EXPLORING BORDERLINE PERSONALITY DISORDER FEATURES
DIMENSIONALLY AMONG EMERGING ADULTS WITH A HISTORY OF
OFFENDING

A Thesis

Submitted to the Faculty of Graduate Studies and Research

In Partial Fulfillment of the Requirements

For the Degree of

Master of Arts

In

Clinical Psychology

University of Regina

By

Chelsea Anne Delparte

Regina, Saskatchewan

August 30, 2011

Copyright 2011: C.A. Delparte

Library and Archives
Canada

Published Heritage
Branch

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque et
Archives Canada

Direction du
Patrimoine de l'édition

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

ISBN: 978-0-494-88536-9

Our file Notre référence

ISBN: 978-0-494-88536-9

NOTICE:

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.

Canada

UNIVERSITY OF REGINA
FACULTY OF GRADUATE STUDIES AND RESEARCH
SUPERVISORY AND EXAMINING COMMITTEE

Chelsey Anne Delparte, candidate for the degree of Master of Arts in Clinical Psychology, has presented a thesis titled, *Exploring Borderline Personality Disorder Features Dimensionally Among Emerging Adults with a History of Offending*, in an oral examination held on August 29, 2011. The following committee members have found the thesis acceptable in form and content, and that the candidate demonstrated satisfactory knowledge of the subject material.

External Examiner: Dr. Twyla Salm, Faculty of Education

Supervisor: Dr. Kristi Wright, Department of Psychology

Committee Member: Dr. Heather Price, Department of Psychology

Committee Member: Dr. Regan Hart-Mitchell, Adjunct

Chair of Defense: Dr. Rick Ruddell, Department of Justice Studies

*Not present at defense

Abstract

Crime committed by emerging adults in North America is increasing, along with reports of recidivism. Although there is no known cause of offending, current literature suggests that personality pathology, specifically borderline personality disorder (BPD), may be an underlying factor, as many emerging adults entering the justice system present with emotional, cognitive, and behavioural problems symptomatic of BPD. With the latter in mind, the purposes of this study were fourfold: (1) assess for BPD features dimensionally using multiple valid measures among a male and female emerging adult sample with and without an offender history; (2) compare BPD features and associated psychopathology across both emerging adults with and without offender histories; (3) explore the relationship between BPD features, abuse history, types of criminal offenses, number of criminal offenses, and demographic information in the group with an offender history; and (4) examine potential predictors of offender status. Participants included 187 emerging adults comprising two groups; a group with a history of offending ($n = 43$) and a group without a history of offending ($n = 144$). History of offending was operationalized as a self-reported history of an arrested or charged criminal offense. Results demonstrated that BPD features, specifically affect dysregulation, negative relationships, and self-harm, were significantly more elevated in the group with a history of offending than the group without as indicated by two specific BPD measures (Personality Assessment Inventory; Borderline Evaluation of Severity Over Time). In addition, associated BPD symptomatology and psychopathology (i.e., impulsivity, paranoia, state anxiety, substance problems, and aggression) were also significantly more elevated in the group with an offender history than the group without. Participants with a

history of offending were significantly more likely to have experienced some type of abuse. Within the group with an offender history, clinical levels of BPD features were not associated with an increased history of abuse, number of arrested/charged offenses, or type of offense committed. Lastly, BPD features were a statistically significant predictor of offender status, however, the relationship was mediated by substance problems and a history of abuse. Overall, the current findings offer empirical evidence to support the notion that BPD features are more prominent among individuals with a history of offending than those without. Further, results suggest that in a heterogeneous group of participants with a self-disclosed offender history, BPD features are not associated with a specific type of offense or number of offenses. Rather, the relationship between BPD and offending may lie in the process of committing the criminal act itself rather than the type of act. Further exploration of BPD features among emerging adult offenders is required, specifically within a large incarcerated sample. Although the findings are preliminary, the current findings may have important clinical implications for both the assessment and treatment of BPD symptoms within incarcerated criminal populations.

Acknowledgements

A number of individuals contributed to the completion of this thesis by providing advice and guidance throughout the process. I would like to thank my supervisor, Dr. Kristi Wright for her support, expertise, and commitment to this project. Working with Dr. Wright has been an invaluable experience that has facilitated my growth as a researcher. In addition, I would like to express my gratitude to my committee members, Dr. Heather Price and Dr. Regan Hart, for their assistance, encouragement, and contributions to this project. I appreciate my supervisor and committee members' dedication to the project, their recommendations, and feedback.

This research was funded by multiple sources all of which made this project possible. Acknowledgement and thanks are given to the Social Sciences and Humanities Research Council (SSHRC) for the Joseph-Armand Bombardier Canada Graduate Master's Scholarship. This research was also supported in part by the Canadian Institute of Health Research Health Professional Student Research Award to which I am grateful. Lastly, I would like to acknowledge and express my appreciation to the Faculty of Graduate Studies and Research for their continued financial support in the form of academic scholarships, awards, and teaching assistantships.

