder during their lifetime.

Although the 12-month prevalence of mental health and substance abuse disorders were significantly lower than the lifetime rates, there are still some striking results of Canadians' mental health during the 2012 period. In this case, approximately 2.8 million Canadians (or 1 in 10 persons) met the criteria for one of the measured disorders. With regards to the 12-month prevalence of disorders, 4.4% of Canadians met criteria for substance abuse disorders in the 12-month period. In particular, 3.2% exhibited symptoms of alcohol abuse or dependence, 1.3% met criteria for abuse or dependence of cannabis, and 0.7% met diagnostic criteria for abuse or dependence of other drugs (excluding cannabis). Furthermore, in this 12-month period

approximately 5.4% of Canadians met the diagnostic criteria for a mood disorder, with 4.7% displaying symptoms of major depressive episodes, and 1.5% showing signs of bipolar disorder. Finally, 2.6% of Canadians met the criteria for generalized anxiety disorder over the 12-month period.

According to a 2009 report on mental illness by the Mood Disorders Society of Canada, it was argued that the chances of a Canadian experiencing a mental disorder is 1 in 5, and at any given point 10.4% of Canadians suffer from a mental illness. In addition to that, the percentage of adolescents (15-24 years of age) who reported a psychological illness or substance abuse issue was 18 percent. It was further suggested that 8% of Canadians will experience a major depression in their lifetime, 1% will experience bipolar disorder, 1% will experience schizophrenia, and 12% will suffer from anxiety disorder(s) in their lifetime. Moreover, 3% of Canadian women and 0.3% of men are affected by eating disorders in their lifetime. When it comes to suicide, approximately 90% of people who commit suicide have a diagnosable mental illness. Strikingly, each year there are roughly 4,000 deaths in Canada attributed to suicide. It accounts for 24% of deaths among Canadians aged 15-24 and 16% of deaths for those aged 25-44 (for more information, see Mood Disorders Society of Canada, 2009; see also Kirby & Keon, 2004; Stewart, Lips, Lakaski, & Upshall, 2002).

Although these numbers provide a general idea of the rates of mental health problems and disorders in Canada, the data only focus on a small snapshot of mental disorders and illnesses, excluding a vast amount of other relevant disorders/illnesses that individuals may suffer from in Canada. Thus, these values, as accurate as they may be, cannot be taken for face value, as the story may vary depending on the number and types of disorders that are analyzed. What is more, with the advent of the *DSM-5* (released May 18, 2013), classifications of disorders may have

changed and new types of disorders have been developed since the release of these prevalence reports on Canadian mental health.

All things considered, the aforementioned statistics indicate that issues of both victimization and mental health are pervasive within the Canadian context. Although these prevalence reports provide a general ‘starting point’ to the understanding of mental health and victimization as they occur in the Canadian public, these constructs are better understood when analyzed in concomitance. As previously stated, the general goal of this study is to examine the association between victimization and mental health, presenting the underlying dynamics of the relationship from the perspective of victimization predicting individuals’ mental health outcomes. From here, we analyze the victimization—mental health relationship from the perspective of previous scholarly discourse, as well as embed the discussion of this association within the theoretical frameworks of Leonard Pearlin’s Stress Process paradigm, Robert Agnew’s General Strain Theory, and the causation hypothesis.

CHAPTER II: REVIEW OF LITERATURE & THEORETICAL CONSIDERATIONS

2.1 Main Theoretical Frameworks

2.1.1 The Stress Process Paradigm

Previous scholars have overlooked *the stress process* as a paradigm that could aid in explaining the association between victimization and subsequent psychological distress. Therefore, one of the main purposes of this study is to situate the findings within the theoretical groundwork of the stress process paradigm in order to extend our current understanding of the victimization—mental health phenomenon (for review of the stress process, see Pearlin, 1989, 1999; Pearlin, Menaghan, Lieberman, & Mullan, 1981; Thoits, 2006; Turner, 2010; Turner & Lloyd, 1999; Wheaton, 2010). The stress process is a paradigm that asserts that social stress is a complex phenomenon, "combining three major conceptual domains: the sources of stress, the mediators of stress, and [lastly] the manifestations of stress" (Pearlin et al., 1981, p. 337). For instance, in understanding the *sources of stress*, interest has been focused on life events and chronic life strains (i.e., strains such as those encompassing the experiences of victimization, economic strains, etc.). Secondly, concepts of social supports and coping are prominent in work concerned with factors that potentially *mediate* the relationship between stresses and mental health issues. With respect to stress and symptomatic *manifestations*, Pearlin and colleagues (1981) suggest that research has extended from microbiological 'substrates' of stress to overt emotional and behavioral expression. It is maintained that various factors converge to explain the manifestations of stress (i.e., mental health outcomes), rather than single domains explaining psychological adversities that arise from stressful life experiences. Put differently, the stress process argues for a more elaborate understanding of the processes leading from the experience of strains to subsequent adverse mental health outcomes (see Pearlin et al., 1981). The stress

process presents a sequential dynamic, wherein the experience of life/chronic stressors is linked to mental health problems by a process of underlying individual and social experiences. Following this theory, experience of victimization would not directly explain subsequent mental health adversities. Instead, in combination with other interpersonal experiences, social and individual factors, and potentially mediating factors (i.e., in this study, being stress itself), one's experience with a victimizing incident eventually prompts adversities in mental health, or as Pearlin refers to it as 'manifestations of stress'.

With the advent of the stress process paradigm in their 1981 article, Pearlin and his colleagues ultimately shifted the "sociological study of mental health from an emphasis on psychiatric disorder to a focus on social structure and its consequences for stress and psychological distress" (Avison, Aneshensel, Schieman, & Wheaton, 2009, p. v). Accordingly, this theory took the front seat as the dominant perspective for informing sociological inquiry of stress and mental health (Avison et al., 2009). Since it was launched, Pearlin and several other researchers have revisited and elaborated on the model in order to more fully capture the complexities of social life in the pursuit for understanding stressful life events and psychological adversities (see Pearlin 1989, 1999; Pearlin, Schieman, Fazio, & Meersman, 2005; Pearlin & Skaff, 1996; Thoits, 2006). For instance, in his 1989 paper, Pearlin discusses the stress process in a context that clarifies analytical and conceptual issues in order to relate stress more closely to the sociological field. The overarching theme of this article is that in the study of individual well-being, researchers must consider how people are situated in the larger context of society (i.e., background, social status, economic arrangements, etc.) and how this may have an effect on the main associations between sources of stress and subsequent manifestation of stress. In other words, Pearlin maintains (1989) that in the empirical study of the stress process,

background/structural factors must be moved to the forefront of the empirical analysis of stress, rather than simply included as controls which, he states, has been the common pattern for previous research to this point.

In general, incorporating these analytic strategies (i.e., directly examining individual and social factors that converge onto the main associations) provides a better understanding of the complex nature of the stress process, as well as ultimately informs us on how individual and social factors play a role in impacting: exposure to stressors, the resources people may have access to, and the manifestation of psychological distress (Pearlin, 1989). This assertion follows closely with the argument for the causation hypothesis in the explanation of lower-socioeconomic status, and co-occurring life adversities, having a compounding impact on psychological well-being (discussed in section 2.2). Here, it is contended that life stressors may be unique and exclusive in their own right, but they cannot be evaluated separately in the process of stress, as "stressors typically surface as groups or constellations of stressors" (Pearlin, 1989, p. 254). It is further suggested that by analyzing stressors separately, results may not truly reflect the impact stressful life events may have on individual well-being, as stressors are more likely to interact in a compounding nature. Thus, it is clear that Pearlin is arguing for fluidity and dimension in empirical research rather than a monotonous analysis of factors separate from one another, and making inferences only on variables' independent contributions to risk of psychological distress/strain. All things considered, with respect to the current study, and following Pearlin's stress process paradigm and the argument for complexity/fluidity in understanding the manifestations of stress, it is reasonable to assert that the association between victimization and mental health/well-being will be mediated by the level of perceived stress one experiences. Thus, suggesting that it is the victimization that elicits stress, further leading to

subsequent mental health problems, and not solely the experience of victimizing events explaining ones' mental health outcomes.

2.1.2 Agnew's General Strain Theory

In addition to the application of Pearlin's Stress Process paradigm to the victimization and mental health association, this relationship also closely resonates with Agnew's (1992) General Strain Theory (hereafter GST) of crime and delinquency. In his 1992 study, Robert Agnew postulated at the broadest level that strain theory has its roots in the negative interactions/relationships individuals endure, wherein strain is a consequence of an individual "not [being] treated as he or she wants to be treated" (p. 48), which has the potential to produce negative affective emotional states as a result (such as anger, but may also include other emotional reactions to strain). More specifically, the GST posits three major sources of strain. These include (1) preventing one from achieving positively valued goals; (2) removing or threatening to remove positively valued stimuli that one possesses; or (3), presenting or threatening to present one with noxious or negatively valued stimuli (Agnew, 1992).

Although the primary scope of GST is to assess the impact that these types of strains have on the likelihood of individuals engaging in criminal and delinquent behavior, it clearly offers explanation for the association between victimization and subsequent mental health adversities (especially in relation to substance abuse, as this is evidently regarded as a delinquent social behavior/method of maladaptation). What is more, it is apparent that in discussing GST, Agnew (1992) alludes to the connection between *presentations of strain* and *delinquent behavior* as ultimately deriving from a path that begins at the experience of strains/stressors, which then leads to feelings of negative affect (i.e., poor emotional well-being), and as a result of these

negative affective states the individual consciously decides to engage in delinquent or criminal behavior as a method of resolving the strains.

The importance here is observing the link Agnew makes between *strain* and *negative affective states*, which in essence aids to highlight the scope of the current study. Victimization (i.e., intimate partner violence, personal victimization, household victimization, and cyber-bullying) may act as a source of 'noxious or negatively valued stimuli' that is presented to the victim, which could subsequently lead to poor emotional well-being (i.e., effecting general mental health, life satisfaction, and perceived stress) and maladaptive coping (i.e., substance abuse) as a result of exposure to these stressful life events. In other words, victimization as a major source of strain is the result of negative interactions/relationships, which further leads to the stresses of psychological and behavioral maladaptation. Furthermore, just as Agnew uses negative affective states to discuss the indirect association between sources of strain and delinquent behaviors, I use perceived stress to determine an indirect association between victimization and mental health adversities.

Although of the three general sources of strain posited in this theory, 'receiving negatively valued stimuli' appears to be the most suitable when discussing victimization and mental health, it is clear that the other two sources may be just as applicable. For one, people may be unable to 'achieve positively valued goals', such as monetary gain or receiving respect, as a result of the stigma related to victimization and the impingements it may foster financially (Agnew, 2009). Secondly, people may experience 'removal of a positive stimuli', such as loss of property or losing feelings of liberty, as a result of victimization (Agnew, 2009). Thus, it can be argued that these sources of strain as a result of victimization are just as likely to manifest, and further facilitate the development of mental health adversities.

2.2 Socioeconomic Status, Victimization, and Mental Health

Sociologists have long established the mutual, or reciprocal, connection between mental illnesses and socioeconomic status. In other words, mental health has been identified as both an antecedent to, and consequence of, socioeconomic attainment (see Dohrenwend et al., 1992; Miech, Caspi, Moffitt, Wright, & Silva, 1999). As such, scholars have discussed this association with respect to the selection—causation hypothesis. On the one hand, the "selection" tradition, which relates more or less to determinism, purports that mental health and well-being influences an individual's status attainment. For instance, it is argued that those who are healthier and mentally capable are more likely to maintain high SES or increase in SES, whereas those who suffer from mental disorders will either descend from higher SES to low SES or fail to escape from a lower socioeconomic status (Dohrenwend et al., 1992; Miech et al., 1999). On the other hand, "causation" hangs on the side of differential environmental exposures, whereby "adversities linked to low SES may damage the psychological functioning of individuals and play a role in the etiology of mental disorders" (Miech et al., 1999, p. 1097; see also Dohrenwend et al., 1992). Thus, socioeconomic status acts as a catalyst in conjunction with various other individual/social adversities to 'cause' mental disorder (Miech et al., 1999).

With respect to the current thesis topic, it is more appropriate to utilize the causation segment of this hypothesis in order to inform the impact that adversities, such as victimization, have on stress and psychological well-being, especially when coupled with low total household income. In an early study by Kohn (1972), he explained the association between social class and subsequent development of schizophrenic disorder. Here, he claims that although lower class may be conducive to schizophrenia, it is not the only predictor of mental health issues as the rates of this disorder in the lower class would be much higher if this were the sole cause. Class

may play a part in this phenomenon, but it is other factors—like stress or genetics—that also exacerbate this primary stressor in the development of mental health problems (Kohn, 1972). Kohn argues that the constrictions placed on those of lower SES impair their ability to appropriately manage stressful life situations (i.e., unable to afford treatment). In general, the development of mental health problems (in this case schizophrenia) is the result of these constrictions of low-SES, accompanied by genetic predisposition and experience of stress. Thus, it is the compounding effects of individual/social stressors that predict risk for mental health issues (Kohn, 1972).

Moreover, Miech et al. (1999) conducted a study to examine the selection—causation hypotheses and analyzed mental disorder as both an antecedent and consequential variable in relation to SES. This study was based on a longitudinal panel design, which analyzed adolescents on SES and mental health status as they transitioned into adulthood (i.e., from age 15 to 21). Miech and colleagues examined four types of mental disorders in order to delineate any specific differences a mental problem may have on the key associations. It should be noted that SES at age 15 was based on familial SES, and early adulthood (age 21) social status was based on a proxy of SES (i.e., educational attainment) due to the fact that those in early adulthood are not likely to establish independent income or occupational prestige (see Miech et al., 1999). Nevertheless, with respect to the causation hypothesis, it was determined that lower SES predicted a greater likelihood of anxiety at age 15, and an increase in anxiety by the age of 21, as determined by SES 'destination' (i.e., measured by educational attainment). Surprisingly, it was determined that there was no support for causation processes on depression. This suggests that SES may not influence depression prior to age 21, and may be more adult specific (Miech et al., 1999). Moreover, strong support was established for antisocial disorders, wherein SES predicted

conduct disorder at age 15, and low SES in adulthood indicated increases in antisocial disorders from ages 15 to 21. It was further concluded that SES as a causative factor (and even a selective factor) in predicting mental health may be disorder specific, as varying results were found when SES was assessed in accordance to the specific disorders (Miech et al., 1999).

In their 1995 study, Turner, Lloyd, and Wheaton found empirical results that challenged the prevailing view, at the time, that disparities in mental health among social strata are explained by the *differential vulnerability* hypothesis. In this case, this hypothesis asserts that mental health differences in social statuses are the result of social groups being more or less susceptible to reacting negatively to stressful experiences (see Turner et al., 1995). However, Turner and colleagues argue for *differential exposure* to stress, wherein it is contended that social strata are faced with varying levels of stress, which ultimately influences mental well-being, rather than social strata being either more or less vulnerable to stressors. In terms of notable empirical findings, it was determined that increasing SES (as measured by occupational prestige) was associated with decreasing levels of depressive symptoms and rates of depressive disorder. More importantly, these authors find support for their theoretical contentions as it was concluded that SES influences mental health "partly because of social status differences in exposure to stress" (Turner et al., 1995, p. 119). For instance, it can be argued that lower social strata may be exposed to security- or victimization-related stressful life events, whereas higher social strata may have more work-related stress. Nevertheless, how one reacts to or manages the stress will ultimately have an impact on whether or not it leads to mental health problems; accordingly, there is still evidence of differential vulnerability and resilience to stressors (for example, Kohn discusses how it is the constrictions [thus vulnerability] of lower class that effects development of mental disorder).

Taken together, if SES (specifically, income level) has such a profound effect on the psychological well-being of an individual, it is expected that when the chronic stress of lower-total household income is coupled with other life adversities (i.e., experience of personal victimization, household victimization, intimate partner violence, or cyber-bullying) individuals may be at an even greater risk for psychological problems. Akin to the causation hypothesis, the *lifestyle-exposure theory* adds depth to the aforementioned contentions of the links between SES, life adversities, and mental health (see Hindelang, Gottfredson, & Garafolo, 1978; Miethe, Stafford, & Long, 1987). This theory of victimization is based on the essential idea that particular social groups are at a greater risk for victimization compared to others, due to variations in lifestyles. In other words, certain lifestyles are more likely to expose individuals to risks for victimizing incidents. For instance, it is understood that an individual's income limits their lifestyle choices. In this case, those at the lower end of the economic scale may be limited to choices regarding the neighborhood they live in, employment opportunities, and security, among others. It follows that if an individual at the lower end of the economic scale lives in an unsafe neighborhood, this puts them at a greater risk for victimization. Although for the most part individuals do not have a choice on the matter of economic status, their lifestyle makes them more vulnerable to victimization. Thus, if the chronic stressor of economic status puts individuals at greater risk for other life stressors, such as victimization, it holds that those who eventually do experience the compounding stress of both low-income and victimization could further suffer mental health problems or even disorders.

2.3 Intimate Partner Violence & Mental Health

Several studies have identified a significant relationship between intimate partner violence (hereafter IPV) and mental health, especially among women. In general, IPV is

typically categorized into three broad domains: sexual, physical, and psychological. How one defines and operationalizes these terms largely depends on the particular topic of study and what they want to capture. Nevertheless, sexual abuse has commonly been operationalized as demanding or forcing someone into sexual activity, and even includes actions such as refusing to use contraceptive devices (i.e., a condom) (Campbell, 2002). Physical abuse encompasses a wide range of actions, including forms of aggression like slapping or hitting to more severe forms, such as stabbing, burning, or choking of an individual (Smith, White, & Holland, 2003). Psychological abuse refers to emotional manipulation and includes actions such as intimidation, socially isolating the victim from others, humiliation, and any other methods of emotional harm used to control the victim (Coker et al., 2002). IPV is not exclusive to cohabiting or marital relationships, as it also includes those who are in a 'dating' relationship (Eshelman & Levendosky, 2012). It is suggested that because there are distinct differences between married/cohabiting and dating relationships with respect to financial, legal, and moral constraints, the experience and impact of abuse may also vary between the two relationship styles (Eshelman & Levendosky, 2012; Riggs & O'Leary, 1989). The definition of "intimate partner" may also extend beyond these relationship dynamics to those who are no longer in a relationship but have been intimate in the past, for instance an ex-spouse, ex-girlfriend, or ex-boyfriend (Rand, 1997).