Table of Contents

0.1 Abstract	I
0.2 Acknowledgements	III
0.3 Table of Contents	IV
0.4 List of Tables	IX
0.5 List of Figures	XI
1.0 Introduction	1
1.1 Emerging Adults	5
1.2 Adolescent/Emerging Adult Offenders	7
1.2.1 Offenders mental health	8
1.2.2 Offenders mental health sex differences	12
1.2.3 Types of offenses	14
1.2.4 Self-reported offending	16
1.3 Theories of Offending	18
1.3.1 A General Theory of Crime	18
1.3.2 Moffitt's Theory	19
1.3.3 Psychological risk factors	20
1.3.4 Summary of theories of offending	21
1.4 Personality Disorders	22
1.5 Borderline Personality Disorder	23
1.5.1 Self-harming behaviour	25
1.5.2 Inappropriate expression of anger/aggression	25

1.5.3 Sex differences	26
1.5.4 Comorbid disorders	26
1.5.5 BPD versus antisocial Personality disorder	27
1.6 Etiological Theories of BPD	28
1.6.1 Attachment Theory	28
1.6.2 Biosocial Model	29
1.6.3 Heritability	31
1.7 BPD Influences on Offending	31
1.8 BPD and Offending	34
1.9 Link Between BPD and Emerging Adult Offending	39
1.9.1 Childhood maltreatment	39
1.9.2 Substance problems	41
1.10 Purposes	42
1.11 Hypothesis	44
2.0 Method	45
2.1 Participants	45
2.2 Measures	46
2.2.1 Self-Report of Offending-Revised	47
2.2.2 Personality Assessment Inventory	47
2.2.3 Borderline Evaluation of Severity Over Time	49
2.2.4 Beck Scale for Suicide Ideation	50
2.2.5 Barratt Impulsiveness Scale – Version 11	51
2.2.6 Center for Epidemiological Studies Depression Scale	52

2.2.7 State Trait Anxiety Inventory for Adults – Form Y	53
2.3 Procedure	53
3.0 Results	55
3.1 Descriptive Statistics	55
3.1.1 BPD Features	65
3.1.2 Associated BPD Symptomatology and Psychopathology	71
3.1.3 Impulsivity	76
3.1.4 Suicidality	76
3.1.5 Depression	76
3.1.6 Anxiety	77
3.1.7 BPD associated psychopathology on the PAI Scale	77
3.2 BPD Features as a Function of Group Membership	77
3.3 Associated BPD Symptomatology and Psychopathology as a Function of Group Membership	81
3.4 Association Between BPD Features and History of Abuse In the Group with a History of Offending	85
3.5 Association Between BPD Features and Criminal Offense Variables in the Group with a History of Offending	86
3.6 Sex Differences in BPD Features in the Group with A History of Offending	88
3.7 Predictors of History of Offending	88
4.0 Discussion	106
4.1 Prevalence of Clinical BPD Features	106

4.2 Demographic Information and Abuse History Across Groups	110
4.3 Comparison of BPD Features Across Groups	112
4.4 Comparison of Associated BPD Symptomatology and Psychopathology Across Groups	114
4.5 Abuse History and BPD Features Among the Group with A History of Offending	123
4.6 Association Between BPD Features and Criminal Offense Variables in the Group with a History of Offending	123
4.7 Sex Differences in BPD Features in the Group with a History of Offending	125
4.8 Predictors of History of Offending	126
4.9 Strengths, Limitations, and Future Directions	129
4.10 Scientific and Clinical Implications	131
5.0 References	134
6.0 Appendices	166
Appendix A: Research Ethical Approval	167
Appendix B: Consent Form	168
Appendix C: Demographic Form	172
Appendix D: Self-Report of Offending-Revised	175
Appendix E: Personality Assessment Inventory	236
Appendix F: Borderline Evaluation of Severity Over Time	237
Appendix G: Beck Scale for Suicide Ideation	238
Appendix H: Barratt Impulsiveness Scale-11	239

Appendix I: Center for Epidemiologic Studies Depression Scale	240
Appendix J: State Trait Anxiety Inventory	241
Appendix K: Debriefing Form	242

List of Tables

Table 1. Demographic information for the entire sample as a function of sex	57
Table 2. History of abuse for the entire sample as a function of sex	59
Table 3. Demographic information as a function of group membership	60
Table 4. History of abuse as a function of group membership	62
Table 5. Offense information for those with a history of offending	66
Table 6. Type and frequency of self-reported arrested and/or charged offenses among the group with a history of offending	68
Table 7. Means and standard deviations for PAI scale and subscale scores as a function of group membership	69
Table 8. Level of borderline personality disorder features as measured by the PAI-BOR and subscales as a function of group membership	72
Table 9. Means and standard deviations for measures of BPD features and associated constructs as a function of group membership	73
Table 10. Frequency of symptoms endorsed on the BEST Subscale A and B as a function of group membership	74
Table 11. Levels of depressive symptoms measured by the CES-D as a function of group membership	78
Table 12. Frequency of clinically significant t-scores on the PAI Clinical Scales, Subscales, and three PAI Treatment Scales as a function of group membership	79

Table 13. The association between offending variables and BPD features as measured by the PAI-BOR	87
Table 14. BPD features in the group with a history of offending as a function of sex	89
Table 15. Summary of correlations between measures of BPD features across the entire sample	91
Table 16. Summary of correlations between PAI-BOR and associated psychopathology across the entire sample	92
Table 17. Summary of correlations between PAI-BOR and other associated PAI Scales across the entire sample	93
Table 18. Predictors of self-reported history of offending	94

List of Figures

Figure 1: Direct effect of borderline features on history of offending	98
Figure 2: Borderline features affecting history of offending indirectly through abuse history	99
Figure 3: Borderline features affecting history of offending indirectly through drug problems	102
Figure 4: Borderline features affecting history of offending indirectly through alcohol problems	104

1. Introduction

Criminality is not a rare phenomenon during emerging adulthood, defined as the period ranging from 18 years to the late 20's (Arnett, 2000). Approximately 31% of all adult criminal court cases involved emerging adults. This percentage is alarmingly disproportionate as emerging adults make up only 12% of the adult population (Statistics Canada, 2008a). In addition, emerging adults have high rates of recidivism as approximately 60% of convicted emerging adult offenders had at least one previous conviction (Statistics Canada, 2002). A specific cause for emerging adult offending is unknown; however, the empirical literature has highlighted a personality pathology (i.e., emotionally unstable personality; borderline personality disorder [BPD] features/diagnosis) that appears to be present in both adolescent/emerging adult (Alessi, McManus, Brickman, & Grapentine, 1984; Barylnik, 2003; Eppright, Kashani, Robinson, & Reid, 1993; McManus, Brickman, Alessi, & Grapentine, 1984; Taylor, James Reeves, & Kistner, 2009) and emerging adult/adult offenders (Black et al., 2007; Davison, Leese, & Taylor, 2001; Grella, Greenwell, Prendergast, Sacks, & Melnick, 2008; Jordan, Schlenger, Fairbank, & Caddell, 1996; Zlotnick et al., 2008). Specifically, identified rates of BPD features/diagnosis range from approximately 17% to 37% among adolescent/emerging adult offenders (Eppright et al., 1993; McManus et al., 1984; Taylor et al., 2009) and approximately 13% to 57% across emerging adult/adult offenders (Black et al., 2007; Blackburn & Coid, 1999; Davison et al., 2001; Dixon, Hamilton-Giachritsis, & Browne, 2008; Grella et al., 2008; Jordan et al., 1996; Logan & Blackburn, 2009; Stuart, Moore, Gordon, Ramsey, & Kahler, 2006; Timmerman & Emmelkamp, 2005; Trestman, Ford, Zhang, & Wiesbrock, 2007; Warren et al., 2002; Zlotnick, 1999;

Zlotnick et al., 2008) which is disproportionally higher than the 2% BPD prevalence rate identified in the general population (American Psychological Association [APA], 2001).

In turn, elevations in affective dysregulation/emotional instability have been observed within adolescent/emerging adult offender populations (Krischer, Sevecke, Lehmkuhl, & Pukrop, 2007; Plattner et al., 2007). In addition, a dysfunctional style of regulating emotions and impulsivity has been associated with offending during adolescence/emerging adulthood (Cooper, Wood, Orcutt, & Albino, 2003). The presence of suicidal ideation and self-harming behaviours are also common among adolescent/emerging adult offenders, with estimates of self-harm or suicidal ideation ranging from approximately 22% to 68% across studies (Alessi et al., 1984; Bailey, 1996; Holley, Arboleda-Florez, & Love, 1995; Kenny, Lennings, & Munn, 2008) which are disproportionally higher than the self harm rate of 1% to 4% identified in the United States general population (Briere, & Gil, 1998; Klonsky, Oltmanns, & Turkheimer, 2003).