Even though men are likely to experience forms of IPV, research has mainly focused on women in relation to this construct since they are at greater risk of experiencing more severe physical injuries and psychological problems as a result of the abuse (Campbell, 2002; Coker et al., 2002; Eshelman & Levendosky, 2012). Specifically, women who have experienced some form of physical abuse are more likely than women who have never experienced IPV to report

mental health adversities and poor physical health, as well as visit the doctor more frequently (Coker et al., 2002; Coker, Smith, Bethea, King, & McKeown, 2000; Dutton et al., 2006). More specifically, psychological issues, such as attempts of suicide, anxiety, substance abuse, post-traumatic stress disorder (PTSD), and depression are elevated in women who have experienced some form of IPV compared to those who have not experienced such abuse (Golding, 1999; see also Carlson, McNutt, Choi, & Rose, 2002; Eshelman & Levendosky, 2012).

Eshelman and Levendosky (2012) conducted a study on the association between dating violence and mental health problems among a sample of 499 female college students. In particular, these authors examined psychological, physical, and sexual abuse types in relation to depressive and PTSD symptomatology. The sample was divided into 5 separate groups based on their experience of abuse (e.g., no abuse; psychological; physical; psychological and physical; psychological, physical, and sexual). The results indicated that, based on group types, those who experienced psychological, physical, and sexual abuse, and psychological and physical abuse displayed the highest levels of both depression and PTSD symptoms. Therefore, it is suggested that experience of multiple abuse types puts one at a greater risk for mental health problems compared to only experiencing one type of abuse (Eshelman & Levendosky, 2012). It was also noted that a greater frequency of psychological, sexual, and physical violence predicted more mental health symptoms, with exception to the fact that physical violence did not significantly predict depressive symptomatology in this case.

In a similar study, Pico-Alfonso et al. (2006) analyzed the association between women's mental health and lifetime physical, psychological, and sexual male IPV based on a sample of physically/psychologically abused (*n*= 75), psychologically abused (*n*=55) and non-abused women. The main purpose of this study was to identify the fact that psychological IPV can be

just as detrimental to women's mental well-being as physical IPV. It was found that women who had been exposed to physical/psychological and psychological abuse by an intimate partner reported greater severity and frequency of depressive and anxiety symptoms, PTSD, and suicidal ideation compared to the control group of no abuse; no differences were found between the abused groups. Analysis of concomitance of sexual violence with the physical/psychological and psychologically abused groups indicated a greater severity of depression in both groups, and higher incidence of suicide attempts for the physically/psychologically abused group. The authors further assessed the comorbidity of depressive and PTSD symptoms in the abused groups and their association with state anxiety and suicide. It was noted that incidence of PTSD alone was rare, and depressive symptoms were either displayed exclusively or in comorbidity with PTSD. In relation to state anxiety and suicide, abused women with depression or comorbid depression/PTSD also indicated a greater severity of state anxiety. In addition, the incidence of suicidal ideation was higher in the physically/psychologically-abused group with depression or comorbidity.

Taft, Resick, Watkins, and Panuzio (2009) conducted a clinical psychological study on 162 adult female participants who were victims of rape or first-degree assault, and met diagnostic criteria for PTSD. These researchers were interested in analyzing factors related to comorbid PTSD-depression symptomatology in this group of women initially diagnosed with PTSD, as well as delineating the severity of PTSD and depression based on potentially differential predictors (see Taft et al., 2009). Taft and colleagues computed bivariate correlations among independent and dependent variables. Of interest, intimate partner physical assault was associated with more severe PTSD symptoms, along with greater likelihood of sexual assault in adulthood. However, one must be skeptical of the findings for this analysis, as bivariate analyses

do not consider the effects of confounding variables on the constructs of interest. Regressions were run to determine severity of PTSD and depression based on correlates. It was determined that intimate partner physical assault was significantly and positively associated with PTSD symptom severity, but not depression severity. Taft et al. (2009) conclude that these findings on physical assault and associated psychological issues are similar to findings by Stein and Kennedy (2001), who found that physical assault severity was significantly associated with PTSD and not depression—perhaps suggesting specific disorder outcomes in relation to assault.

In another study, Carlson and colleagues (2002) examined the association between intimate partner violence, mental health, and the role of ameliorative factors, using a sample of 557 women. Specifically, these authors analyzed this sample of women based on physical and mental health problems related to recent physical, sexual, and emotional partner abuse, while also including analyses of prior experiences with domestic violence, as well as occurrence of physical and sexual abuse as a child. The authors used protective factors, such as good health, social support, self-esteem, education, income, and employment, to determine how these variables relate to the partner abuse—mental health association. Previous research on this topic has determined that, although traumatic experiences like partner abuse are associated with mental health adversities, some women show resiliency (Carlson et al., 2002). Carlson and colleagues (2002) state that factors that have been found to be related to the resiliency of abused women include, but are not limited to: "social support, positive self-regard, cognitive appraisal strategies, perception of control, maintaining a positive outlook, self-esteem or self-efficacy, spirituality, good health, and type of coping strategies used" (p. 722; for more information on these variables, see Benishek & Lopez, 1997; Valentine & Feinauer, 1993; Wheeler & Frank, 1988). With respect to social support in particular, research prior to that of Carlson et al. (2002)

has determined that this factor mediates stress by increasing self-esteem and knowledge of appropriate coping strategies, as well as having an influence on how one perceives stressful events (Zimet, Dahlem, Zimet, & Farley, 1988). It has also been found that merely having someone to confide in and with whom to express problems shows positive effects (Cohen & Hoberman, 1983).

Nevertheless, Carlson et al. (2002) wanted to determine whether levels of social support are lower amongst abused women compared to those who were not abused; if social support is related to lower levels of anxiety and depression of those who have been abused; and, whether multiple protective factors have an impact on the relationship between abuse and mental health issues, such as depression and anxiety. In general, it was determined that depression and anxiety were related to all three forms of abuse measured (i.e., childhood, previous adult abuse, and recent abuse in adulthood). Consistent with the prior research on resilience (e.g., Benishek & Lopez, 1997; Valentine & Feinauer, 1993; Wheeler & Frank, 1988) the mental health measures of depression and anxiety were strongly associated with each of the seven protective factors, as well as *total protective factors* (i.e., the presence of more than one of the measured ameliorative factors). For instance, those with depression or anxiety were less likely to report: partner and non-partner support, self-esteem, good health, higher education, low economic hardship, and employment (Carlson et al., 2002). In addition, non-depressed women reported higher levels of total protective factors compared to depressed women (84.1% versus 33.3%, respectively). Likewise, women without anxiety were more likely to report higher levels of total protective factors compared to women with anxiety (88.5% versus 44.9%, respectively). However, there were no significant results suggesting that abused women received less social support compared to their non-abused counterparts. The authors further indicated that having no economic hardship

is one important protective factor that mitigates the 'stressful effects' associated with abuse. Finally, the number of protective factors had an opposite effect on the association between lifetime abuse and anxiety as to what was expected. Women with the most severe levels of abuse were much less likely to benefit from protective factors. It is contended that high instances/levels of abuse can overwhelm women so much so that even four or more protective factors have no effect on 'buffering' from mental health issues related to abuse. Nevertheless, it is argued that having more rather than fewer protective factors are still beneficial for those who are severely abused, so it is not that the factors are completely nullified by more severe abuse (Carlson et al., 2002).

Zlotnick, Johnson, and Kohn (2006) conducted a 5-year longitudinal study on a nationally representative sample of 10,005 American women in a married or cohabiting relationship in order to examine IPV and the long-term sequelae of these events. In particular, these researchers were interested in comparing women who experienced intimate partner violence with those who did not on various psychosocial outcomes over a 5-year period. They also examined the rate of divorce or separation for those who indicated that they were the victims of an IPV at the outset of the study, as well as explored whether certain factors were correlated with ending the abusive relationship over this period. In terms of IPV predicting long-term psychosocial outcomes, Zlotnick et al. (2006) found that women who reported an IPV were significantly more likely than those who *did not* report an IPV to experience more depressive symptoms, greater functional impairment, lower self-esteem, and less life satisfaction over the 5-year follow up. The authors, however, did not find that remaining in an abusive relationship over time would increase the likelihood of women experiencing the measured psychosocial adversities. Almost half (43%) of the women who indicated that they were in an abusive

relationship left their partner within the 5-year period. Women who left their abusive partner had lower individual incomes and greater levels of social support at the outset (Wave 1) of the study than women who remained in their abusive relationship (Zlotnick et al., 2006). One would think that having a lower individual income is a major factor that would prevent a person from leaving their abusive partner, as they may struggle living on their own with a smaller income. Therefore, it may be that woman have a lower individual income, but also have greater levels of social support and friends or family to help them in the process of leaving an abusive relationship, or even providing living arrangements. Thus, lower individual income may not be as important to leaving the relationship as Zlotnick and colleagues had found, as it may just be concomitant with greater levels of social support.

Not to negate the importance of the adversities faced by women victims of IPV, it is apparent that more research has placed an emphasis on this demographic with respect to partner violence and resultant health consequences, neglecting male experiences with IPV. With that being said, Coker et al. (2002) add to extant research on the health effects of physical and psychological IPV by analyzing both men and women victims. In their population-based sample, the authors noted that 28.9% of 6,790 women and 22.9% of 7,122 men had experienced physical, sexual, or psychological abuse at some point in their life. When comparing gender, women were more likely to report physical and sexual IPV, as well as experiencing abuse of power and control, whereas men were more likely to report experiencing verbal abuse alone. The results indicated that, for both men and women, physical IPV was significantly related to an increased risk of: current poor health; symptoms of depression; substance abuse; developing a chronic disease, chronic mental illness, and injury. With respect to psychological IPV, it was concluded that the variable related to abuse of power and control displayed a stronger association with the

aforementioned health outcomes than the variable related to verbal abuse. In general, it is asserted that experience of physical and psychological violence may lead to mental health problems, as well as adverse physical health, for both men and women (Coker et al., 2002).

2.4 Cyber-Bullying & Mental Health

Traditionally, 'bullying' has been defined as the intentional use of aggressive behavior repeatedly and over time (by an individual or a group) against a helpless victim (Olweus, 1993; Smith et al., 2008). In the conventional sense of the term, this may include physical, verbal, or emotional bullying, which is used to intimidate, control, or physically or mentally harm the intended target. Research suggests that roughly 20-35% of adolescents are involved in traditional bullying, whether it is as a bully, a victim, or a bully-victim (Bannink, Broeren, van de Looij-Jansen, de Waart, & Raat, 2014). With technological advancements and the rapid growth in popularity of social media networking websites over the past decade, a new typology of bullying has surfaced, otherwise labeled as cyber-bullying or cyber-victimization. Numerous definitions have been assigned to the term *cyber-bullying*, but most of these classifications maintain the same general notion: it is "an aggressive, intentional act carried out by a group or individual, *using electronic forms of contact*, repeatedly and over time against a victim who cannot easily defend him or herself" (Smith et al., 2008, p. 376). Due to the fact that communication technologies (i.e., Internet, social media, and mobile phone technology) are still fairly young, and cyber-bullying itself has only been identified in recent years, research on this phenomenon is also still in its infancy. Albeit cyber-bullying may not explicitly threaten the physical well-being of victims in the same manner of traditional bullying, there are still significant consequences of exposure to online bullying.

Previous research has identified the link between experience of cyber-bullying and subsequent mental health adversities, and even between cyber-bullying and suicide (Bonanno & Hymel, 2013; Kessel-Schneider, O'Donnell, Stueve, & Coulter, 2012; Klomek, Sourander, & Gould, 2010). Elgar et al. (2014) conducted a study to analyze the extent to which experiencing cyber-victimization was associated with internalizing problems (i.e., anxiety, depression, self-harm, suicidal ideation, etc.), externalizing problems (i.e., fighting and vandalism) and substance abuse problems (i.e., frequency of alcohol use, frequent binge drinking, prescription drug abuse, etc.) and whether family contact plays a moderating role in this relationship. A sample of 18,834 adolescent students (age 12-18) in the United States was used for this research study. It should be noted that these authors also attempted to clarify whether experiencing cyber-bullying independently contributed to mental health problems of individuals since it commonly overlaps with traditional forms of bullying as well (see Juvonen & Gross, 2008). Testing these factors, Elgar et al. (2014) found that cyber-bullying related to all 11 internalizing, externalizing, and substance abuse problems among adolescents, even after statistically controlling for concomitant experience of traditional face-to-face bullying. The results also further suggest that family contact and communication (as measured by family dinners in this study) acts as a protective factor against exposure to cyber-bullying and subsequent mental health and substance abuse problems.

In a similar study, Bonanno and Hymel (2013) analyzed a sample of 399 British Columbia residents enrolled in grades 8 through 10 in order to determine: (1) the contributions of traditional and cyber forms of bullying *and* victimization in predicting depression and suicidal ideation; (2) whether cyber bullying *and* cyber-victimization uniquely predict depression and suicidal ideation, controlling for traditional bullying *and* victimization; (3) if cyber bully-victims

experience greater risk for psychological distress (as measured by depression/suicidal ideation) compared to those who are solely cyber-victims or cyber-bullies. Essentially, this study set forth to not only determine the association between involvement in cyber-bullying and internalizing problems of adolescents, but also to forward the notion that involvement in cyber-bullying independently and uniquely explains psychological issues rather than being the cause of overlap with traditional forms of bullying. Accordingly, it was found that those who were involved in cyber-bullying, as either a victim or the bully, also experienced depressive symptomatology and suicidal ideation. Further, the findings of this study showed that involvement in cyber-bullying was linked to depression and suicidal ideation "independent of involvement in traditional forms of bullying" (Bonanno & Hymel, 2013, p. 693). Specifically, it was found that both cyber-bullying and cyber-victimization consistently predicted the key measures of psychological distress, holding gender and involvement in traditional bullying as constants.

In addition to that, these authors note that involvement in cyber-bullying, as a victim or bully, *uniquely* contributed "to the explained variance in depressive symptomatology and suicidal ideation, above and beyond that accounted for by gender and traditional forms of victimization and bullying" (Bonnano & Hymel, 2013, p. 694). Due to the fact that previous research has indicated those classified as traditional bully-victims are at greater risk for internalizing problems compared to those categorized as only victims *or* bullies (see Menesini, Modena, & Tani, 2009; Young, Yun-Joo, & Leventhal, 2005), Bonanno and Hymel wanted to see if this would maintain when it comes to cyber-bullying as well. On the one hand, no significant results were found to support this hypothesis with respect to depression, as cyber bully-victims were not at any greater risk for depressive symptoms than victims *or* bullies. On

the other hand, cyber bully-victims were at greater risk of suicidal ideation compared to the mutually exclusive categories.

Sourander et al. (2010) provide a Finnish population-based study to examine mental health outcomes associated with cyber-bullying using three cyber-victimization typologies: cyber-victims only, cyber-bullies only, and cyber bully-victims. A sample of 2,215 Finnish adolescents (aged 13-16) was used for this study. In total, 4.8% of the sample identified as cyber-victims only, 7.4% as cyber-bullies only, and 5.4% as cyber bully-victims. Sourander and colleagues conclude that *cyber-victims only* were more likely to live in a household with other than 2 biological parents, have psychosomatic problems (i.e., headaches, abdominal pain, etc.), high levels of perceived difficulties, emotional and peer problems, and feelings of insecurity at school and low support by teachers. Accordingly, the results indicated that this group mainly suffers from emotional and peer associated problems. Moreover, *cyber-bullies only* also had high levels of perceived difficulties, experienced feelings of insecurity at school and low support by teachers, and displayed psychosomatic issues related to headaches. Unsurprisingly, this group also displayed greater levels of conduct problems, hyperactivity, substance abuse, and low pro-social behavior. Finally, the *cyber bully-victims* group displayed all of the measured psychosocial and psychiatric risk factors. This finding conforms to prior research asserting that those who are both bullies and victims experience the greatest troubles (Klomek et al., 2008; Sourander et al., 2007).

Hinduja and Patchin (2007) used Agnew's General Strain Theory to inform their results on the emotional and behavioral consequences of experiencing cyber-bullying. In particular, these authors attempted to explain cyber-bullying as a strain that is related to problematic behaviors offline, including violence and delinquency (i.e., drank alcohol, cheated on a test,

assaulted peer, assaulted an adult, damaged property, carried a weapon, smoked marijuana, etc.). A sample of 1,388 adolescents (aged from 6-17) was used for this study. With respect to the sample, 32% of males and approximately 36% of females experienced a form of cyber-victimization. It is asserted that the greater number of female victims of cyber-bullying may be a result of the Internet acting as a forum for females to effectuate their more common covert forms of bullying (Hinduja & Patchin, 2007). In line with the GST, Hinduja and Patchin argue that exposure to cyber-bullying is a source of negatively valued stimuli (one of three general sources of strain proposed by Agnew) presented to the victim, which indirectly leads to the victims maladaptively coping by engaging in deviant behaviors as a mechanism to alleviate and manage stressful situations.

These authors argue, for instance, that a distressed victim may seek revenge by assaulting the perpetrator or relieve negative feelings by engaging in substance abuse. This notion is supported by Agnew's contention that individuals are "…pressured into delinquency by the negative affective states…that often result from negative relationships" (Agnew, 1992, p. 49). Hinduja and Patchin assert that this describes the actions of an individual subjected to continuous harassment, which causes them to break down and attempt to resolve strain through anti-normative behavior. In any case, the results of this study indicate that both measures of strain and cyber-bullying victimization independently and significantly predict a greater likelihood of offline problematic behaviors. However, when introduced in the same model, cyber-bullying loses significance while strain maintains a significant and strong-positive relationship with delinquent behaviors, indicating a mediating effect. It is therefore argued that the effect of cyber-victimization on offline delinquent behaviors is attributed to the strain that is elicited by this stressor (Hinduja & Patchin, 2007).