Affective dysregulation and self-harm/suicidal ideation are hallmarks of BPD along with impulsivity, instability in interpersonal relationships, and inappropriate expressions of anger (APA, 2000). Within the current literature this cluster of symptoms are frequently highlighted amongst adolescent/emerging adult offenders [i.e., affective dysregulation (Krischer et al., 2007; Plattner et al., 2007), self-harm and suicidal ideation (Alessi et al., 1984; Bailey, 1996; Holley et al., 1995; Kenny et al., 2008), inappropriate anger/aggression (Plattner et al., 2007; Wilson, Rojas, Haapanen, Duxbury, & Steiner, 2001), instability in interpersonal relationships (Krischer et al., 2007), paranoia (Krischer et al., 2007), and impulsivity (Krischer et al., 2007; Wilson et al., 2001)], and those with

a history of offending [i.e., impulsivity (Langhinrichsen-Rohling, Arata, Bowers, O'Brien, & Morgan, 2004; Pfefferbaum & Wood, 1994)]. That said, research examining the relationship between BPD symptomatology specifically and offender populations has largely focused on adult offender populations, demonstrating support for the proposed relationship.

A small number of studies have specifically examined BPD among adolescent/emerging adult offender populations, demonstrating support for the relationship between BPD and criminal behaviour (Eppright et al., 1993; McManus et al., 1984; Taylor et al., 2009). However, there are several methodological limitations to the previous studies (e.g., utilization of one measure of BPD assessment, use of dated measures, lack of comparison group, inclusion of only male offenders, utilization of only serious offenders). In addition, there is limited research on offenders in strictly the emerging adulthood period in their life course, specifically in relation to personality disorders. Undergraduate samples have been previously utilized, however the focus has been on exploration of impulsivity and suicidal behaviour among emerging adults with a self-reported history of offending, not specifically BPD features (Langhinrichsen-Rohling et al., 2004; Pfefferbaum & Wood, 1994). It is beneficial to examine BPD features and related psychopathology in relation to criminal behaviour in a non-incarcerated sample as specific symptom presentations seen in incarcerated samples may be reflective of incarceration rather than an enduring disorder (e.g., paranoia, self-harm). Incarcerated offenders may be engaging in self-harming behaviours in order to be moved to a different facility, to receive attention from staff, or to appear unstable to other incarcerated offenders. Furthermore, it has been suggested that antisocial personality disorder

(ASPD) may resemble BPD in an incarcerated setting (Vaillant, 1975). Specifically, Vaillant observed narcotic addicts that were not anxious or depressed and lacked motivation to change, transform their behaviours once incarcerated resembling patients with BPD. Vaillant discusses how defense mechanisms may shift behaviours in incarcerated settings. It is important to determine the relationship between BPD features and criminal behaviour and whether a relationship exists outside of a correctional environment. Therefore utilizing a non-incarcerated sample may provide a more accurate understanding of the link between BPD features and criminal behaviour.

To our knowledge, no study to date has specifically explored the full range of BPD features, using specific BPD measures, among an undergraduate emerging adult sample with a self-reported history of offending. Further, there is currently no research on the full range of BPD features among a non-incarcerated emerging adult male and female offender sample. Follman, Miller, and Burg (1972) demonstrated that reports of offending in undergraduates were not greatly dissimilar from incarcerated offenders. Therefore, an undergraduate sample may represent an appropriate sample for the examination of BPD features in relation to history of offending in a non-incarcerated sample. The current study aimed to examine and compare BPD features and related psychopathology, using multiple valid measures, among a heterogeneous group of male and female emerging adults with a history of offending and an emerging adult group with no history of offending. The inclusion of up-to-date multiple measures of BPD assessment will enhance support for statistically significant findings and will provide a more accurate estimate of BPD features among those with a history of offending. Furthermore, the inclusion of male and female emerging adults with a heterogeneous

history of offending (i.e., crimes range from minor offenses to major offenses) and a comparison group without a history of offending may enhance understanding of the relationship between BPD features, criminal offending, and recidivism. The inclusion of a comparison group expands the extant adolescent/emerging adult offender and emerging adult/adult offender literature on the full range of BPD features/diagnosis which has not previously included a comparison group. Lastly, the inclusion of participants strictly in the emerging adult age range is a key feature of the current study as this time period is critical given the previously noted disproportionate amount of crimes committed by this age range. It is important to examine criminal behaviour during specific stages in the lifespan (e.g., emerging adult period) in order to clarify its etiology and what facilitates maintenance and continuance of such behaviour (i.e., recidivism).

1.1 Emerging Adults

The term *emerging adulthood* is a relatively new term used to conceptualize the period from the late teens through to the late twenties (Arnett, 2000). Arnett argues that the transition from emerging adulthood to young adulthood occurs in the late twenties and is reached by age 30. Three criteria have been outlined as important milestones in reaching adult status; these criterion include accepting responsibility for oneself, making independent decisions, and becoming financially independent (Arnett, 2001). Although emerging adulthood is a relatively new term, it has become widely used in many disciplines beyond psychology (e.g., sociology, health sciences, social work, law; Arnett, 2007). Arnett (2007) postulates that the widespread use of the term *emerging adulthood* has occurred as disciplines have required new ways to conceptualize this distinct time period. Previously, Erikson (1950) described young adulthood as the period of time

ranging between 20 to 40 years and this definition dominated developmental psychology. Arnett (2007) demonstrates that norms and morals in industrialized societies have shifted since the middle of the 20th century, with widespread and longer participation in postsecondary education and training, greater tolerance of premarital cohabitation, and later ages for entering marriage (mean age = 26 years; Population Reference Bureau, 1996). Arnett (2000) demonstrated that 60% of emerging adults answered moderately (i.e., yes/no) to the question “Do you feel that you have reached adulthood”. Arnett (2007) argues that the transition to adulthood is now long enough to constitute a separate period of the life-course. Five features have been identified that distinguishes emerging adulthood from other periods: (1) it is the age of identity explorations; (2) the age of instability; (3) the self-focused age; (4) the age of feeling in-between; and (5) the age of possibilities (Arnett, 2007).

Life-course is particularly relevant when examining the course of criminal activity (i.e., how it develops and persists overtime; Moffit, 1993) and that is why the term emerging adulthood will be utilized. Within the criminal offender literature, divisions of life-course periods tend to blur (e.g., 12 to 18 years; 13 to 19 years; 18 to 54 years). The adolescent and adolescent/emerging adult offender literature is likely most representative of emerging adulthood characteristics as the mean age in emerging adult/adult studies tends to be higher than the range identified as the emerging adulthood period (e.g., mean age = 32 years; Black et al., 2007). The construct of *adolescence* share more characteristics with *emerging adulthood*, than *young adulthood* based on Arnett’s description. Therefore, a greater focus will be devoted to the adolescent/emerging adult literature, as few studies have focused on an emerging adult time period specifically.

1.2 Adolescent/ Emerging Adult Offenders

Adolescent offenders (under 18 years of age) in Canada are managed under the Youth Criminal Justice Act (YCJA) that was instituted in 2002 (Department of Justice Canada, 2011). The YCJA was developed on the premise that sentencing decisions should consider the offender's potential for rehabilitation. The YCJA put into place an *alternative measures program* developed to allow judges to hold youth accountable in the least restrictive means possible, the most restrictive sentence being secure custody. Alternative sentences include reprimand (lecture by judge), fine (maximum amount of \$1000), community service, probation, intensive support and supervision order (closer monitoring and support than a probation order but still served in the community), or order to attend a non-residential program at fixed times and terms (Statistics Canada, 2008b). The most common youth court sentence in Canada is an order of probation (59% of the time; Statistics Canada, 2008b). Depending on the criminal offense and criminal history, an adolescent may be tried as an adult in adult court. An adolescent convicted of a criminal offense may serve a sentence in an adolescent correctional facility beyond 18 years of age due to the length of his/her sentence. As a result, the age range included in many studies examining incarcerated adolescent offenders may surpass 18 years of age (e.g., age range of 12 to 20 years; Taylor et al., 2009). Alternatively, individuals serving a sentence in an adolescent correctional facility beyond 18 years of age may be transferred to an adult correctional facility.

Individuals charged with a criminal offense at 18 years of age and older are managed within the adult criminal justice system. Sentencing options in the Canadian adult criminal justice system include imprisonment in a provincial/territorial (i.e.,

sentence is 2 years less a day) or federal institution (i.e., sentence is 2 years or more), conditional sentence served in the community under supervision with conditions restricting the movement and activities of the offender where violation can result in immediate suspension and imprisonment of the offender, probation, fine, or other sentences (e.g., restitution, compensation, absolute discharge) (Statistics Canada, 2008a). Multiple sanctions may be imposed.

1.2.1 Offenders mental health. The presence of mental disorders among offenders is high, in most cases demonstrating prevalence rates above that found in the general population (Earthrowl, O'Grady, & Birmingham, 2003). The Bureau of Justice Statistics (2006a) reported that at midyear 2005, mental health problems were present in more than half of all emerging adult/adult prison and jail inmates in the United States. Specifically, emerging adult offenders 24 years and younger had the highest rate of mental health illness; 62.6% in state prison, 57.8% in federal prison, and 70.3% in local jail (BJS, 2006a). Approximately 75% of emerging adult/adult offenders in state prison presenting with mental health problems also met criteria for substance dependence or abuse (BJS, 2006a). In addition, approximately 20% of all youth entering the justice system demonstrate mental or emotional problems, the majority with co-occurring substance use disorder (Stewart & Trupin, 2000). Teplin, Abram, McClelland, Dulcan, and Mericle (2002) examined mental disorders in a large sample of detained adolescent/emerging adult offenders ($N = 1829$; 10 to 18 years of age). Teplin et al. established that approximately two thirds of the male offenders and three quarters of the female offenders presented with at least one or more mental disorders (e.g., disruptive behaviour disorders, affective disorders, and substance abuse disorders). Trestman et al.