Although there is a growing body of research that has provided evidence for the link between experience of cyber-bullying and mental health problems, these studies have primarily been cross-sectional analyses. Thus, we know little about the long-term impact of cyber-bullying (Bannink et al., 2014). However, Bannink and colleagues conducted a two-year longitudinal study using a sample of 3,181 Dutch adolescents in their first year of secondary education in order to examine whether experience of traditional bullying and cyber-bullying are associated with mental health issues and suicidal ideation over time. The authors used self-report questionnaires, measuring both traditional and cyber-bullying at baseline, and assessing psychological distress and suicidal ideation at both baseline and follow-up. It was hypothesized that both traditional bullying and cyber-bullying would be associated with mental health problems and suicidal ideation at the two-year follow-up. Moreover, these authors further assessed differential impact of bullying based on gender. In general, it was found that traditional and cyber bullying were associated with mental health issues among girls only, controlling for baseline mental health problems. With respect to suicidal ideation, it was only found that traditional bullying was associated with this outcome factor, controlling for baseline suicidal ideation (see Bannink et al., 2014). Therefore, it is evident that these forms of bullying can have a long-term impact on problems related to mental health and suicidal ideation—particularly among adolescent girls.

2.5 Criminal/Personal Victimization & Mental Health

Criminal/personal victimization generally refers to serious forms of victimization, typically involving violence or personal theft (with confrontation by the criminal), and primarily constitutes crimes perpetrated by strangers, but may include acquaintances or friends/family as perpetrators as well. Crimes that fall into the category of criminal/personal victimization may

involve rape/sexual assault, aggravated assault, theft of personal property, and robbery, or any crime that may be considered as one against the person (Kilpatrick & Acierno, 2003; Stafford & Galle, 1984). Hindelang and colleagues (1978) state that "personal victimization…occurs disproportionately away from the home of the victim, mainly on the street or in other public places" (as cited in Stafford & Galle, 1984, p. 174). Therefore, those who spend more time outside of the house put themselves at a greater risk of experiencing victimization compared to others (see Hindelang et al., 1978; Stafford & Galle, 1984). In their early study, Frieze, Hymer, and Greenberg (1987) suggest that the 'typical victim' of personal victimization or a violent crime is one who is young (between the age of 12 and 24), black, single, resides in an urban area, unemployed, and has an annual family income of $3,000 or less (see also Zawitz, 1983).

Frieze et al. (1987) outline the **immediate**, **short-term**, and **long-term** psychiatric reactions to personal victimization, which have been classified into stages. Foremost, there are immediate reactions. This includes the first stage, *impact-disorganization*, which is an immediate reaction to the criminal act and comprises of psychological responses, such as "numbness or disorientation, along with denial, disbelief, and feelings of loneliness, depression, vulnerability, and helplessness" (Frieze et al., 1987, p. 301; see also Bard & Sangrey, 1986). These reactions have been further divided by Symonds (1975, 1976) into two sub-stages. First, there is the initial response of shock, disbelief, paralysis, and denial followed by a second reaction in which the victim becomes detached from others and is regressive (which may last up to days). Frieze et al. suggest that these inherent responses as a victim of crime may diminish over time, but if effective coping mechanisms are not available, these psychological responses can become a long-term issue. Following one's immediate reaction to victimization, the dynamics of one's reaction to a victimizing event alters after a few hours or days. From here, it is suggested that

victims enter the short-term reaction category once they experience what Bard and Sangrey (1986) label as *recoil*. This stage, having the potential to last up to months at a time, involves the experience of mood swings from: fear to anger; sadness and elation; self-pity and guilt. It is argued that other reactions that may be observed in this stage include insomnia, restlessness, substance abuse and weakened personal relationships (Frieze et al., 1987). At this stage, if the victim is unable to resolve their psychological problems related to the trauma through effective mechanisms of coping, they may experience chronic stress (Krupnick & Horowitz, 1981), or even post-traumatic stress disorder (Frieze et al., 1987).

Finally, the victim enters the long-term reaction stage, known as *reorganization*. It is argued that at this point the victim is able to resolve the trauma that they have experienced, leading to the establishment of target-hardening techniques. For instance, the victim develops vigilant behaviors to reduce future victimization, and reforms values and attitudes to readjust to daily life (Frieze et al., 1987). However, victims do not always readjust in a positive way after experiencing such traumatic events. This is evidenced in the fact that Ellis, Atkeson, and Calhoun (1981) have found that women who had been victims of rape experienced negative long-term reactions, such as greater depression and less satisfaction with daily activities compared to non-victims. Additionally, these same authors determined that women who experienced sudden violence by strangers displayed the most severe reactions, with even more depression, fatigue, fearfulness, and less life satisfaction than victims of other assault types. Victims may face long-term maladaptive psychological reactions, such as low self-esteem, depression, guilt, fear, and relationship problems (Frieze et al., 1987), among several other psychological distresses (i.e., substance abuse, PTSD, low life satisfaction, self-harm behavior, etc.). Overall, this classification system provides a good general understanding of the possible

stages of psychological distress *and* coping one may pass through after the experience of a traumatic victimizing event. However, these stages cannot be taken for full face value, as every individual's experience with victimization may vary. For instance, individual experiences may differentiate based on frequency, chronicity, and severity of the victimization, whether it is coupled with other compounding life stresses, and resiliency to the psychological effects of victimization, to name a few.

Previous scholars have analyzed several indices of 'emotional well-being' that could be associated with forms of personal victimization. Post-traumatic stress disorder (PTSD) has received the greatest attention as an outcome variable of victimization and trauma experiences related to personal crimes (see Boudreaux, Kilpatrick, Resnick, Best, & Saunders, 1998; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; for a review, see also Kilpatrick & Acierno, 2003). For instance, in an earlier study by Harrison and Kinner (1998), these authors set forth to advance understanding of determinants of post-traumatic distress by examining victims of armed robberies. Specifically, the primary purpose of the paper was to measure overall levels of distress in armed robbery victims, as well as analyze correlates of distress using variables related to pre-, mid-, and post-trauma experience. The sample consisted of 57 armed robbery victims, aged 15 to 65. With respect to the results, the sample displayed high levels of overall distress, which was persistent over time, indicating long-term post-traumatic stress resulting from such experiences. Moreover, it was found that pre-trauma variables (i.e., including mostly individual social factors) were not directly related to distress, and traumatic severity (a mid-trauma variable) was weakly correlated to post-traumatic distress. With respect to post-trauma correlates of distress, it was determined that those who displayed high unique vulnerability and avoidant coping were most distressed following armed robbery.

Kessler et al. (1995) also established a link between traumatic life events/victimization and post-traumatic stress. The primary purpose was to determine lifetime prevalence of PTSD, traumas most commonly associated with it, socio-demographic correlates, comorbidity with other disorders, etc., among a nationally representative sample of 5,877 participants from the National Comorbidity Survey. This study used the DSM-III-R (Diagnostic and Statistical Manual of Mental Disorders third edition, revised) measure of PTSD symptomatology. Most importantly, the results indicated that lifetime prevalence of PTSD in the sample was 7.8 percent. This rate was more than twice as high for women and higher for those previously married (only significant for women, however). With respect to trauma exposure, it was found that 65% of men and 46% of women who reported rape as the most upsetting trauma developed PTSD. Other traumas related to a high probability of experiencing PTSD consisted of childhood neglect and childhood physical abuse for men. For women, upsetting traumas related to a high probability of PTSD were sexual molestation, physical attack, threatened by a weapon, etc.

Boudreaux et al. (1998) examined a sample of 391 women 18 years and older based on the association between lifetime occurrence of personal victimization (i.e., rape, attempted rape, sexual molestation, aggravated assault, robbery, burglary while at home, burglary while not at home) and psychological distress/disorders (i.e., PTSD, major depressive episode, agoraphobia, obsessive-compulsive disorder [OCD], social phobia, and simple phobia). In terms of prevalence, Boudreaux and colleagues (1998) determined that roughly 75% of the sample had experienced one of the crimes in their lifetime. With respect to psychological problems, 6% reported having current PTSD. Notably, those with current PTSD were also more likely than those without PTSD to have comorbid Axis I disorder, experience a major depressive episode, panic disorder, agoraphobia, OCD, and social phobia. More importantly, bivariate analyses

indicated that crime victims were more likely than those who were not victims of the measured crimes to experience major depression, agoraphobia, OCD, social phobia, and 'simple phobia.' Results further suggested that PTSD played a mediating role in the relationship between victimization and other Axis I disorders, suggesting that the association between victimization and Axis I disorders was indirectly related through PTSD. Thus, it was concluded that although victimization factors may in fact relate to psychopathology in a direct relationship, experience of PTSD plays a role in the association between victimization and subsequent non-PTSD mental health adversities (Boudreaux et al., 1998).

Although post-traumatic stress is commonly analyzed as an outcome in studies of trauma and victimization through various methodological and theoretical approaches, researchers have analyzed several other mental health and emotional well-being measures in order to extend our knowledge on the impact of victimization. Nada-Raja and Skegg (2011) conducted a longitudinal study to assess pathways to non-suicidal self-harm for men and women from age 21 to age 26. Several factors were used to determine the likelihood of self-harm behavior, including child sexual abuse, assault victimization in adulthood, and symptoms of PTSD, among other mental disorders. The measure of victimization for this study was operationalized in terms of physical or sexual assault committed against the respondent by anyone (i.e., stranger, partner, etc.). For men, victimization did not play a role in predicting later non-suicidal self-harm at age 26. However, for women assault victimization, among other factors, predicted self-harm at age 26. In addition, experiencing PTSD as a result of victimization increased the likelihood of later self-harm, and this was even higher with comorbid mental health issues. In fact, it was also found that there was a direct link between assault victimization, irrespective of mental health problems, and self-harm for women but not men. Childhood sexual abuse was not independently related to later self-

harm, however, through further analysis the results showed that it might indirectly increase risk for this factor, as it increased the risk for anxiety among men, and victimization among women.

Previous scholars have determined a link between criminal victimization and victims' well-being and life satisfaction (see Demaris & Kaukinen, 2005; Michalos & Zumbo, 2000; Norris & Kaniasty, 1994). According to Hanson et al. (2010), "studies examining these constructs [life satisfaction and well-being] typically focus on indicants such as fear of crime, concerns for personal safety, happiness, and satisfaction with overall quality of life" (p. 192). Demaris and Kaukinen (2005) examined a sample of 7,700 women from the survey of Violence and Threats of Violence Against Women and Men in the United States, 1994 to 1996, to determine mental and physical health effects of violent victimization (i.e., sexual and physical assault), as well as life-course stage and victim-offender relationship correlates of these health outcome measures. It was found that victim—offender relationship was the best predictor of depression, wherein women victimized by someone they know were more likely to suffer symptoms compared to others. Furthermore, none of the main predictors were significantly related to concern for personal safety. However, it was determined that those who experienced a serious injury or have been stalked were more likely to be very concerned for personal safety. Experience of physical assault and serious injury were both significantly and positively associated with always carrying something for personal protection. Accordingly, it can be argued that these victimizing traumas diminish one's overall quality of life, as experiencing these incidents increase the likelihood of mental health issues, such as depression and paranoia/anxieties (as evidenced by having to carry something to protect oneself).

Norris and Kaniasty (1994) conducted a longitudinal study to analyze a sample of violent crime victims (n= 105), property crime victims (n= 227), and non-victims (n= 190) based on

levels of psychological problems post-criminal victimization. The psychological consequences of crime measured for this study consisted of depression, somatization, hostility, anxiety, phobic anxiety, fear of crime, and avoidance behavior. These authors assessed the participants 3 months post-victimization, which has been established by previous researchers as a general time period that distress associated with criminal victimization should dissipate (Atkeson, Calhoun, Resick, & Ellis, 1982; Frank & Stewart, 1984; Kilpatrick & Calhoun, 1988). However, Norris and Kaniasty found that after 3 months, these victims still displayed symptoms of distress related to their victimization, such as depression, anxiety, somatization, hostility, and fear. Notably, violent crime victims experienced the greatest levels of distress compared to the property crime victims and non-victims. With respect to long-term impact, it was found that the victims' symptoms did, in fact, decline from the point of baseline assessment to the 6-month period. However, after 9 months there was little improvement of symptomatology. At 15 months, Norris and Kaniasty determined that violent crime victims continued to display greater levels of symptomatology compared to property crime victims, and property crime victims displayed greater levels of distress compared to non-victims.

In their study, Sabri, Coohey, and Campbell (2012) used a sample of 2,066 adolescents aged 11-18 years who met criteria for victimization (i.e., physical, sexual, or emotional abuse), reported use of substances, and met criteria for abuse or dependence of substances in the past year. Specifically, the authors wanted to determine the association between multiple types of victimization, coping mechanisms, and comorbid internalizing and externalizing mental health issues, as well as determine whether coping resources mediated the relationship between poly-victimization and mental health adversities. Notably, those who experienced multiple types of victimization were more likely to have co-occurring internalizing and externalizing mental health

issues compared to those who experienced only one type of victimization. Findings also suggested that poly-victimization experience has a more profound impact on mental health, leading "to a greater number of, and more severe, negative outcomes" when compared to single victimization types (Sabri et al., 2012, p. 757). Additionally, adolescents with fewer positive psychological coping resources were at greater risk for co-occurring internalizing and externalizing mental health problems. Finally, receiving support for victimization mitigated the negative impact of victimization on mental health problems for this sample of adolescents.

In an early study on rape victims, Frank and Anderson (1987) compared victims and non-victims based on psychological well-being, including measures of generalized anxiety disorder (GAD), major depression, and drug abuse. In general, it was found that those who had been victims of rape did not vary in any way with respect to type or number of *past disorders* when compared to non-victims. However, it was determined that victims of rape were more likely to meet the criteria (as established in the Diagnostic Interview Schedule) for depression, GAD, and drug abuse in comparison to non-victims. Likewise, Kilpatrick et al. (1985) examined a sample of 2,004 women based on experience of sexual assault, along with several other victimizing incidents, in order to discern the association these incidents share with three measures of mental health adversities (i.e., nervous breakdowns, suicidal ideation, and suicidal attempts) and how they compare across crime types. Of importance, mental health problems were higher for victims compared to non-victims in general. Victims of attempted and completed rape reported greater rates of mental health problems on all three measures, compared to controls. Those who were victims of attempted molestation were more likely to report suicidal ideation and attempts at suicide, whereas those who were actually molested only showed greater likelihood of suicidal ideation. Thus, experiencing sexual assault increases the likelihood of developing a

psychological problem post-victimization (Kilpatrick et al., 1985). On the other hand, these researchers determined that victims of aggravated assault and attempted robbery were only more likely to experience suicidal ideation or attempts at suicide when compared to controls. Kilpatrick et al. (1985) conclude that victims of sexual assault (i.e., attempted/completed rape or molestation) have more mental health problems compared to those of other crimes, and experiencing completed rape had a more profound impact on individuals when compared to any other attempted or completed crimes.

2.6 Property Crime & Mental Health

Although research related to understanding household or property victimization as a predictor of emotional well-being is fairly scarce, scholars have linked these constructs (see Davis & Friedman, 1985; Kilpatrick, Saunders, Veronen, Best, & Von, 1987; Skogan, 1987; Wirtz & Harrell, 1987). In line with this notion, Wirtz and Harrell (1987), Davis and Friedman (1985), and Kilpatrick and colleagues (1987) have acknowledged that significantly more research had focused on the association between personal attacks/crimes and psychological distress (especially regarding rape victims), whereas less attention had been paid to the relationship between non-assaultive forms of victimization and psychological outcomes. Yet, it has been asserted that victims of non-assaultive and assaultive crimes may experience parallel psychological responses post-victimization, although to differing levels (Wirtz & Harrell, 1987; see also Norris & Kaniasty, 1994). Generally speaking, household/property victimization—also known as non-assaultive crimes—can be defined as those crimes related to non-assaultive household burglary/robbery, motor vehicle theft (including theft of parts), break and enter, vandalism, and general theft. In addition to that, the perpetrator does not commonly confront the victim(s) when it comes to these types of crimes.

In their early 1987 study, Wirtz and Harrell examined a sample of victims of personal crimes (i.e., physical assault, including rape, domestic assault, and non-domestic assault) and a sample of victims of non-assaultive crimes (i.e., robbery and burglary) based on three psychiatric measures over a 6-month period to assess the extent to which non-assault victims display patterns of distress that parallel victims of physical assault. The sample consisted of 273 recent victims of crime, wherein 21% were rape victims, 27% domestic assault, 24% other types of physical assault, 14% robbery victims, and 14% burglary. The three measures of psychological distress for this study were fear, anxiety, and stress. It was found that non-assaultive victims displayed psychological distress comparable to those who experienced personal attacks over each measure, although at lower levels than those who were physically assaulted. Thus, the findings suggest that victims of other types of crime—in this case non-assaultive robbery and burglary—may also experience similar levels of mental health problems/distress as those who are physically assaulted (Wirtz & Harrell, 1987). This notion is supported by Skogan's (1987) analysis of criminal victimization and its association with psychological outcomes, including a fear of crime and protective behaviors. Specifically, it was determined that experience of personal and property crimes stimulate fear and cause changes in behavioral patterns (to protect from future victimization) at an equivalent magnitude.

Kilpatrick and colleagues (1987) conducted a study to analyze lifetime victimization, crime reports to police, and psychological problems associated with victimization; both property and personal crimes were measured in this study. Descriptive statistics indicated that, of the 391 female respondents, 53% had experienced sexual assault—including completed rape (23.3%), attempted rape (13.1%), completed molestation (18.4%), attempted molestation (4.6%), and other sexual assault (3.9%). Approximately 10% of the sample had experienced aggravated

assault, 5% were victims of robbery, and 45.3% were victims of burglary. With respect to psychological distress following a particular crime, it was found that about one-fourth of participants had developed PTSD following their respective victimization, and 7.5% continued to experience this mental health problem. This is interesting, considering that from the time of assessment, the 'mean period since attack' for all crimes was approximately 15 years (Kilpatrick et al., 1987). More importantly, 28.2% of those who experienced the non-assaultive crime of burglary had also developed PTSD, and 6.8% were still experiencing this problem during the time of assessment. Therefore, it is clear that crime can have a lasting effect on an individual's mental well-being (Kilpatrick et al., 1987), not only for victims of personal crimes but for non-assaultive/property crimes as well.