(2007) examined current and lifetime psychiatric illness among emerging adult/adult inmates (18 to 64 years of age). These authors found that 69.7% of inmates met criteria for at least one lifetime psychiatric disorder, 39.3% met criteria for multiple lifetime Axis I disorders, and 23.1% met criteria for multiple Axis II disorders.

Lifetime psychiatric disorders amongst emerging adult/adult offenders are prevalent; these include major depression (23% to 30%; BJS, 2006a; Grella et al., 2008; Gunter et al., 2008), dysthymia (3.1%; Gunter et al., 2008), affective disorders (37%; Trestman et al., 2007), mania (43% to 54%; BJS, 2006a; Gunter et al., 2008), anxiety disorders (23.9% to 43.6%; Grella et al., 2008; Trestman et al., 2007), posttraumatic stress disorder (PTSD; 11.4% to 28.6%; Grella et al., 2008; Trestman et al., 2007), panic disorder (8% to 10.4%; Grella et al., 2008; Gunter et al., 2008), psychotic disorders (1.6% to 24%; BJS, 2006a; Grella et al., 2008; Trestman et al., 2007), schizophrenia/NOS (8.4%; Gunter et al., 2008), substance abuse or dependence (73.8% to 76.6%; Gunter et al., 2008; Peters, Greenbaum, Edens, Carter, & Ortiz, 1998), attention-deficit/hyperactivity disorder (AD/HD; 21.6%; Gunter et al., 2008), Cluster A personality disorders (11.4%; Trestman et al., 2007), Cluster B personality disorders (40.7%; Trestman et al., 2007), and Cluster C personality disorders (14.1%; Trestman et al., 2007). The aforementioned prevalence rates are notably higher than the rates of the above disorders experienced in the general population (see APA, 2000). Psychological disorders amongst adolescent offenders are also common; these include major depression, AD/HD, anxiety disorders, separation anxiety disorder, posttraumatic stress disorder (PTSD), oppositional defiant disorder, conduct disorder, affective disorders, eating disorders (more common among female offenders), and substance use disorders

(Colins, Vermeiren, Schuyten, & Broekaert, 2009; Pliszka, Sherman, Barrow, & Irick, 2000; Timmons-Mitchell et al., 1997). Timmons-Mitchell et al. noted that the rates of mental disorders observed in their study were much higher than rates observed in the general population.

Parsons, Walker, and Grubin (2001) demonstrated a relationship between a diagnosis of a mental disorder among female offenders and having been remanded for a violent offence (27% females with a mental disorder versus 18% females without). The BJS (2006a) found similar outcomes as 49% of those emerging adult/adult offenders with mental health problems were charged for a violent offense as their most serious offense. Grella et al. (2008) found that adult offenders in substance abuse treatment with both Axis I and II disorders had the highest rates of prostitution or pimping, assault, homicide, and probation or parole violations, in terms of offenses committed. Furthermore, adult offenders with only Axis II pathology had the highest rates of public intoxication, illegal drug use, and possession of drug paraphernalia, in terms of offenses committed (Grella et al., 2008). Recent reports suggest that emerging adult/adult offenders with mental health issues are more likely to be injured in a fight, be charged for a physical or verbal assault, and violate facility rules during incarceration (BJS, 2006a). In addition, state prison inmates with mental health problems in the United States spend on average a maximum sentence that is five months longer than those without mental health problems (BJS, 2006a). State prison and jail inmates with mental health problems both demonstrated more prior sentences (42% to 47% had 3 or more prior sentences) compared to those without mental health problems (33% to 39% had 3 or more prior offenses) (BJS, 2006a). Overall 32% of local jail inmates and 47% of state prison inmates presenting with a

mental health problem were repeat violent offenders compared to 22% of jail inmates and 39% of state prison inmates without mental health problems (BJS, 2006a). These findings suggest high levels of recidivism, particularly violent recidivism among offenders with mental health problems.