Furthermore, Davis and Friedman (1985) examined the extent to which victims of property and personal victimization suffer from emotional adversities. Specifically, these scholars analyzed 274 victims immediately after the victimizing event (i.e., one to three weeks post-victimization), 182 individuals from the same sample four months post-victimization (likely smaller due to attrition), and 152 individuals who were classified as 'supporters' (i.e., those providing assistance to the victim). The authors assessed victims of burglary, robbery, and assault. With respect to psychological reactions, this study analyzed "practical and emotional problems caused by the incident; changes in positive and negative affective states; increases in fear of crime; precautionary and avoidance behavior aimed at reducing the odds of future victimization; feelings of self blame; effects on relationships with others," among other factors, such as those related to PTSD criterion (Davis & Friedman, 1985, p. 91-92). With respect to the immediate reactions to victimization, Davis and Friedman found that loss of property impacted the victims emotionally. In addition to that, burglary victims reported experiencing fear and

anxiety, and physiological effects, such as elevated blood pressure. Importantly, even when the offender did not confront the victim, "fear, anxiety, and tension created by the invasion of a person's private space" had a more profound effect than the material losses from the crime (Davis & Friedman, 1985, p. 93). Moreover, it was determined that victims scored lower on the positive affect subscale and higher on the negative affect subscale of the Affect Balance Scale (ABS), indicating that victimization reduces positive affect emotions (i.e., joy, vigor, etc.) and increases negative affective emotions (i.e., anxiety, depression, guilt, etc.).

In addition, being a victim reduces feelings of safety, and increases fear of crime. Following the crime, individuals spent more time target-hardening. In other words, ensuring safety of themselves and their property by attempting to prevent future victimization. For instance, victims may invest in alarm systems, guard dogs, move to a different location, avoid certain areas or going outside, among adopting other protective strategies. Thus, it is apparent that experience of victimization can have a profound impact on peoples' lives and how they carry on with daily activities—victims become so preoccupied with preventing future crime that it affects normal functioning (Davis & Friedman, 1985). Although PTSD was not directly assessed, it was found that "practically all the victims suffered emotional distress that often endured at least four months and that included components of PTSD, particularly sleep disturbances, constricted affect, feelings of estrangement from others, recurrent thoughts about the incident, and avoidance of situations that reminded them of the traumatic event" (Davis & Friedman, 1985, p. 110). Although this study provides some insight on the impact that property crime may have on psychological distress following victimization, for the most part the authors discuss the victims as a global variable (i.e., lumping property and personal crime victims together), with exception to the discussion of immediate reactions to the crimes. Therefore, when

it comes to this study it is unclear whether victims of property crime would experience the measured psychological and emotional adversities when examined separate from personal crime victims.

Overall, it is apparent that there is a lack of research on the topic of property/household crime and resultant mental health adversities, even though scholars have indicated that victims of property crime display parallel psychological outcomes as victims of personal crimes (Davis & Friedman, 1985; Kilpatrick et al., 1987; Skogan, 1987; Wirtz & Harrell, 1987). Thus, the current study seeks to support previous knowledge on the association between these constructs, as well as extend our current understanding of the link between property/household victimization and mental health.

CHAPTER III: CURRENT STUDY & METHODS

3.1 The Current Study

Although a considerable amount of scholarly attention has been given to understanding the increased risk of psychological distress for those who experience victimization, there are still noticeable gaps in the current literature. For instance, few studies test a criminological/sociological theoretical explanation of this association (with exception to some; e.g., Hinduja & Patchin, 2007). Accordingly, the present study introduces the Stress Process and General Strain Theory (in addition to the causation hypothesis) as theoretical explanations for hypotheses and results, thereby extending our current knowledge of how victimization is linked to mental health adversities. These theories provide an avenue to relate our understanding of victimization and psychological distress closer to the sociological field, while also adding dimension to a process (i.e., the association between victimization and mental health outcomes) that has been otherwise discussed through a lack of complexity and in a relatively linear/direct pattern (with some exceptions). Although previous studies have tapped into assessing the effects of victimization on mental well-being variables related to *life satisfaction*, research on this variable is also relatively scarce. Additionally, few studies actually directly examine this construct, instead using proxy variables in order to capture this mental health outcome in relation to victimization (i.e., fear of crime, concern for personal safety, happiness, etc.). This study addresses this caveat by directly assessing life satisfaction at the time of study. Furthermore, little research has analyzed several forms of victimization in their relation to mental health and well-being in one study. Introducing different types of victimization into the empirical analysis will provide for a comparative assessment of these variables in relation to mental health—a significant proportion of studies often overlook this analytical approach, and instead confine

analyses to a specific form of victimization rather than including multiple, as well as varying, types for investigation (for more information, see Finkelhor, Ormrod, Turner, & Hamby, 2005).

A vast majority of the current research on this association has also analyzed: mostly smaller (or localized) samples; psychological distress related to exhibition of more serious mental illness (i.e., internalizing/externalizing problems, PTSD, depression, etc.); data collected primarily in the United States. Therefore, previous findings are not generalizable, as the proportion and severity of victimization and psychological distress may differ when data are derived from a nationally representative sample. Accordingly, the current thesis project fills these significant gaps in the current literature by using a large, nationally representative Canadian dataset. This Canadian survey also uses more general measures of mental health and well-being, thus assessing a broader spectrum of individuals, rather than only those with a serious mental illness.

There is little research on household victimization/property crime as a predictor of mental well-being, even though prior research has found a link between these variables (see Davis & Friedman, 1985; Kilpatrick et al., 1987; Skogan, 1987; Wirtz & Harrell, 1987). Thus, this study intends to extend our current knowledge on the process by which household victimization relates to psychological distress. Moreover, income has generally been relegated as a control variable in previous studies of victimization and mental health. However, the stress process, as well as the 'causation' hypothesis, argues that stressful life events and chronic stressors likely interact and are compounding in the prediction of stress and mental health. The present study intends to pull income to the forefront of the analysis, and examine how it modifies the association between victimization and likelihood of psychological distress. Moreover, stress itself has not been a large focus of the victimization—mental health research. The current study seeks to extend our

understanding of how this variable fits into this relationship. In general, the analysis of stress is twofold for this study. First, it is used as a dependent variable to determine how victimization relates to one's levels of stress. Second, it is used to test for mediation in order to determine whether incidence of victimization is indirectly related to psychological well-being by a process of stress. Again, the latter purpose falls in line with the primary assertion of the stress process paradigm calling for complexity in the process of stressors relating to the manifestation of psychological distress. In terms of substance abuse, previous studies have found victimization to be significantly correlated with this variable. However, it has not been consistently analyzed with respect to all forms of the key independent victimization variables proposed in the current study (i.e., household victimization).

The present study attempts to fill the aforementioned gaps in extant literature by examining the associations between several types of victimization and psychological distress, using a large nationally representative Canadian dataset. Further examining how certain social factors (i.e., economic status) may modify the relationship between victimization and mental health adversities, as well as analyzing whether the relationship between victimization and mental health can be explained by a process (or mediation) of stress. By studying these patterns of victimization and psychological well-being, the results of this research could be used to develop/restructure intervention and prevention strategies for those dealing with issues related to mental health, victimization or any other potentially negative factors underlying this relationship. Information from this study could also help health care professionals, clinical practices, and laypersons in the management of individuals who are at increased risk for experiencing distress associated with victimization.

I attempt to answer the following research questions: (1) Are those who have been victimized more likely to exhibit higher levels of stress, poor psychological well-being, and greater likelihood of substance abuse behavior (compared to non-victimized counterparts)? (2) Does stress mediate the relationship between victimization and psychological well-being/substance abuse behavior? (3) Does low household income moderate the relationship between victimization, stress, and psychological well-being/substance abuse behavior?

I propose the following hypotheses:

H_1: All forms of victimization will predict higher levels of stress, as well as poor psychological well-being, and greater likelihood of substance abuse behavior.

H_2: Stress will mediate the relationship between victimization and mental well-being and substance abuse behavior.

H_3: Lower total household income will statistically modify the association between victimization and mental health outcomes, which will predict elevated levels of stress, as well as worse psychological well-being and greater likelihood of substance abuse behavior, compared to the main effect analyses of these associations.

3.2 Method

The dataset used for this study was the 2009 Canadian GSS Victimization [cycle 23] survey. Data were gathered from a nationally representative sample of Canadian citizens aged 15 and over. This cross-sectional survey is the fifth cycle dedicated to collecting data on victimization in Canada. Specifically, it targeted all persons aged 15 and over, excluding individuals residing in the Yukon, Northwest Territories, and Nunavut, or full-time residents of an institution. The survey initially aimed at sampling 23,500 participants, ending with a final sample of 19,422. In order to sample the Canadian population, each of the ten provinces were

divided into strata, further separating Census Metropolitan Areas (i.e., Toronto, Ottawa, Winnipeg) and non-Census Metropolitan areas into separate strata to form a total of 27 strata. Data were collected from selected households within each strata via random-digit-dialing and computer-assisted telephone interviewing. Persons without a household phone or only having cellular telephone service were excluded from the sampling frame. Once contact was made with a household, a person within the household (15 or older) was randomly selected to participate in the study. The primary purpose of this survey was to better understand Canadians' experience of victimization; provide estimates of the extent to which individuals are the victims of various forms of victimization (e.g., sexual/physical assault, cyber-bullying, robbery, property crime, etc.); and, examine risk factors related to incidence of victimization. The content of this survey cycle is similar to previous cycles, but also incorporates additional content to reflect emerging issues within society, such as victimization through social media/the Internet (i.e., cyber-crime and cyber-bullying).

I use OLS and Logistic Regression to analyze the effects of independent/control variables on the likelihood of psychological distress and substance abuse behavior. First, bivariate regressions were run for each main predictor/control variable in relation to the dependent variables to determine independent correlation. Next, multivariate regressions were run to predict the likelihood of the dependent variables when controlling for confounding factors—excluding mediational analyses and interaction terms. Then, Baron and Kenny's (1986) procedure was used to detect a mediation effect of stress in the association between victimization and mental health. Finally, interaction terms were included into multivariate analyses in order to understand how low total household income modifies the relationship between victimization variables and mental

health outcomes. For instance, interactions between *low THI* and: (1) personal victimization; (2) household victimization; (3) cyber-bullying; (4) intimate partner violence.

3.3 Measurement

The dependent variable for this study is psychological distress and mental well-being. There are four mental health outcome variables of interest for this study, including: self-report mental health, life satisfaction, perceived stress, and substance abuse behavior. *Mental health* was measured as a continuous variable, based on self-report of how the respondents perceived their general level of mental health according to a 5-point Likert scale ranging from *poor* (1) to *excellent* (5). *Life satisfaction* was also coded as a continuous variable, and was based on how the participant felt about their life as a whole during the time of assessment using a 10-point Likert scale ranging from *very dissatisfied* (1) to *very satisfied* (10). Furthermore, *stress* was coded as a continuous variable, measured in terms of how stressful the respondent perceived most days to be according to a 5-point Likert scale ranging from *not at all stressful* (1) to *extremely stressful* (5)—it should be noted that this is the same variable used to determine mediation. The fourth variable is *substance abuse*. This was separated into two categories, one pertaining to alcohol use and the other relating to drug use. Both of these variables were coded as dichotomous variables, based on whether or not the respondent had engaged in high drug or alcohol use in the month prior to assessment. In this case, those who indicated they drank alcohol/used drugs 2-3 times a week, 4-6 times a week, or every day in the past month were coded as 1 (high use) and 0 otherwise. A variable dictating the types of drugs participants had used over the month would have been a better measure of drug use for this study, however the dataset did not provide such information.

This study used five main predictor variables. *Personal victimization* was measured in terms of whether or not the respondent had experienced a serious form of victimization in the past 12 months, excluding those perpetrated by a spouse/partner or an ex-spouse/ex-partner. This variable is based on a list of several victimizing incidents, including: sexual assault, robbery, attempted robbery, assault, theft of personal property, and attempted theft of personal property. This measure was transformed into a dummy variable, coded as 1 if they experienced any of these incidents and 0 otherwise. Secondly, *household victimization* is measured based on whether the respondent had experienced a serious form of property crime in the past 12 months. This variable was also based on a list of several victimizing incidents, such as: break and enter, attempted break and enter, motor vehicle theft, attempted motor vehicle theft, attempted motor vehicle parts theft, theft of household property, attempted theft of household property, and vandalism. This measure was transformed into a dichotomous variable, coded as 1 if the participants experienced any incident and 0 otherwise.

Next, the measure of *cyber-bullying* is based on whether or not the respondent had ever been the target of cyber-bullying, in which they provided a yes or no answer (thus, coded as 1 for yes and 0 for no). Again, cyber-bullying is defined as the use of the Internet to threaten, antagonize, or intimidate someone. *Ex-spousal/partner abuse* is measured in terms of whether or not the respondent had experienced *physical or sexual violence* (in the past 5 years) or *emotional abuse* (lifetime) by an ex-spouse/ex-partner. These constructs were coded as dummy variables, with those who indicated experiencing abuse coded as 1 and 0 otherwise. The present study would benefit from a measure of current spousal/partner abuse, however this victimization dataset does not provide such information for open-source users. Additionally, previous scholars have contended that operationalization of "intimate partner" may extend to those no longer in a

relationship but who have been intimate in the past, thus making these variables valid in the measurement of intimate partner violence for the present study (see Rand, 1997). The final predictor variable is one's *total household income*, which was coded as a series of dummy variables: $0 to $29999, $30000 to $59999, $60000 to $149999, and $150000 or more (the reference category). This is a better predictor of income, as the respondent's individual income or education does not provide the most accurate assessment of their lifestyle, especially with respect to the younger age groups who may still be dependent upon their respective caregivers and have yet to establish occupational prestige.

The control variables for this study include measures relating to sociodemographic factors and individual characteristics/experiences. These variables are included as controls, as it is apparent that they are grounded in current mental health and victimization research. It is also possible that these measures could predict psychological well-being of individuals in addition to the key independent variables of interest. Thus, including these variables into the analyses provides for a more accurate understanding of victimization as a predictor of mental health and well-being, as they reduce the likelihood of omitted variable bias and control for confounding effects in the explanation of psychological well-being. *Lifetime victimization* is measured in terms of whether or not a respondent has been a victim of a crime in their lifetime, in which they answered yes or no (thus, coded as 1 for yes and 0 otherwise). *Age* is measured as a series of dummy variables: 15 to 29 (the reference category), 30 to 54, 55 to 79, and 80 or more years of age. Perceived level of *social support* is a continuous variable ranging from 0 to 200, based on how many relatives and friends the respondents have that they feel close to (i.e., those they feel at ease with, can talk to about things on their mind, or call for help). *Gender* is coded as a dichotomous variable, 1 for females and 0 for males. *Physical health/disability* is measured in

terms of the limitations one has with daily activities at home, work, school or any other area of life due to a physical condition. This is coded as a dichotomous variable, 1 for those who answered sometimes or often/always and 0 otherwise. *Ethnicity* was assessed in terms of whether or not respondents identified as a visible minority or non-visible minority, and thus is coded as a dichotomous variable with non-visible minorities as the reference category. *Marital status* is a self-report assessment of the type of relationship the respondent currently occupies. For the current study the measure is coded as a dummy variable, with those living common-law or in a marriage set as the reference category and those widowed, separated, divorced, or single (never married) coded as 1. Finally, *education* is measured based on a series of dummy variables: doctorate/masters/bachelor's degree (reference category), diploma/certificate from community college or trade school, some university or college, high school diploma, or some secondary/elementary school or no schooling.

CHAPTER IV: RESULTS

4.1 Descriptive Statistics

Descriptive statistics are presented in Table 1. Percentages are provided for discrete variables, whereas means and standard deviations are given for continuous variables. First, results show that the average for respondents' self-report mental health status leaned more towards the 'very good' range (*M*= 4.01; *SD*= 0.93), indicating that, as a whole, the sample displayed relatively good mental health. Results also indicated that, on average, the sample showed high levels of life satisfaction at the time of assessment (*M*= 8.3; *SD*= 1.68). Furthermore, the average level of perceived stress was on the lower end of the scale (*M*= 2.73; *SD*= 1.03), suggesting that most days were not very stressful for this sample of Canadians. With respect to substance abuse, it was found that roughly 28% of the sample had engaged in high alcohol use, whereas only 2.2% engaged in high drug use.

With respect to the key independent variables, it was determined that 11.4% of participants have experienced personal victimization (i.e., sexual assault, robbery, attempted robbery, assault, etc.), whereas 15.7% have experienced household victimization (i.e., break and enter, attempted break and enter, motor vehicle theft, vandalism, theft of household property, etc.). Five percent of respondents indicated that they were the victims of cyber-bullying. In terms of intimate partner violence, results show that 2.7% of the sample have been the victim of physical or sexual violence by an ex-partner in the past five years, whereas a greater proportion have been the victim of emotional abuse (7.7 percent; *note*: emotional abuse measured in terms of lifetime emotional abuse). When it comes to total household income, forty-three percent of participants fell in the range of $60,000 to $149,999 total household income, followed by roughly 29% of the sample indicating an income of $30,000 to $59,999, nineteen percent

belonging to the category of $0 to $29,999, and a small percentage of respondents indicating a combined household income of $150,000 or more (9.2 percent).

The highest proportion of the sample was 30 to 54 years of age (44 percent), followed by those 55 to 79 years of age (35.7 percent), 15 to 29 years (15.5 percent), and finally those 80 or more (4.8 percent). The sample was primarily comprised of female participants (55.1 percent), with males making up 44.9% of the sample. Additionally, 91.3% of the sample identified as a non-visible minority, whereas 8.7% indicated they were a visible minority. A greater proportion of the sample was in a married or cohabiting relationship (57.5 percent) compared to those who were categorized as 'unmarried' (42.5 percent; i.e., those who are widowed, separated, divorced, or single/never married). Finally, there is a relatively even distribution across all categories of education. In order from highest to lowest percentages, twenty-eight percent of the sample graduated from community college or trade school, 24.3% have received a higher-level education (i.e., received a doctorate, masters, or bachelors degree), roughly 19% have only attained some secondary or elementary education or no schooling at all, 14.7% have completed high school, and 13.5% had some university or college education (but never completed).

Prior to the discussion of regression results, it should be made clear what each statistical model represents in the tables. With respect to tables 2, 3, 5, and 6, model 1 refers to the basic additive model (i.e., introduction of variables in a multivariate analysis); model 2 refers to the inclusion of mediations to the multivariate analyses (i.e., the 'perceived stress' variable as mediator); model 3 refers to the inclusion of interaction terms predicting the modifying effects of low THI on the association between victimization and mental health outcomes. Further, for Table 4, model 1 again refers to the basic additive model, and model 2 refers to the interaction

terms predicting the modifying effects of low THI on the association between victimization and perceived level of stress. (Bivariate models are labeled accordingly).

4.2 Bivariate Statistics

Bivariate models are first provided in all regression tables. Table 2 displays OLS regressions predicting self-report mental health status. Bivariate results for the main predictor variables were in the expected direction, and significant, in relation to this dependent variable. In particular, personal victimization (β = - .077, p<.001), household victimization (β = - .062, p<.01), being a victim of cyber-bullying (β = - .115, p<.001), and having experienced physical/sexual (β = - .440, p<.001) *or* emotional ex-partner (β = - .252, p<.001) abuse were all significantly and inversely related to self-report mental health. In other words, those who have experienced these victimizing events were likely to have poorer mental health compared to non-victims. When assessing the magnitude of these bivariate findings, it is evident that the correlation between physical/sexual assault and mental health suggests a strong-negative relationship, whereas being a victim of cyber-bullying and emotional partner abuse display a weak to moderately strong-negative correlation, with personal and household victimization portraying a relatively weak-negative relationship with mental health. It was also found that those with higher levels of perceived stress were likely to have poorer mental health (β = - .170, p<.001); the magnitude of the coefficient suggests a relatively weak-negative correlation between these variables. Bivariate results further indicate that those earning a total household income between $0 to $29999, $30000 to $59999, and $60000 to $149999, were likely to have poorer mental health when compared to the reference category of earning a total income of $150000 or more annually. What is more, the magnitude of the coefficients suggests that the lower the income, the stronger this negative association is when predicting mental health (i.e., $0

to $29999 displaying a strong-negative correlation), with the strength of this relationship weakening with each increase in income category, compared to the reference of $150000 (i.e., $60000 to $149999 showing a fairly weak-negative correlation).

Next, Table 3 presents OLS regressions predicting perceived level of life satisfaction. Results for this dependent variable are similar to those found for mental health status. Particularly, personal victimization (β = - .436, p<.001), household victimization (β = - .296, p<.001), those who were victims of cyber-bullying (β = - .578, p<.001), and having experienced physical/sexual (β = - .988, p<.001) or emotional ex-partner (β = - .705, p<.001) abuse were significantly and inversely related to life satisfaction. To put it differently, those who were victims of these types of victimization were likely to display a decrease in life satisfaction compared to non-victims. Based on the size of these coefficients, it is apparent that the bivariate findings suggest very strong-negative correlations between physical/sexual and emotional partner abuse, with personal victimization and cyber-bullying indicating strong-negative correlations, and household victimization displaying a moderately strong-negative correlation. Moreover, an increase in perceived stress was also associated with a decrease in life satisfaction (β = - .509, p<.001); the magnitude of this coefficient suggests a strong-negative relationship between these variables. It was also indicated that those categorized as earning $0 to 29999, $30000 to $59999, and $60000 to $149999, were likely to have poorer life satisfaction compared to those earning $150000 or more. Again, the magnitude of the coefficients suggests that the lowest income category displays a very strong-negative association with life satisfaction, with the strength of the association diminishing with an increase in income category, compared to the reference category of $150000.

Table 4 provides OLS regressions predicting perceived level of stress. As anticipated, bivariate results indicate that experience of personal victimization (β = .404, p<.001), household victimization (β = .297, p<.001), cyber-bullying (β = .406, p<.001), and physical/sexual (β = .505, p<.001) or emotional ex-partner (β = .376, p<.001) abuse were significantly and positively correlated with stress. In other words, those who experienced these victimizing events were more likely to experience greater levels of stress compared to those who did not experience these strains. Based on the size of these correlation coefficients, it is clear that personal victimization, cyber-bullying, and physical/sexual partner abuse share a strong-positive association with stress, whereas household victimization and emotional partner abuse display a moderate to strong-positive correlation. In terms of total household income, bivariate results show that those categorized as earning between $0 to $29999, $30000 to $59999, and $60000 to $149999, were likely to have lower levels of stress compared to those who earned $150000 or more, as expected. The magnitude of the coefficients show that those at the lowest income category (i.e. $0 to $29999) had a strong-negative association with levels of stress, with the strength of this relationship diminishing with increases in income categories, comparing to the reference of $150000 or more.

Tables 5 and 6 provide odds ratios predicting the likelihood of substance abuse. Specifically, Table 5 presents results of regressions predicting high alcohol use. In this case, bivariate results indicate that, of the victimization variables, only those who experienced household victimization (O.R. = 1.09, p<.05) and emotional ex-partner abuse (O.R. = 1.21, p<.01) were significantly more likely to engage in high alcohol use. In terms of odds ratios, those who were victims of household victimization were 1.09 times more likely to engage in high alcohol use compared to non-victims, and victims of emotional ex-partner abuse were 1.21 times

more likely to engage in high alcohol use compared to non-victims. Based on the size of these coefficients, it is clear that the associations between these victimization variables and alcohol use are fairly weak as they sit close to the odds ratio of 1.0 (which is an indicator of no correlation). The only other main predictor variable that was significantly correlated to high alcohol use for bivariate models was that of total household income. Here, results show that those who indicated they earned between $0 to $29999, $30000 to $59999, and $60000 to $149999, were at lower odds of engaging in high alcohol use compared to the reference category of earning $150000 or more. With those who earned $0 to $29999 showing a strong-negative association with alcohol abuse, the magnitudes of the coefficients suggest that as income increases, the likelihood of alcohol abuse increases as well, compared to the reference of $150000.

Finally, Table 6 presents results of odds ratios predicting the likelihood of high drug use. Accordingly, bivariate results indicated that those who have experienced personal victimization (O.R. = 3.81, $p<.001$), household victimization (O.R. = 2.47, $p<.001$), were the victims of cyber-bullying (O.R. = 3.76, $p<.001$), and have experienced physical/sexual (O.R. = 3.08, $p<.001$) or emotional ex-partner (O.R. = 2.11, $p<.001$) abuse were at greater odds of engaging in high drug use, compared to non-victims. Based on the size of the coefficients, it can be asserted that personal victimization, cyber-bullying, and physical/sexual assault display a moderately strong-positive association with high drug use, with household victimization and emotional partner abuse portraying a relatively weak-positive relationship with drug use. Additionally, those who experience higher levels of perceived stress were also 1.15 times more likely to engage in high drug use (O.R. = 1.15, $p<.01$); this coefficient suggests a very weak positive correlation between perceived levels of stress and high drug use. Finally, bivariate models for total household income were in the expected direction, however only one income category in predicting this construct

indicated significance. In this case, those who earned $0 to $29999 were 1.74 times more likely to engage in high drug use compared to the reference category of earning $150000 or more.

4.3 Multivariate Results

Three primary hypotheses were proposed for this study. Foremost, it was hypothesized that all forms of victimization will predict greater levels of stress, as well as poor psychological well-being (as measured by self-report mental health and life satisfaction), and greater likelihood of substance abuse behavior (as measured by alcohol and drug use). Table 4, model 1 displays a multivariate OLS regression predicting perceived level of stress. Results are in the expected direction. Specifically, it was found that experience of personal victimization significantly predicted greater levels of stress compared to non-victims (β = .144, p<.001), as did household victimization (β = .073, p<.01), being a victim of cyber-bullying (β = .174, p<.001), as well as a victim of emotional partner violence (β = .147, p<.001). In terms of the magnitudes of these coefficients, the findings indicate a fairly weak-positive association between the victimization variables and perceived levels of stress. Results for physical/sexual partner abuse were in the expected positive direction, however, this variable was insignificant in the prediction of stress.

Tables 2 and 3 present results for determining whether the experience of victimizing incidents predicts poor psychological well-being. Two measures were used to capture this construct. Specifically, Table 2, model 1 displays a multivariate OLS regression, predicting self-report mental health status. The results of this regression show that having experienced a personal victimization significantly predicted poorer mental health compared to non-victims (β = -.071, p<.01), as did household victimization (β = -.052, p<.05), being the victim of cyber-bullying (β = -.129, p<.001), as well as having experienced physical/sexual partner violence (β = -.236, p<.001) or emotional partner abuse (β = -.064, p<.05). The magnitude of the correlation

coefficients suggests a fairly weak-negative correlation for most victimization variables in predicting mental health, with the exception of physical/sexual abuse showing a moderately strong-negative relationship. Furthermore, Table 3, model 1 presents multivariate OLS results predicting perceived level of life satisfaction. Here, it was found that all but one of the key predictor variables significantly predicted life satisfaction. Being a victim of a personal victimization significantly predicted poorer levels of life satisfaction compared to non-victims (β = -.134, p<.01), as did being a victim of cyber-bullying (β = -.289, p<.001), and having experienced physical/sexual partner abuse (β = -.211, p<.05) or emotional partner abuse (β = -.207, p<.001). The magnitudes of the coefficients show that these victimization variables share a weak to moderately strong-negative association with life satisfaction. Although the variable of household victimization was in the expected direction predicting life satisfaction, it was not significant in this model.

Finally, Tables 5 and 6 show results indicating the likelihood of substance abuse behavior for those exposed to victimizing experiences. Table 5, model 1 displays a multivariate odds ratio regression, predicting high alcohol use. Only one victimization predictor variable was significant in this model. It was found that those who have experienced emotional partner violence are at a greater likelihood of engaging in high alcohol use when compared to non-victims (O.R. = 1.304, p<.01); the magnitude suggests a relatively weak-positive correlation between these variables. For the most part, each of the other variables were in the expected direction, but did not make a significant contribution to this multivariate model. More significant results were found when predicting drug use. Accordingly, Table 6, model 1 presents a multivariate odds ratio regression, predicting high drug use. In this case, it was determined that those who experienced personal victimization are at greater odds of engaging in high drug use when compared to non-victims

(O.R. = 1.753, $p<.001$), as are those who experience household victimization (O.R. = 1.318, $p<.05$), as well as those who have been the victim of cyber-bullying (O.R. = 1.534, $p<.05$). The sizes of the coefficients show that the relationship between these victimization variables and drug use are fairly weak-positive associations. The variables related to partner abuse were not significant in this model.

Next, it was hypothesized that stress would mediate the relationship between victimization and mental well-being and substance abuse behavior. According to Baron and Kenny (1986), a mediation effect is present when: (1) the predictor variable is significantly associated with the mediator, (2) the predictor variable is significantly related to the dependent variable, (3) the mediator variable is significantly associated with the dependent variable when the dependent is regressed on the independent variable and mediator, and (4) the relationship between the predictor and dependent variable is insignificant when the mediator variable is added to the regression. Mediational results are presented in model 2 of each table (with the exception of Table 4, as it specifically measures stress).

With respect to mediation in the relationship between victimization and mental well-being, significant results are found. Table 2, model 2 specifically presents mediation effects in the relationship between victimization and self-report mental health. When perceived stress and victimization are introduced in the same model, the variables of personal victimization, household victimization, and emotional partner abuse lose significance completely while perceived stress maintains a highly significant negative relationship (though relatively weak with respect to magnitude) with mental health (β = -.190, $p<.001$)—indicating full mediation. In addition, the strength of the coefficient for cyber-bullying is significantly weakened when perceived stress is added to the model, suggesting partial mediation. The coefficient for

physical/sexual abuse is weakened when perceived stress is introduced to the model; however, it is not significant enough to attribute it to mediation. Table 3, model 2 shows mediation effect in the relationship between victimization and perceived level of life satisfaction. When perceived stress is introduced into this model, the variables of personal victimization and physical/sexual partner abuse lose significance completely, while perceived stress maintains a highly significant and strong-negative relationship with perceived life satisfaction (β = -.480, p<.001), suggesting full mediation. The strength of the coefficients for emotional partner abuse and cyber-bullying are weakened when perceived stress is introduced, suggesting partial mediation. However, it should be noted that only the coefficient for cyber-bullying is weakened, but the level of its significance remains when perceived stress is added to model 2.

When it comes to testing for the mediation between victimization, stress and substance abuse behavior, no significant results were found. When perceived stress was added into regressions predicting high alcohol and high drug use (Tables 5 and 6, model 2 in each table), it adjusted the odds ratios slightly for both of these dependent variables, however significance of the main independent variables remained (i.e., those related to victimization). In addition, perceived stress was not significant when added into the models for either of high alcohol or high drug use, further confirming the conclusion of no mediational effects as per Baron and Kenny's procedures for detecting mediation.

Finally, it was hypothesized that lower total household income (as measured by earning a total household income of $0 to $29,999) will modify the association between victimization and mental health outcomes, which will predict elevated levels of stress, as well as worse psychological well-being and greater likelihood of substance abuse behavior, compared to the main effect analyses of these associations. Very few significant results were found for this

hypothesis. No statistically significant results were found at the .05 alpha level when statistically testing for a modifying effect of low total household income on the association between victimization and perceived levels of stress. Likewise, no statistically significant results were found at the .05 alpha level when testing for changes in the strength of the association between victimization and mental health status through statistical interaction with low total household income. On the other hand, significant results were found for the modifying effect of low total household income on the association between victimization and life satisfaction (Table 3, model 3). In particular, results indicated that the negative effect of physical/sexual assault on life satisfaction is stronger when statistically coupled with low total household income (β = -.377, p<.05). Finally, in terms of testing the modifying effects of low total household income on the relationship between victimization and substance abuse behavior, only one significant result was found for this analysis (Table 5, model 3). Specifically, results indicate that the positive association between personal victimization and alcohol abuse is stronger when statistically coupled with low total household income (O.R. = 1.508, p<.05). No significant results were found when testing for the modifying effect of low total household income on the association between victimization and high drug use.

In summation, several significant results are found in relation to the primary hypotheses of this study. First, having experienced personal victimization, household victimization, being a victim of cyber-bullying, as well as being exposed to emotional ex-partner violence significantly predicted greater levels of stress compared to non-victims. Experience of personal victimization, household victimization, being a victim of cyber-bullying, and subjection to physical/sexual partner violence and emotional partner abuse significantly predicted poorer mental health compared to non-victims. Moreover, being a victim of personal victimization, being a target of

cyber-bullying, and experiencing physical/sexual partner violence or emotional partner abuse significantly predicted poorer levels of life satisfaction. With regards to victimization predicting substance abuse behavior, findings indicate that those who have experienced emotional partner violence were at a greater likelihood of engaging in high alcohol use. Likewise, results show that those who have experienced personal victimization, household victimization, and being a target of cyber-bullying were at greater odds of engaging in high drug use.

Second, mediational analyses display several significant results. In particular, it was found that the associations between self-report mental health and victimization variables related to personal victimization, household victimization, and emotional partner abuse, were fully mediated by perceived stress when it was introduced in the model; the association between cyber-bullying and self-report mental health was partially mediated by perceived stress when introduced. It was also determined that the associations between level of life satisfaction and victimization variables related to personal victimization and physical/sexual partner abuse were fully mediated by perceived stress when it was added into the model; the association between emotional partner abuse and life satisfaction was partially mediated by perceived stress when it was added. Third, very few results were found when assessing the modifying effect of low total household income on the associations between victimization and mental health outcomes. Nevertheless, it was found that low household income modified the association between physical/sexual partner violence and life satisfaction to predict a stronger-negative correlation between these variables, compared to the main effect. Similarly, low income modified the association between personal victimization and alcohol abuse to predict a stronger-positive correlation between these variables, compared to the main effect.

CHAPTER V: DISCUSSION & CONCLUSIONS

The goal of this study was to advance extant discourse on the topic of victimization and subsequent mental health adversities, specifically in the Canadian context. In particular, I examined the extent to which various forms of victimization (i.e., personal victimization, household victimization, cyber-bullying, and intimate partner violence) are related to stress, psychological well-being (i.e., self-report mental health and life satisfaction) and maladaptive behavior (i.e., substance abuse); whether perceived stress acts as a mediator in the association between victimization and mental well-being; and, if total household income moderates the relationship between victimization and mental health. In general, it was determined that: (1) experience of victimizing events predicts increases in levels of stress, diminishes mental well-being and levels of life satisfaction, as well as increases the likelihood of substance abuse behavior; (2) the relationship between victimization and psychological well-being (i.e., self-report mental health and life satisfaction; *not* substance abuse behavior) is mediated by perceived stress; (3) very limited results were found when testing for the modifying effect of low total household income on the associations between victimization and mental health outcomes (discussed in detail below).

5.1 Hypotheses & Theoretical Connections

Hypothesis 1 proposes the general premise that all forms of victimization will predict greater levels of stress, as well as poor psychological well-being, and greater likelihood of substance abuse behavior. Considerable support is found for this hypothesis. With respect to levels of stress, it was found that personal victimization, household victimization, being the victim of cyber-bullying, and emotional intimate partner violence were all significantly and positively correlated with stress. In other words, those who experience these victimizing

incidents are more likely to experience greater levels of stress compared to non-victims. It was also determined that personal victimization, household victimization, being the victim of cyber-bullying, and experiencing physical/sexual partner violence or emotional partner abuse were all significantly and negatively correlated with mental health status. Therefore, experience of these forms of victimization increases the likelihood of poorer mental health when compared to non-victims. Similarly, it was found that personal victimization, cyber-bullying, and physical/sexual partner violence or emotional partner abuse were all significantly and inversely related to life satisfaction. Thus, those who endured these particular forms of victimization are likely to have lower levels of life satisfaction compared to those who were not victims. With regards to substance abuse behavior, mixed results were found. In this case, it was determined that only those who have experienced emotional partner abuse were at higher odds of engaging in high alcohol use compared to non-victims. On the other hand, more significant results were found for the high drug use model. Here, it was found that personal victimization, household victimization, and being a victim of cyber-bullying were significantly and positively correlated with high drug use. Put differently, results indicated that those who experienced these forms of victimization were at higher odds of engaging in drug use behaviors.

The relationship between these victimization factors and resultant mental health adversities observed in the current study are better understood within the context of Agnew's General Strain Theory (1992). Drawing from Agnew's contentions it can be inferred that, based on the aforementioned results, these various forms of victimization act as a source of 'noxious or negatively valued stimuli' (which is evidenced in the inherently invasive, damaging, and demeaning nature of these interactions/victimizing incidents), which are subsequently associated with the experience of negative affective states and engaging in maladaptive/delinquent coping

behavior. More specifically, the results clearly indicate that stressful life events, such as personal/household victimization, cyber-bullying, and physical/sexual or emotional partner abuse, act as a source of strain that elicits negative affect as indicated by poorer levels of self-report mental health and life satisfaction, as well as higher levels of stress, in correlation with these stressors. More closely related to Agnew's GST is the correlation between these sources of stress/strain (i.e., victimization) and the maladaptive/delinquent coping behaviors of alcohol and drug use. Agnew (1992) argues that engaging in these maladaptive coping behaviors acts as a mechanism to manage or alleviate negative feelings associated with the sources of strain. Accordingly, the victimization variables in the current study show a direct correlation with substance abuse (more evident in relation to the drug abuse models), which indicates that substance abuse behavior may act as a method to manage or resolve issues related to the exposure to victimizing strains. Thus, it can be concluded that direct experience with victimization is a negative interaction, wherein resultant strain leads to the manifestation of negative affective states of poor mental health/life satisfaction, as well as greater levels of stress, and maladaptive substance abuse behaviors as a mechanism of coping.