Additional mental health concerns among offenders include self-harming behaviours and suicide attempts. Self-harm and suicidal behaviours are prevalent among adolescent/emerging adult offenders, with estimates of self-harm or suicidal ideation ranging from approximately 22% to 68% across studies (Alessi et al., 1984; Bailey, 1996; Holley et al., 1995; Kenny et al., 2008). Kenny et al. (2008) examined self-harming behaviours among 242 detained adolescent/emerging adult offenders [223 male (14 to 22 years of age) and 19 female (15 to 18 years of age)]. Of the adolescent/emerging adult offenders, 22% engaged in self-harming behaviours within the last 12 months. Among those who had engaged in self-harming behaviours, 13% reported both self-harm and suicide attempts. The latter is quite concerning when it has been noted that there are inadequate resources (e.g., time constraints, inappropriate screening conditions, lack of training for corrections healthcare staff, inadequate screening tools) to screen, assess, and treat the mental illness present in most correctional and community placement facilities (Birmingham, Gray, Mason, & Grubin, 2000; Birmingham, Mason, & Grubin, 1996; MacKinnon-Lewis, Kaufman, & Frabutt, 2002; Redding, 1999; Trupin, Stewart, Beach, & Boesky, 2002). Prisons are not designed to deliver mental health care as offenders are a highly mobile population (Birmingham et al., 1996) incarcerated in facilities thriving on discipline and control (i.e., anti-therapeutic environment; Hughes, 2000). In turn, the relationship between prisoners and prison healthcare staff may not be satisfactory

(Birmingham, et al., 2000). The BJS (2006a) reported that only 17% of local jail inmates, 34% of state prison inmates, and 24% of federal prison inmates with mental health problems received treatment since admission.

Potential consequences of missed mental health screening and treatment opportunities include perpetuated pathology, repeat offending, suicide, or self-harm. Smith and Kaminski (2010) examined self-injurious behaviours among emerging adult/adult inmates (18 to 61 years of age). Results demonstrated that self-injurious behaviours among inmates were associated with disproportionate utilization of health resources and maladjustment to the correctional environment. Specifically, there was a 37% increase in the number of disciplinary incidents among inmates that self-injure. Vollm and Dolan (2009) identified numerous needs (e.g., treatment and information about treatment, psychological distress) among self-harming female prisoners in the United Kingdom; more than half of those needs were unmet.

1.2.2 Offender mental health sex differences. Across studies, adolescent/emerging adult and emerging adult/adult female offenders typically present with more mental health problems than adolescent/emerging adult and emerging adult/adult male offenders (BJS, 2006a; Timmons-Mitchell et al., 1997; Trestman et al., 2007; Zlotnick et al., 2008), although some studies have demonstrated similar rates of psychiatric disorders across sex (Gunter et al., 2008). It is important to consider the rates of mental health disorders across sex in offender populations as differences may impact offending and treatment needs. Trestman et al. (2007) demonstrated that one in four women met criteria for more than one Axis II disorder and 42% had co-morbid Axis I and II disorders. Zlotnick et al. (2008) demonstrated that significantly more female

offenders presented with a lifetime mental health disorder (i.e., eating disorders, major depression, affective disorders, anxiety disorders, and BPD) than male offenders. Male offenders presented with ASPD significantly more than female offenders. In total, 46.7% of female offenders presented with one or more disorders as compared to 24.7% of male offenders (Zlotnick et al., 2008).

Although Gunter et al. (2008) demonstrated similar rates of a current psychiatric disorders (last 12 months) across sex, female offenders presented with PTSD (23.2% females versus 10.2% males) and adjustment disorder (10.7% females versus 3% males) significantly more than male offenders. Furthermore, female offenders presented with more eating disorders including anorexia and bulimia (7.1% females versus 1.9% males) than male offenders, however this result only approached significance ($p = .054$; Gunter et al., 2008). Trestman et al. (2007) examined lifetime history of psychiatric disorders in male and female emerging adult/adult offenders (18 to 64 years of age). Results indicated that female offenders presented with BPD (23.2% females versus 12.9% males) and anxiety disorders (49.7% females versus 37.6% males) significantly more often than male offenders, and male offenders presented with ASPD (39.5% males versus 27% females) significantly more often than female offenders.

Numerous researchers have examined mental health needs of strictly female emerging adult/adult offenders, likely in response to the aforementioned imbalance in the presence of psychiatric disorders. Across such studies, the following rates of lifetime psychiatric disorders among female emerging adult/adult offenders have been observed: major depressive episode (MDE; 13% to 16.9%; Jordan et al., 1996; Teplin, Abram, & McClelland, 1996); dysthymia (7% to 9.6%; Jordan et al., 1996; Teplin et al., 1996);

manic episode (2.6%; Teplin et al., 1996); generalized anxiety disorder (GAD; 2.5% to 13%; Jordan et al., 1996; Logan & Blackburn, 2009; Teplin et al., 1996); panic disorder (1.6% to 26%; Jordan et al., 1996; Logan & Blackburn, 2009; Teplin et al., 1996); PTSD (33.5% to 37%; Logan & Blackburn, 2009; Teplin et al., 1996); obsessive compulsive disorder (4%; Logan & Blackburn, 2009), eating disorders (20%; Logan & Blackburn, 2009); alcohol abuse/dependence (32.3% to 38.6%; Jordan et al., 1996; Teplin et al., 1996); drug abuse/dependence (44.2% to 63.6%; Jordan et al., 1996; Teplin et al., 1996); ASPD (11.9% to 56%; Jordan et al., 1996; Logan & Blackburn, 2009; Teplin et al., 1996); and BPD (42%; Logan & Blackburn, 2009). Jordan et al. (1996) demonstrated that overall 64% of the female emerging adult/adult offenders met criteria for any lifetime disorder, and 46.3% met criteria for any current disorder.