Hypothesis 2 posits that stress would mediate the relationship between victimization and mental well-being and substance abuse behavior. Some support is found for this hypothesis. When it comes to self-report mental health, it was determined that when perceived stress was introduced to the additive model, the variables of personal victimization, household victimization, and emotional partner abuse lost significance completely and perceived stress maintained a significant negative relationship with mental health, indicating full mediation. Additionally, the strength of the coefficient for cyber-bullying was significantly weakened, suggesting partial mediation here. Likewise, mediation was detected in the relationship between

victimization and perceived level of life satisfaction. Here, when perceived stress was introduced to the additive model, the variables relating to personal victimization and physical/sexual partner abuse lost significance completely, while perceived stress maintained a significant and negative relationship with life satisfaction, indicating full mediation. Additionally, the strength of the coefficient for emotional partner abuse was significantly weakened, suggesting partial mediation. However, no mediation was detected in the relationship between victimization, stress and substance abuse.

Again, these findings are better understood when embedded within sociological/criminological theory. As such, Leonard Pearlin's (1981) Stress Process paradigm provides an avenue for discussion of these results within a way that considers both the complex/multifaceted nature of the association between social stressors/strains and resultant adverse psychological manifestations, as well as how social structural factors (i.e., personal background, social status, economic factors, etc.) effect manifestations of stress and psychological adversities. Pearlin (1981, 1989) alludes to the fact that in order to truly understand the link between social stress and resultant psychological manifestations of stress (i.e., mental health outcomes), we must be cognizant of the underlying individual experiences and sociodemographic factors that inevitably converge onto this relationship. By omitting these factors or neglecting to acknowledge them in the forefront of analysis, we ignore the impact that other (equally important) coexisting individual and social factors have on the relationship. As previously mentioned, the stress process argues for a more elaborate/complex understanding of the processes leading from strain to adverse mental health outcomes (see Pearlin et al., 1981); it is a sequential dynamic, wherein the experiences of life/chronic stressors are indirectly linked to mental health problems by a process of underlying individual and social experiences.

Following the stress process paradigm it was expected that the experience of victimization and subsequent mental health problems would be indirectly linked through other individual experiences, such as perceived stress, rather than having a direct relationship. Further, this empirical analysis is included as an attempt to not only extend our current knowledge on the victimization-mental health relationship, but to also add dimension and complexity to the association, whereby previous scholars have been lacking methodologically. Nevertheless, based on the findings of the current study, it can be concluded that some forms of victimization are indirectly related to psychological well-being by a process of stress; particularly, in relation to victimization predicting self-report mental health and life satisfaction. In other words, it can be asserted that victimization elicits stress, which then leads to the development of subsequent mental health problems. Therefore, the relationship between victimization and mental health is not as direct of an association as previously indicated by some scholars, but rather one that is complicated by individual experiences, such as stress (which can be the result of victimization itself or related to general life stresses). Generally speaking, based on the posits of Pearlin's Stress Process (1981, 1989) and the results of this research, it is evident that social science researchers need to look deeper into the dynamic association between victimization and mental health in order to bring to light individual or social factors that could contribute to this negative relationship. By doing so, this could ultimately contribute to the development of comprehensive research strategies, which may foster better techniques for intervention and prevention provisions. Understanding how these constructs are mediated is, therefore, essential if we are to determine the deep-seated contributions to the victimization-mental health relationship.

Hypothesis 3 proposes that lower total household income will statistically modify the association between victimization and mental health outcomes, which will predict elevated levels

of stress, as well as worse psychological well-being and greater likelihood of substance abuse behavior, compared to the main effect analyses of these associations. Very limited support is found for this hypothesis. It was determined that the strength of the association between physical/sexual assault and life satisfaction becomes a stronger negative correlation through statistical interaction with low total household income (measured by earning a total household income of $0 to $29,999), compared to the main effect analysis of this relationship. Therefore, physical/sexual assault and low THI combine to exacerbate the perceived life satisfaction of an individual. Moreover, results indicated that the strength of the association between personal victimization and alcohol abuse becomes a stronger positive correlation through statistical interaction with low total household income, compared to the main effect analysis of this relationship. Thus, personal victimization and low total household income are compounding strains that interact to increase an individual's likelihood of engaging in maladaptive coping, such as alcohol use.

Although very few significant results were found for this hypothesis, it is still important to consider these findings with respect to theoretical/conceptual frameworks. On the one hand, the "causation" hypothesis maintains that, "adversities linked to low SES may damage the psychological functioning of individuals and play a role in the etiology of mental disorders" (Miech et al., 1999, p. 1097; see also Dohrenwend et al., 1992). Thus, socioeconomic status interacts with other individual/social adversities to 'cause' mental illness and disorders. As Kohn (1972) points out, social class might be conducive to the development of mental health problems, but it is likely that several other social/individual factors compound to exacerbate SES in the prediction of mental health illness and disorders (i.e., stress, genetics, constrictions based on SES, etc.). Akin to the Stress Process, Pearlin (1989) supports this notion by asserting that in

order to understand the processes of stress we cannot separate potentially 'blended' life stressors, as "stressors typically surface as groups or constellations of stressors" (Pearlin, 1989, p. 254). On the other hand, based on the differential exposure theory presented by Turner and colleagues (1995), wherein it is posited that social classes are faced with varying types/levels of stress, it can also be maintained that lower socioeconomic standing may subject individuals to some forms of victimization (i.e., those measured in the present study). This coincides with the lifestyle-exposure theory (Hindelang et al., 1978; Miethe et al., 1987), wherein it is suggested that those who are of low economic status are limited in choices, such as the neighbourhood they live in or security, and therefore can put these individuals at an increased risk for victimization. Taken together, SES (especially in relation to income) can both act as a secondary stressor in the causation of mental health adversity, as well as place individuals at a greater risk for victimization.

Whether or not being in low social strata puts individuals at greater risk for experiencing victimization, it is apparent that we find at least some evidence that the primary associations between victimization and mental health outcomes/substance use behavior are modified through statistical interaction with low income. It was anticipated that based on the stressful nature of both victimization and low THI that more significant results would be found when assessing whether low total household income moderates the relationship between victimization and psychological health. More specifically, it was expected that victimization would have greater negative effects on the mental health outcome measures when combined with a chronic life stressor, such as low income.

It can be argued that the lack of significant results for this hypothesis could be explained by one's personal experience with victimizing incidents. A valid supposition is that the combined

impact that victimization and low income have on mental health outcomes is related to one's *perception* of these stressors. For example, those within the same low economic standing may experience a similar victimizing event. It is likely that they will react negatively to the victimization; however, they may perceive its impact at differing levels based on individual internalization of the event, which will vary according to frequency, chronicity, and severity of the victimizing incident(s), as well as the exchange/interaction (i.e., how the victimization takes place, and what occurs) between the perpetrator and victim. Those who perceive victimization and/or low income as highly significant problems in their life may react more negatively compared to those who perceive these same stressors as less trivial; thus, playing an important role in the development of stress and potential mental health issues. Therefore, it can be argued that the effects that victimization have on mental health outcomes relate less to income levels and more to how one perceives the victimizing incident and associated life stressors. On the one hand, more research needs to be done with respect to empirically assessing supplemental stressors in the association between victimization and subsequent mental health in order to determine any compounding effects other individual/social strains may have on this association. On the other hand, research should investigate the importance of internalization and perception of victimization, along with other life stressors, in explaining resultant mental health outcomes—this is an avenue where qualitative work could provide valuable insight.

5.2 Specific Analysis of Victimization in Relation to Mental Health

Although the above discussion provides a broad understanding of how victimization is correlated with subsequent mental health adversities, it is imperative that we consider the specific forms of victimization in their relation to mental health outcomes in order to provide greater detail on these relationships.

5.2.1 Personal victimization

Several significant results were found in the relationship between experience of personal victimization (i.e., sexual assault, robbery, attempted robbery, assault, theft of personal property, etc.) and the mental health outcome measures. Being a victim of a personal crime was significantly correlated with greater levels of stress, lower mental well-being and life satisfaction, as well as greater odds of drug use behavior when compared to those who were not victims. As marked by both Frieze and colleagues (1987) and Bard and Sangrey (1986), it is argued that one short-term reaction to personal crime/victimization may include substance abuse behaviors. Although the current study did not assess temporal ordering of these constructs, it is clear that victimization of this sort is correlated with higher odds of substance abuse behavior. Moreover, the current findings suggesting that those who were victims of personal crime displayed lower levels of life satisfaction and mental well-being supports previous work by Ellis et al. (1981), Demaris and Kaukinen (2005), Michalos and Zumbo (2000), and Norris and Kaniasty (1994). As previously mentioned, the conceptualization of life satisfaction differs in this study compared to former analyses, as scholars have typically used proxy variables to assess life satisfaction as an outcome variable in relation to personal victimization (i.e., fear of crime, concerns for personal safety, happiness, etc.). In this study, a more 'sound' measure is used to capture one's general level of life satisfaction to determine if experience of victimization/crime transcends feelings associated with fear of crime and impacts perception of life as a whole. Also, prior studies on personal victimization have not measured perceived stress, but rather more severe manifestations of stress, such as post-traumatic stress or PTSD, as outcome variables and thus juxtaposing current findings to previous studies is not very practical here (for review of PTSD/post-trauma related research, see Boudreaux et al., 1998; Harrison & Kinner, 1998;

Kessler et al., 1995; Kilpatrick & Acierno, 2003; Norris & Kaniasty, 1994). Although the measure of stress in this study does not equate to more commonly measured severe disorders, such as PTSD or other measures of post-traumatic stress, it is clear the current findings support the pattern between personal victimization/crime and resultant increased stress outcomes.

Further, results indicated that personal victimization is indirectly related to both mental health status and life satisfaction through perceived stress. Boudreaux et al. (1998) noted similar findings when assessing the association between lifetime personal victimization and psychological distress. The authors showed that PTSD plays a mediating role in the association between victimization and other Axis I disorders (i.e., major depressive episode, OCD, social phobia, etc.), suggesting the association is indirectly linked by post-traumatic stress. Although the current study does not measure for more severe indication of stress or mental health as the study by Boudreaux and colleagues, it is apparent that experience of stress explains the link between personal victimization and subsequent psychological adversities in a similar manner to findings by Boudreaux et al. (1998). As previously mentioned, it was determined that low total household income modifies the association between personal victimization and high alcohol use to predict a stronger positive correlation between these factors, compared to the main effect analysis. In line with this notion, Frieze et al. (1987) suggested that one of several factors that put an individual at greater risk of personal victimization was earning an annual family income of $3,000 or less (see also Zawitz, 1983). Accordingly, it can be argued that not only does low economic status put one at a greater risk of victimization, but also contributes to adverse psychological outcomes related to victimization.

5.2.2 Household Victimization

Research on household victimization and its association with mental health adversities is scarce. Thus, the current study extends discourse on this topic in order to advance the notion that non-confrontational forms of victimization are just as likely to have an effect on mental health as other types of victimization (albeit, to a lower extent than more serious forms of victimization as evidenced when comparing the magnitude of coefficients of victimization variables predicting mental health outcome measures). Accordingly, being a victim of household (or property) crime was significantly correlated with greater levels of stress, lower mental well-being, as well as greater odds of drug use behavior. Similar findings are displayed in Wirtz and Harrell's (1987) early study, which found that victims of non-assaultive property crimes portrayed levels of psychological distress (as measured by fear, anxiety, and stress) comparable to those who were physically attacked. Moreover, the current findings of household victimization predicting mental health adversities are partially supported by Kilpatrick et al.'s (1987) study on psychological problems associated with personal and property victimization. In this case, the authors discovered that victims of non-assaultive crime (particularly, burglary) had developed PTSD, and some continued to experience this issue 15 years post-victimization. Likewise, Davis and Friedman (1985) concluded that experiencing a loss of property had negative emotional effects on victims, and burglary victims were more likely to display fear and anxiety. Even when the offender did not confront the victim, "fear, anxiety, and tension created by the invasion of a person's private space" had a more profound effect than the material losses from the crime (Davis & Friedman, 1985, p. 93). Thus, the findings in the current study reify the results found in prior studies and ultimately extend the notion that household victimization is just as likely to foster poor psychological health as other types of victimization. However, prior studies have not

made the link between household victimization and subsequent substance abuse behavior; yet, it is apparent in the current study that these non-assaultive crimes can increase the odds for drug abuse as well.

Furthermore, results of the current study showed that household victimization is indirectly related to mental well-being by a process of stress. Again, previous research has not acknowledged any underlying factors that may contribute to the association between household/non-assaultive victimization and mental health outcomes. Based on the aforementioned results of previous studies (i.e., Davis & Friedman, 1985; Kilpatrick et al., 1987; Wirtz & Harrell, 1987), it can be argued that the present findings suggesting that the association between household victimization and mental well-being is mediated by stress could be explained by the negative feelings that result from these incidents (i.e., invasion of personal space, feelings of insecurity, or negative emotional responses related to the loss of valued property), which may increase stress as a post-victimization response, further leading to mental health adversities.

5.2.3 Cyber-Bullying

Although the topic of cyber-bullying and related mental health is becoming an increasingly popular topic for academic researchers and laypersons alike, research on this phenomenon is still in its infancy. Accordingly, the present study extends our understanding of this topic. Foremost, results indicated that being a victim of cyber-bullying was significantly related to increased levels of stress, decreased mental well-being and lower levels of life satisfaction, as well as predicted higher odds of drug abuse. These findings are supported by previous research. For instance, Elgar et al. (2014) stated that cyber-bullying was related to substance abuse problems among adolescents (i.e., alcohol use, frequent binge drinking, prescription drug abuse, etc.), even when controlling for concomitant traditional bullying (i.e.,

face-to-face). This notion is also supported by Hinduja and Patchin (2007) in their study regarding cyber-bullying and subsequent offline delinquent behaviors (one such being alcohol use). Generally speaking, previous studies support the findings here regarding the effect cyber-bullying has on mental health and life satisfaction, as it has been previously established that being a victim of cyber-bullying is correlated with internalizing and externalizing mental health problems (and mental health issues in general), depressive symptomatology and suicidal ideation, along with other psychological issues (see Bannink et al., 2014; Bonanno & Hymel, 2013; Elgar et al., 2014; Sourander et al., 2010).

Moreover, results also showed that stress partially mediates the association between cyber-bullying and mental well-being. This suggests that stress accounts for some of the relationship between cyber-bullying and mental health, but there is still a fairly direct correlation between these constructs. Although Hinduja and Patchin (2007) assessed the mediational role strain plays in relation to the association between cyber-bullying and offline externalizing problems (beyond the scope of this study), their results somewhat support the current findings. Most notably, it was determined that the relationship between cyber-victimization and delinquent behaviors was indirectly linked by strain. Taken together, it is apparent that experiencing cyber-bullying may elicit feelings of stress or strain, which could play a role in the manifestation of poor psychological health.

5.2.4 Intimate Partner Violence

Intimate partner violence is a well-researched topic, with scholars taking a myriad of approaches to explain how it is linked to mental health. IPV has been commonly categorized as sexual, physical, or psychological. The current study separates this construct into two domains: partner abuse comprising of both physical *and* sexual assaults, and partner violence related to

only emotional abuse. Accordingly, for the sake of clarity these domains will be assessed separately. Foremost, it was determined that those who experienced physical/sexual ex-partner abuse displayed lower levels of mental well-being and life satisfaction. These findings are supported by prior studies, such as that conducted by Zlotnick et al. (2006). Specifically, these authors determined that women who experienced IPV were more likely than those who did not to experience less life satisfaction, along with depression, functional impairment, and low self-esteem, among other factors. Moreover, Coker et al. (2002) found that for both men and women, physical IPV predicted an increased risk of chronic mental illness and symptoms of depression. Taken together, it is evident that these more severe levels of intimate partner violence are likely to foster psychological adversities. Based on methodologies used by prior scholars to assess physical or sexual IPV in relation to subsequent mental health outcomes, it is likely that results would differ had I analyzed male and female participants separately with respect to this association. Nevertheless, that is beyond the scope of this study.

Furthermore, results indicate that physical/sexual partner abuse is indirectly correlated with life satisfaction by stress. Although previous studies have determined that social support acts as a mediator in the relationship between IPV and subsequent mental health adversities (see Zimet et al., 1988), scholars have yet to consider stress as an underlying contributor to this association. It can therefore be argued that IPV may not be directly linked to mental health outcomes (life satisfaction in particular), but instead is indirectly associated based on other individual adversities (such as stress). Finally, it was found that low total household income modifies the association between physical/sexual partner abuse and life satisfaction to predict a stronger negative correlation between these factors, compared to the main effect analysis. Based on this, it can be argued that those who experience physical or sexual partner violence coupled

with low THI have a negative perception on life for several reasons. One, these co-occurring life stressors have a compounding effect, as argued by the Stress Process (Pearlin, 1989) and the causation hypothesis (Dohrenwend et al., 1992; Miech et al., 1999). Two, having a low economic standing could prevent one from leaving an abusive relationship, and thus lead to continual subjection to IPV. Whatever the reason, physical/sexual IPV and low THI combine to contribute to worsened levels of perceived life satisfaction.

On the other hand, results show that emotional partner violence significantly predicts greater levels of stress, lower levels of mental well-being and life satisfaction, as well as a greater likelihood of alcohol abuse. These findings are supported by previous studies. For instance, Pico-Alfonso et al. (2006) determined that women who were exposed to psychological abuse reported greater severity and frequency of depression and anxiety symptoms, PTSD, and suicidal ideation compared to the control group of no abuse. Coker et al. (2002) also concluded that psychological IPV relating to abuse of power and control displayed a strong association with mental health outcomes, such as displaying symptoms of depression, substance abuse, or developing a chronic mental illness. Finally, findings show that emotional partner abuse is fully mediated by stress in relation to mental health, and partially mediated by stress in relation to life satisfaction. Thus, stress plays a significant role in the relationship between emotional partner abuse and resultant mental health adversities. Based on these findings, future research on emotional IPV should address other individual experiences/adversities that may play a mediating role, as these analyses could extend our understanding of how these victimizing experiences are ultimately correlated with mental health outcomes.

5.3 Limitations & Future Research

This study has some limitations. Foremost, the survey was conducted in 2009, and therefore the results of this study do not necessarily reflect current issues (2016) of victimization and mental health within the Canadian population. The prevalence of victimization, and the composition of psychological adversities and substance abuse behavior, may have shifted since the survey was conducted. Although this limits the generalization of these results to current trends of Canadian mental health and victimization, the current findings are still informative. Regardless of how rates of victimization and mental health have shifted over the years, these issues remain a concern in the public sphere, as some individuals will inevitably experience one or the other, or both stressors, at some point in their life. Future research would benefit from recent data in order to accurately assess the current trends relating to victimization and subsequent mental health, especially in the Canadian context as it appears victimization and mental health research is predominantly derived from U.S. data. Furthermore, researchers should also consider conducting more longitudinal studies on the topic of victimization and mental health in order to determine temporal ordering, as well as long-term effects, of these stressors.

Another limitation of this study relates to the self-report measurement of mental health status (i.e., self-report of general mental well-being). For instance, participants may not provide an accurate estimate of their level of mental well-being. Additionally, the variable of self-report mental health does not provide information on whether the individual suffers from a more serious mental disorder or symptoms of mental health issues. Nevertheless, this measure of mental health has its benefits, as it allows us to capture all individuals potentially experiencing emotional or psychological disturbances. More research should examine specific mental health issues/disorders in relation to the key variables of victimization used in this study in order to

capture how these life stressors correlate with diagnosable psychological problems; this will ultimately lead to better detection and intervention strategies for those who experience these negative interpersonal issues. On that note, future research could also assess the efficacy of current intervention or prevention strategies afforded to those who may experience co-occurring victimization and mental health issues.

Another methodological limitation of this study relates to the measurement of victimization. In this case, some measures of victimization—personal victimization, household victimization, and cyber-bullying—were examined as global variables. In other words, combining several types of victimization into one variable as opposed to assessing the specific types of personal victimization (i.e., sexual assault, robbery, etc.), household victimization (i.e., break and enter, vandalism, etc.), or cyber-bullying (i.e., receiving hateful messages, had someone send out threatening emails using your identity, etc.) in relation to mental health outcomes. Although deconstructing these variables and examining the separate types of victimization as they relate to mental health may have increased our knowledge on the nuances of these relationships, the findings of the present study are assuredly informative. Not to mention, globalizing these variables provides for a more succinct analysis of these constructs, as well as allows for a more straightforward comparative assessment in terms of how they differentially relate to mental health outcomes. Future research should examine the specific types of victimization, especially regarding household/property crime and cyber-bullying (as these are understudied areas), in order to increase our understanding of the underlying mechanisms that may contribute to subsequent poor mental health. On another note, future research should assess the victimization—mental health association in relation to protective factors that may play a mediating role (i.e., coping mechanisms, social support, etc.). Taken together, it is hoped that

expressing the limitations and directions for future research will provide ideas for future studies of victimization and resultant mental health adversities.

5.4 Conclusions

This study points towards several implications. Most notably, mental health provisions must not be one-dimensional. In other words, clinicians, therapists, and mental health professionals should focus not only on the management of mental health issues/disorders, but also address any other interpersonal/social adversities one may have experienced in their lifetime, such as victimization, which might play a role in the manifestation of poor mental health. It is essential to observe any other potential individual and social factors that could relate to mental health outcomes in order to effectively manage individual's psychological problems; neglecting to account for such external stressors obstructs the ultimate goal of reducing distress and improving psychological wellbeing. Therefore, if experience of victimization (i.e., personal victimization, household victimization, cyber-bullying, or intimate partner violence) may be related to mental health problems, clinicians should devise a treatment program that attends to both adversities in order to increase the likelihood of ultimately improving one's mental health. Clinicians and mental health care professionals could analyze one's incidence of victimization and address the issue themselves, or work in unison with victimization support programs/care centres to appropriately manage these clients.

Laypersons can also benefit from the findings of this research. Foremost, it is imperative that those who are directly impacted by a victimizing event—whether it is minor or severe, chronic or sporadic—seek immediate attention of a mental health care provider. It can be argued that the earlier an individual is evaluated, diagnosed, and assigned a treatment provision, the greater the likelihood that related mental distresses will be reduced, promoting better overall

mental well-being in the long-term. However, stigma related to suffering from a mental illness/disorder and receiving psychotherapy, as well as being a victim (of a crime, bullying, or abuse), may effect one's decision in seeking help for these problems. Nevertheless, it can be argued that the negative impact that is associated with stigmatization may not be as detrimental as the experience of victimization may be over time to one's psychological health (i.e., see Frieze et al., 1987), as not seeking attention or talking about these problems may worsen one's mental wellbeing. On the same note, it is important that persons close to victims provide support post-victimization, especially when it is evident that a victimizing incident has caused any emotional change in the victim. In this case, friends and family should advise victims to seek assistance from victim support groups, a mental health professional, or both. Individuals providing support could also receive information from support groups and mental health care professionals on appropriate methods for managing those who have been victimized. Further, depending on whether or not friends/family members have been indirectly impacted by the victimization, they may also need to seek professional assistance in order to not only improve their mental health, but also foster a better positive environment for the initial victim.

It is important to consider policy implications of this research. When it comes to personal victimization (i.e., sexual assault, robbery, assault, theft of personal property, etc.) and household victimization (i.e., break and enter, motor vehicle theft, theft of household property, vandalism, etc.), these types of crimes fall into what Vito and Maahs (2011), as well as environmental criminologists, would consider 'opportunity crimes'. In this case, the opportunity for crime is determined by environmental design and situational factors, which ultimately promote or prevent the likelihood of crime and victimization (see Jeffery, 1978). Environmental criminologists have established that a crime or victimizing event is more likely to occur in an environment that is

poorly designed, oriented in a way that makes engaging in crime easier, or provides easy access to potential victims (see Vito & Maahs, 2011). Examples of this may include dilapidated neighbourhoods or streets, poorly lit areas, vacant properties, unkempt commercial lots/buildings, lack of securitization (i.e., police or security technologies/systems), as well as poor layout of residential housing/streets or commercial buildings (i.e., fencing, door/window locks, etc.). In an effort to both understand, as well as reduce, the risk of crime and victimization in relation to environmental design and opportunity, Jeffery (1978) developed the field of criminological inquiry commonly referred to as *situational crime prevention* or *crime prevention through environmental design* (CPTED). Since its inception, numerous scholars have devoted research to understanding the correlations between environment and crime/victimization, as well as strategies required to prevent victimizing incidents.

Felson and Boba (2010) suggest crime prevention related to the environment can be separated into: **natural strategies**—protection from crime relates to design and layout; **organized strategies**—protection through police or security guards; **mechanical strategies**—security technologies to provide surveillance, alert potential victims/offenders, or control access to a premises. Although understanding the nature of the victimizing incident, and the context in which it took place, is beyond the scope of this research it is still imperative that policymakers consider situational crime prevention strategies in order to reduce the likelihood of personal and household victimization. First, LED-style streetlights should be put in place of the current streetlights in order to increase lighting on residential streets and neighbourhoods, as well as commercial areas. Not only are these lights more powerful, they are also more energy-efficient. In line with this notion, homeowners should ensure they have operational motion-sensor lights to prevent from likely offenders lurking around the property. Policy-makers should also seek to

implement Closed-Circuit Television (CCTV) cameras on residential streets, especially in high criminal activity areas, in order to prevent the likelihood of crime and victimization. Homeowners might also benefit from the installment of this type of surveillance to prevent household crimes. Policymakers should also be made aware of the necessity of fixing any deteriorating buildings or streets, so as to reduce criminal gathering; any unsafe areas (i.e., vacant housing, buildings, or lots) should be blocked from public access to at least prevent potential victims from entering areas that may be populated by offenders. Policing strategies should be dedicated to increasing presence in areas that have been the site of criminal activity or victimization. Albeit this research does not test for the environmental contexts of victimization, it is still important to understand the circumstances in which these crimes are made possible and the potential strategies that can be taken to prevent them.

Policy implications are important to consider for intimate partner violence as well. For instance, Zink, Elder, Jacobson, and Klostermann (2004) suggested that physicians should screen patients for signs of IPV routinely, as well as when they display potential symptoms relating to partner abuse. When it is known that an individual may be suffering from IPV, physicians can then provide the proper intervention strategies to victims, such as suggest local resources, educate them on the effects of abuse, and document the abuse (Zink et al., 2004). Furthermore, victim programs should provide assistance for victims of IPV who are contemplating leaving an abusive relationship. Oftentimes, victims of IPV feel as though they are unable to leave a relationship, which may relate to financial constraints or lack of a social support system. If victims are given living arrangements, they may be more likely to leave an abusive relationship. Thus, policymakers should ensure proper funding is provided to IPV victim programs in order to

provide victims with proper accommodations until they are able to recuperate from the abuse and move forward.

When it comes to cyber-bullying and related policy implications, it is apparent that Canada has taken a step in the correct direction with the most recent legislation on the unlawful dissemination of 'intimate images'. In this case, it is illegal to publicly disseminate sexual images without an individual's consent. Other laws are also put into place to prevent cyber-bullying in Canada, such as those related to criminal harassment, uttering threats, intimidation, and other common factors associated with cyber-bullying. With laws put in place to prevent the likelihood of cyber-bullying, it is evident that other informative methods for preventing cyber-bullying need to be considered, such as target-hardening techniques. Hinduja and Patchin (2012) provide tips for individuals who might be at risk for experiencing cyber-bullying—primarily teens. For instance, individuals should always ensure that they have logged out of their accounts on public computers; they should reduce the likelihood of being bullied by not bullying themselves; they should not post anything that would allow individuals to make harsh judgments, or that would compromise their reputation; they should ensure that passwords are protected; and, use privacy controls to restrict viewership of material. In addition, Hinduja and Patchin (2012) stress the importance of raising awareness of cyber-bullying. This can be done through school campaigns, as well as ad campaigns (i.e., via television, billboards, pamphlets, etc.). The more that individuals know about cyber-bullying and its effects, the better the chances of significantly reducing the possibility that it will occur.

Taken together, the findings from this study not only extend our current methodological and theoretical knowledge on the relationship between victimization and mental health correlates, but also provide practical applications, such as informing the methods by which

clinical professionals and laypersons provide care for victims of minor or severe crime, abuse, or cyber-bullying. This research also points to policy implications that should be considered in order to prevent or reduce victimization and resultant mental health problems.

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Table 1. Descriptive Statistics (*N*= 19,422)

	Full Sample	
	Percentage/ Mean	Range
Dependent Variables		
Mental Health (mean)	4.01 (0.935)	1-5
Life Satisfaction (mean)	8.30 (1.68)	1-10
Perceived Stress (mean)	2.73 (1.03)	1-5
Substance Abuse		0-1
High alcohol use	28.3	
High drug use	2.2	
Independent Variables		
Personal Victimization	11.4	0-1
Household Victimization	15.7	0-1
Cyber-Bullied	5.1	0-1
Ex-Spousal/Ex-Partner Abuse		0-1
Physical/sexual Abuse	2.7	
Emotional abuse	7.7	
Total Household Income		0-1
$0 to $29,999	19.2	
$30,000 to $59,999	28.7	
$60,000 to $149,999	42.8	
$150,000 or more	9.2	
Control Variables		
Lifetime Victimization	58.9	0-1
Age		0-1
15 to 29 years	15.5	
30 to 54 years	44.0	
55 to 79 years	35.7	
80 or more years	4.8	
Social Support (mean)	16.22 (21.24)	0-200
Gender		0-1
Male	44.9	
Female	55.1	
Physical Limitations	15.0	0-1
Ethnicity		0-1
Non-visible minority	91.3	
Visible minority	8.7	
Marital Status		0-1
Married/cohabiting	57.5	
Unmarried	42.5	

(continued)

Table 1. (continued)

	Full Sample	
	Percentage/ Mean	Range
Education		0-1
Higher education	24.3	
Community college/trades	28.3	
Some university/college	13.5	
High school	14.7	
Less than high school	19.2	

Note. Means and standard deviations are provided for continuous variables, percentages shown for discrete variables; with respect to marital status, "*unmarried*" refers to those who indicated they were widowed, separated, divorced, or single (never married); in terms of education "*higher education*" refers to those with a doctorate, masters, or bachelors degree; "*less than high school*" refers to those with some secondary/elementary schooling or no schooling; "*lifetime victimization*" is measured in terms of whether or not a respondent has been the victim of any crime in their lifetime; "*physical limitations*" is measured in terms of how often one's daily activities at home, work, school or other areas of life are restricted due to a physical condition (coded dichotomously, 1= sometimes/often, 0 otherwise).

Table 2. Ordinary Least Squares Regression Predicting Self-Report Mental Health Status (with Standard Errors; *N*= 19,422)

	Bivariate Models		Model 1		Model 2		Model 3	
	β	S.E.	*β*	S.E.	*β*	S.E.	*β*	S.E.
Personal Victimization	– .077***	.021	– .071**	.024	– .044†	.024	– .041	.026
Household Victimization	– .062**	.019	– .052*	.021	– .038†	.021	– .042†	.022
Cyber-Bullied	– .115***	.031	– .129***	.034	– .095**	.034	– .093*	.037
Ex-Partner Abuse								
Physical/Sexual	– .440***	.042	–.236***	.052	– .219***	.051	– .205**	.060
Emotional	– .252***	.025	– .064*	.031	– .037	.030	– .012	.034
Total Household Income								
$150,000+ (ref.)	—	—	—	—	—	—	—	—
$0 to $29,999	– .567***	.029	– .386***	.033	– .429***	.032	– .417***	.034
$30,000 to $59,999	– .295***	.028	– .224***	.029	– .263***	.028	– .263***	.028
$60,000 to $149,999	– .166***	.026	– .142***	.027	– .167***	.026	– .168***	.026
Perceived Stress	– .170***	.006	—	—	– .190***	.007	– .190***	.007
Lifetime Victimization	– .010	.014	– .031†	.017	– .008	.017	– .008	.017
Age								
15 to 29 (ref.)	—	—	—	—	—	—	—	—
30 to 54	– .165***	.020	– .201***	.023	– .177***	.023	– .179***	.023
55 to 79	– .215***	.020	– .159***	.025	– .225***	.024	– .228***	.025
80 or more	– .450***	.035	– .208***	.044	– .330***	.043	– .335***	.044
Social Support	.003***	.000	.002***	.000	.002***	.000	.002***	.000
Female (male)	– .051***	.014	.002	.015	.030*	.015	.030*	.015
Physical Limitations (none)	– .492***	.019	– .368***	.021	– .319***	.021	– .317***	.021
Visible Minority (non-visible minorities)	.036	.024	– .041	.028	– .043	.028	– .043	.028
Marital Status								
Unmarried (married/ cohabiting)		.014	– .013	.017	– .009	.017	– .010	.017

(continued)

Table 2. (continued)

	Bivariate Models		Model 1		Model 2		Model 3	
	β	S.E.	*β*	S.E.	*β*	S.E.	*β*	S.E.
Education								
Higher education (ref.)	—	—	—	—	—	—	—	—
Comm. college/trades	− .160***	.019	− .091***	.020	− .104***	.020	− .104***	.020
Some university/college	− .158***	.023	− .115***	.025	− .137***	.024	− .137***	.024
High school	− .165***	.022	− .094***	.025	− .127***	.024	− .128***	.024
Less than high school	− .393***	.020	− .239***	.025	− .265***	.025	− .267***	.025
Interactions between THI and Victimization								
Low THI * Personal vic.								
Low THI * Household vic.								
Low THI * Cyber-bullied								
Intimate Partner Violence								
Low THI * Phys./Sex								
Low THI * Emotional							− .117†	.061
Intercept	—	—	4.562***	.036	5.106***	.041	5.106***	.041

Note. † $p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$; Interaction terms were run in separate models first to determine significance—only significant interaction terms are presented in the table; "*Unmarried*" refers to those who indicated they were widowed, separated, divorced, or single (never married); "*higher education*" refers to those with a doctorate, masters, or bachelors degree; "*Comm*." stands for 'community'; "*Less than high school*" refers to those with some secondary/elementary schooling or no schooling; "*Intimate partner violence*" refers to ex-spousal/partner abuses; "*THI*" stands for total household income; "*vic.*" stands for 'victimization'; "*ref*." indicates the reference categories; "*lifetime victimization*" is measured in terms of whether or not a respondent has been the victim of any crime in their lifetime; "*physical limitations*" is measured in terms of how often one's daily activities at home, work, school or other areas of life are restricted due to a physical condition; all victimization variables compared to the reference of non-victims.

Table 3. Ordinary Least Squares Regression Predicting Perceived Level of Life Satisfaction (with Standard Errors; *N*= 19,422)

	Bivariate Models		Model 1		Model 2		Model 3	
	β	S.E.	*β*	S.E.	*β*	S.E.	*β*	S.E.
Personal Victimization	– .436***	.038	– .134**	.043	– .064	.041	– .088*	.044
Household Victimization	– .296***	.033	– .068†	.038	– .032	.036	– .024	.039
Cyber-Bullied	– .578***	.055	– .289***	.061	– .205***	.059	– .193**	.064
Ex-Partner Abuse								
Physical/Sexual	– .988***	.075	– .211*	.092	– .166†	.088	– .063	.104
Emotional	– .705***	.045	– .207***	.055	– .137*	.053	– .130*	.060
Total Household Income								
$150,000+ (ref.)	—	—	—	—	—	—	—	—
$0 to $29,999	– .680***	.053	– .448***	.059	– .551***	.056	– .540***	.060
$30,000 to $59,999	– .332***	.050	– .247***	.051	– .350***	.049	– .353***	.049
$60,000 to $149,999	– .147**	.048	– .107*	.047	– .169***	.045	– .170***	.045
Perceived Stress	– .509***	.011	—	—	– .480***	.013	– .480***	.013
Lifetime Victimization	– .391***	.025	– .237***	.030	– .180***	.029	– .179***	.029
Age								
15 to 29 (ref.)	—	—	—	—	—	—	—	—
30 to 54	– .121**	.036	– .284***	.042	– .220***	.040	– .224***	.040
55 to 79	.118**	.037	.004	.044	– .158***	.042	– .162***	.043
80 or more	.096	.064	.234**	.079	– .080	.076	– .087	.076
Social Support	.007***	.001	.005***	.001	.005***	.001	.005***	.001
Female (male)	.007	.024	.105***	.026	.173***	.025	.174***	.025
Physical Limitations (none)	– .864***	.034	– .751***	.038	– .629***	.037	– .628***	.037
Visible Minority (non-visible minorities)	– .237***	.043	– .269***	.051	– .267***	.049	– .267***	.049
Marital Status								
Unmarried (married/ cohabiting)	– .562***	.024	– .443***	.030	– .431***	.029	– .434***	.029

(continued)

Table 3. (continued)

	Bivariate Models		Model 1		Model 2		Model 3	
	β	S.E.	*β*	S.E.	*β*	S.E.	*β*	S.E.
Education								
Higher education (ref.)	—	—	—	—	—	—	—	—
Comm. college/trades	− .078*	.034	− .042	.036	− .075*	.034	− .075*	.034
Some university/college	− .143**	.041	− .053	.044	− .108*	.042	− .108*	.042
High school	.007	.040	.045	.044	− .040	.042	− .038	.042
Less than high school	− .040	.037	.060	.045	− .011	.043	− .011	.043
Interactions between THI and Victimization								
Low THI * Personal vic.								
Low THI * Household vic.								
Low THI * Cyber-bullied								
Intimate Partner Violence								
Low THI * Phys./Sex							− .377*	.166
Low THI * Emotional								
Intercept	—	—	8.985***	.064	10.354***	.071	10.357***	.071

Note. † $p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$; Interaction terms were run in separate models first to determine significance—only significant interaction terms are presented in the table; "*Unmarried*" refers to those who indicated they were widowed, separated, divorced, or single (never married); "*higher education*" refers to those with a doctorate, masters, or bachelors degree; "*Comm*." stands for 'community'; "*Less than high school*" refers to those with some secondary/elementary schooling or no schooling; "*Intimate partner violence*" refers to ex-spousal/partner abuses; "*THI*" stands for total household income; "*vic.*" stands for 'victimization'; "*ref.*" indicates the reference categories; "*lifetime victimization*" is measured in terms of whether or not a respondent has been the victim of any crime in their lifetime; "*physical limitations*" is measured in terms of how often one's daily activities at home, work, school or other areas of life are restricted due to a physical condition; all victimization variables compared to the reference of non-victims.

Table 4. Ordinary Least Squares Regression Predicting Perceived Level of Stress (with Standard Errors; *N*= 19,422)

	Bivariate Models		Model 1		Model 2	
	β	S.E.	*β*	S.E.	*β*	S.E.
Personal Victimization	.404***	.023	.144***	.026	.125***	.028
Household Victimization	.297***	.020	.073**	.023	.069**	.025
Cyber-Bullied	.406***	.034	.174***	.037	.191***	.041
Ex-Partner Abuse						
Physical/Sexual	.505***	.046	.085	.056	.084	.067
Emotional	.376***	.028	.147***	.034	.170***	.038
Total Household Income						
$150,000+ (ref.)	—	—	—	—	—	—
$0 to $29,999	− .400***	.033	− .221***	.036	− .226***	.038
$30,000 to $59,999	− .349***	.031	− .216***	.032	− .219***	.032
$60,000 to $149,999	− .171***	.030	− .132***	.029	− .133***	.029
Lifetime Victimization	.338***	.015	.122***	.019	.121***	.019
Age						
15 to 29 (ref.)	—	—	—	—	—	—
30 to 54	.183***	.021	.132***	.026	.131***	.026
55 to 79	− .374***	.022	− .340***	.027	− .341***	.027
80 or more	− .688***	.038	− .636***	.048	− .637***	.048
Social Support	− .002***	.000	− .001**	.000	− .001**	.000
Female (male)	.114***	.015	.141***	.016	.141***	.016
Physical Limitations (none)	.148***	.021	.259***	.023	.259***	.023
Visible Minority (non-visible minorities)	.098***	.026	− .001	.031	− .001	.031
Marital Status						
Unmarried (married/ cohabiting)	− .023	.015	.026	.019	.026	.019
Education						
Higher education (ref.)	—	—	—	—	—	—
Comm. college/trades	− .093***	.021	− .065**	.022	− .065**	.022
Some university/college	− .137***	.025	− .112***	.027	− .112***	.027
High school	− .261***	.025	− .172***	.027	− .171***	.027
Less than high school	− .368***	.023	− .142***	.027	− .141***	.027

(continued)

Table 4. (continued)

	Bivariate Models		Model 1		Model 2	
	β	S.E.	*β*	S.E.	*β*	S.E.
Interactions between THI and Victimization						
Low THI * Personal vic.					.118†	.070
Low THI * Household vic.						
Low THI * Cyber-bullied						
Intimate Partner Violence						
Low THI * Phys./Sex						
Low THI * Emotional						
Intercept	—	—	2.852***	.039	2.854***	.039

Note. † $p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$; Interaction terms were run in separate models first to determine significance—only significant interaction terms are presented in the table; "*Unmarried*" refers to those who indicated they were widowed, separated, divorced, or single (never married); "*higher education*" refers to those with a doctorate, masters, or bachelors degree; "*Comm*." stands for 'community'; "*Less than high school*" refers to those with some secondary/elementary schooling or no schooling; "*Intimate partner violence*" refers to ex-spousal/partner abuses; "*THI*" stands for total household income; "*vic*." stands for 'victimization'; "*ref*." indicates the reference categories; "*lifetime victimization*" is measured in terms of whether or not a respondent has been the victim of any crime in their lifetime; "*physical limitations*" is measured in terms of how often one's daily activities at home, work, school or other areas of life are restricted due to a physical condition; all victimization variables compared to the reference of non-victims.

Table 5. Odds Ratio Predicting the Likelihood of Substance Abuse, High Alcohol Use Models (with Standard Errors; *N*= 19,422)

	Bivariate Models		Model 1		Model 2		Model 3	
	Exp(β)	S.E.	Exp(β)	S.E.	Exp(β)	S.E.	Exp(β)	S.E.
Personal Victimization	1.10†	.050	1.005	.061	.997	.061	.952	.065
Household Victimization	1.09*	.044	.921	.054	.920	.054	.923	.057
Cyber-Bullied	.981	.073	1.056	.088	1.050	.088	1.043	.094
Ex-Partner Abuse								
Physical/Sexual	1.11	.097	1.052	.130	1.048	.130	.997	.149
Emotional	1.21**	.058	1.304**	.078	1.298**	.078	1.282**	.085
Total Household Income								
$150,000+ (ref.)	—	—	—	—	—	—	—	—
$0 to $29,999	.275***	.071	.378***	.084	.380***	.085	.356***	.092
$30,000 to $59,999	.472***	.062	.552***	.070	.553***	.071	.550***	.071
$60,000 to $149,999	.627***	.059	.667***	.063	.668***	.063	.666***	.063
Perceived Stress	1.02	.016	—	—	1.031	.019	1.031	.019
Lifetime Victimization	1.51***	.033	1.264***	.044	1.259***	.044	1.256***	.044
Age								
15 to 29 (ref.)	—	—	—	—	—	—	—	—
30 to 54	1.385***	.050	1.181**	.063	1.181**	.063	1.188**	.063
55 to 79	1.610***	.051	1.802***	.065	1.829***	.066	1.846***	.066
80 or more	.933	.092	1.632***	.121	1.666***	.122	1.698***	.122
Social Support	1.00	.001	.999	.001	.999	.001	.999	.001
Female (male)	.436***	.033	.441***	.038	.440***	.038	.440***	.038
Physical Limitations (none)	.657***	.048	.698***	.059	.692***	.059	.690***	.059

(continued)

Table 5. (continued)

	Bivariate Models		Model 1		Model 2		Model 3	
	Exp(β)	S.E.	Exp(β)	S.E.	Exp(β)	S.E.	Exp(β)	S.E.
Visible Minority (non-visible minorities)	.302***	.079	.320***	.094	.323***	.094	.323***	.094
Marital Status								
Unmarried (married/ cohabiting)	.735***	.033	1.021	.044	1.022	.044	1.029	.044
Education								
Higher education (ref.)	—	—	—	—	—	—	—	—
Comm. college/trades	.739***	.043	.777***	.050	.776***	.050	.778***	.050
Some university/college	.770***	.053	.818**	.062	.823**	.062	.822**	.062
High school	.660***	.052	.716***	.062	.722***	.062	.724***	.062
Less than high school	.388***	.053	.478***	.067	.480***	.067	.484***	.067
Interactions between THI and Victimization								
Low THI * Personal vic.							1.508*	.171
Low THI * Household vic.								
Low THI * Cyber-bullied								
Intimate Partner Violence								
Low THI * Phys./Sex								
Low THI * Emotional								
Intercept	—	—	.983	.090	.900	.106	.903	.106

Note. † $p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$; Interaction terms were run in separate models first to determine significance—only significant interaction terms are presented in the table; "*Unmarried*" refers to those who indicated they were widowed, separated, divorced, or single (never married); "*higher education*" refers to those with a doctorate, masters, or bachelors degree; "*Comm*." stands for 'community'; "*Less than high school*" refers to those with some secondary/elementary schooling or no schooling; "*Intimate partner violence*" refers to ex-spousal/partner abuses; "*THI*" stands for total household income; "*vic.*" stands for 'victimization'; "*ref*." indicates the reference categories; "*lifetime victimization*" is measured in terms of whether or not a respondent has been the victim of any crime in their lifetime; "*physical limitations*" is measured in terms of how often one's daily activities at home, work, school or other areas of life are restricted due to a physical condition; all victimization variables compared to the reference of non-victims.

Table 6. Odds Ratio Predicting the Likelihood of Substance Abuse, High Drug Use Models (with Standard Errors; *N*= 19,422)

	Bivariate Models		Model 1		Model 2		Model 3	
	Exp(β)	S.E.	Exp(β)	S.E.	Exp(β)	S.E.	Exp(β)	S.E.
Personal Victimization	3.81***	.11	1.753***	.140	1.746***	.140	1.840***	.157
Household Victimization	2.47***	.11	1.318*	.138	1.316*	.138	1.250	.155
Cyber-Bullied	3.76***	.14	1.534*	.174	1.521*	.175	1.796**	.195
Ex-Partner Abuse								
Physical/Sexual	3.08***	.19	1.056	.286	1.052	.286	.710	.391
Emotional	2.11***	.14	1.445†	.208	1.441†	.208	1.490	.245
Total Household Income								
$150,000+ (ref.)	—	—	—	—	—	—	—	—
$0 to $29,999	1.742*	.23	2.324**	.254	2.333**	.254	2.403**	.286
$30,000 to $59,999	1.320	.23	1.544†	.242	1.551†	.242	1.592†	.243
$60,000 to $149,999	1.263	.22	1.293	.230	1.295	.230	1.309	.231
Perceived Stress	1.15**	.048	—	—	1.028	.059	1.027	.059
Lifetime Victimization	2.61***	.12	1.320†	.154	1.311†	.154	1.297†	.154
Age								
15 to 29 (ref.)	—	—	—	—	—	—	—	—
30 to 54	.303***	.10	.402***	.140	.400***	.140	.405***	.141
55 to 79	.107***	.16	.137***	.199	.138***	.200	.138***	.202
80 or more	.032***	.71	.053***	.723	.054***	.724	.054***	.725
Social Support	.997	.003	1.001	.003	1.001	.003	1.001	.003
Female (male)	.347***	.10	.326***	.126	.324***	.126	.320***	.127
Physical Limitations (none)	1.19	.13	1.459*	.160	1.448*	.161	1.457*	.161

(continued)

Table 6. (continued)

	Bivariate Models		Model 1		Model 2		Model 3	
	Exp(β)	S.E.	Exp(β)	S.E.	Exp(β)	S.E.	Exp(β)	S.E.
Visible Minority (non-visible minorities)	.335***	.28	.294***	.345	.293***	.345	.290***	.345
Marital Status								
Unmarried (married/cohabiting)	2.92***	.10	1.823***	.134	1.823***	.134	1.818***	.134
Education								
Higher education (ref.)	—	—	—	—	—	—	—	—
Comm. college/trades	2.19***	.17	2.066***	.194	2.073***	.194	2.072***	.194
Some university/college	3.29***	.18	2.039**	.210	2.051**	.210	2.038**	.210
High school	2.43***	.19	1.854**	.221	1.863**	.221	1.812**	.222
Less than high school	2.63***	.18	1.925**	.215	1.938**	.216	1.892**	.217
Interactions between THI and Victimization								
Low THI * Personal vic.							N/S	N/S
Low THI * Household vic.								
Low THI * Cyber-bullied								
Intimate Partner Violence								
Low THI * Phys./Sex								
Low THI * Emotional								
Intercept	—	—	.017***	.306	.015***	.349	.015***	.350

Note. † $p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$; Interaction terms were run in separate models first to determine significance—only significant interaction terms are presented in the table; "*Unmarried*" refers to those who indicated they were widowed, separated, divorced, or single (never married); "*higher education*" refers to those with a doctorate, masters, or bachelors degree; "*Comm*." stands for 'community'; "*Less than high school*" refers to those with some secondary/elementary schooling or no schooling; "*Intimate partner violence*" refers to ex-spousal/partner abuses; "*THI*" stands for total household income; "*vic*." stands for 'victimization'; "*ref*." indicates the reference categories; "*N/S*" meaning No Significance; "*lifetime victimization*" is measured in terms of whether or not a respondent has been the victim of any crime in their lifetime; "*physical limitations*" is measured in terms of how often one's daily activities at home, work, school or other areas of life are restricted due to a physical condition; all victimization variables compared to the reference of non-victims.

Last Updated: April 2016

Bryce Stoliker

Education

M.A.	Western University, *Sociology, Two-year Thesis Stream*; Supervisor: Dr. Rachel Margolis	2014-2016
B.A. [Honours]	University of Windsor, *Double Major Psychology with Thesis & Criminology* (Graduated with Distinction)	2010-2014

Academic/Research Interests

Criminology; Psychology; Criminological theory; Quantitative research methodology & statistical techniques; Mental health of offenders/victims (i.e., illness, disorder, and well-being); Deviancy; Violence; Victimization; Policing; Prison subculture; Sociology of sport.

Statistical Training

Ordinary least squares regression models; Logistic regression models; Mediational analyses (Baron & Kenny); Fixed effects models; Survival & event history analyses; Missing data techniques; Interaction terms; Descriptive data techniques.

Academic Employment History

- September 2014—Present
  Graduate Teaching Assistant, Western University
  - 4442 (Serial Killers), fourth year criminology course (**3 semesters**)
  - 2259 (Sociology of Deviance), second year sociology/criminology course (**1 semester**)

Teaching Experience

- November 2015
  Guest Lecturer, Western University
  - *Fourth-year Policing & Society class* (SOC-4451)

Other Professional Academic Experience

- **Peer-Reviewer**
  - Reviewed manuscript(s) for the following academic journal(s):
    - *Victims & Offenders* (October 2015)

Research Funding/Scholarship (Competition-Based)

Bryce Stoliker (2016-2017; **Declined**). Ontario Graduate Scholarship (Western University). First-year Ph.D. $15,000 Awarded.

Bryce Stoliker (2015-2016). Ontario Graduate Scholarship (Western University). Masters Thesis—Victimization, Stress, and Psychological Well-being: An Analysis of the 2009 Canadian Victimization Survey. $15,000 Awarded.

Other Academic Honours/Awards

Western Graduate Research Scholarship ($2,000), Western University	2015-16
Western Graduate Research Scholarship ($2,500 x3), Western University	2014-15
Dean's Honour Roll in the Faculty of Arts, Humanities & Social Sciences, University of Windsor	2014
Graduated with Distinction (Undergraduate Degree), University of Windsor	2014
Renewable Entrance Scholarship ($750), University of Windsor	2014
Helen Norma Laframboise Scholarships ($1,500), University of Windsor	2014
Member of Golden Key International Honour Society, University of Windsor	2013
Recognition of Achievement Bursary/Award ($1,500), University of Windsor	2013
Recognition of Achievement Bursary/Award ($1,000), University of Windsor	2012
Recognition of Achievement Bursary/Award ($1,000), University of Windsor	2011
Renewable Entrance Scholarship ($750), University of Windsor	2010
Renewable On-Campus Residence Entrance Award ($750 x2), University of Windsor	2010/11
Ontario Scholar Award (Graduating grade 12 with honours)	2010

Publications

Peer-Reviewed/Refereed

Stoliker, B. E., & Varanese, J. A. (Forthcoming). Spending the golden years behind bars: Predictors of mental health issues among geriatric prisoners. *Victims & Offenders*.

Stoliker, B. E. (Forthcoming). Inmate mental health predicting the likelihood of physical and verbal assault on correctional staff. *Journal for Social Thought*.

Stoliker, B. E., & Lafreniere, K. D. (2015). The influence of perceived stress, loneliness, and learning burnout on university students' educational experience. *College Student Journal*, *49*(1), 146-160.

Papers Presented at Professional Conferences

Stoliker, B. E. (2016). Spending the golden years behind bars: Predictors of mental health issues among geriatric prisoners. *Sociology Graduate Student Conference*. Western University.

Stoliker, B. E. (2015). Inmate Mental Health Predicting the Likelihood of Physical and Verbal Assault on Correctional Staff. *Sociology Graduate Student Conference*. University of Western Ontario.

Stoliker, B. E. (2014). The influence of perceived stress, loneliness, and learning burnout on university students' educational experience. *Psychology Undergraduate Poster Conference*. University of Windsor.

Institutional Volunteering Contributions

University of Windsor Walk Safe Program Sept 2013-April 2014

- Ensured that students, employees, faculty and visitors arrived safely to their destination on and off campus during late hours.

Research Assistant, Healthy Relationship Studies,
University of Windsor (Lead Researcher: Dr. Patti Fritz) Sept 2012-April 2014

- Worked as an undergraduate research assistant, aiding in quantitative/qualitative research studies
- Interviewed participants in a one-on-one setting
- Coded data
- Transcribed qualitative data from previously conducted interviews of participants
- Conducted focus group studies