In sum, mental health disorders are common among both adolescent and adult incarcerated offenders. It is important to further examine the level of psychopathology present in offender samples and its effect on offending. As previously noted, mental health disorders at times develop in response to an incarcerated setting. Therefore, it is important to identify mental health disorders existing among individuals with a history of offending (i.e., outside of a correctional environment) and the impact such problems may have on criminal behaviour (i.e., types of offenses committed, recidivism).

1.2.3 Types of offenses. Criminal offenses encompass both status offenses, index offenses, and non-index offenses. Status offenses are offenses considered criminal based on provincial law rather than federal law due to the person's age (under 18 years of age) at the time the crime was committed (e.g., running away from home, truancy from school, disobeying lawful commands of parents or legal guardians, liquor law violations;

Teitelbaum, 2002). Index and non-index offenses are those criminal behaviours that are considered illegal based on criminal codes and are considered violations no matter the age of the person committing them. Index offenses are divided into two subcategories: violent crimes (e.g., murder, non-negligible manslaughter, forcible rape, sexual assault, major assault, common assault), crimes against property (e.g., robbery, burglary, break and enter, automobile theft, arson) (Shoemaker, 2009; Statistics Canada, 2008a). Non-index crimes include: administration of justice crimes (e.g., fail to appear in court, breach of probation, unlawfully at large, fail to comply with order), other criminal code offenses (e.g., weapons, prostitution, disturbing the peace), criminal code traffic offenses (e.g., impaired driving), and other federal statute offenses (e.g., drug possession, drug trafficking) (Statistics Canada, 2008a). In Canada, the ten most common adolescent index and non-index offenses comprising youth court caseload in 2006/2007 include theft (14% of cases), common assault (10% of cases), break and enter (9% of cases), failure to comply with a disposition (8.5% of cases), mischief (7% of cases), possession of stolen property (6% of cases), failure to comply with order (6% of cases), major assault (6% of cases), drug possession (4% of cases), and robbery (4% of cases) (Statistics Canada, 2008b).

In Canada, the ten most common emerging adult offenses comprising adult court case loads in 2006/2007 are theft (9% of cases), common assault (8% of cases), failure to comply with order (8% of cases), impaired driving (8% of cases), breach of probation (7% of cases), drug possession (5% of cases), major assault (5% of cases), mischief (4% of cases), break and enter (4% of cases), and possession of stolen property (4% of cases) (Statistics Canada, 2008a). In total, emerging adult offenders ages 18 to 24 years

comprise 31% of all adults accused of a criminal offense, these include: 25.8% of all crimes against the person; 33.7% of all crimes against property; 32.8% of all administration of justice crimes; 34.5% of all other criminal code offenses; 23.8% of all criminal code traffic offenses; and 37.9% of all other federal statute offenses (Statistics Canada, 2008a). Emerging adults represent the highest percentage of those accused of the following crimes: attempted murder, robbery, major assault, theft, break and enter, mischief, possession of stolen property, failure to appear in court, breach of probation, failure to comply with order, possession of weapons, disturbing the peace, other criminal code traffic, drug possession, and trafficking (Statistics Canada, 2008a). For the purposes of the current study, descriptive information (i.e., frequency) regarding status offenses, index offenses, and non-index offenses will be examined specifically in relation to BPD features. Specifically, the type of offense will be explored in relation to BPD features to determine if BPD features impact the type of criminal behaviour emerging adults with a self-reported history of offending engage in.

1.2.4 Self-Reported offending. When examining the etiology of or factors related to criminal behaviour there are different methods for measuring offense history. Both self-reported offending and official crime data have their advantages and limitations. Knight, Little, Losoya, and Mulvey (2004) report that self-report criminal offense surveys provide support for the notion that official records severely underestimate the true volume of crime and that most crimes remain undetected by law enforcement personnel. In addition, Knight et al. (2004) note that many crimes detected by law enforcement personnel do not lead to an official arrest and therefore are not included in official statistics. Research demonstrates that only 15% of police contacts

with adolescents (Black & Reiss, 1970), and only 14% of police contact with adults resulted in an official arrest (Worden & Myers, 1999).

In addition, official records of offending (e.g., arrest data, uniform crime reports) can be biased, possibly skewing true depictions of offending (e.g., race and sex biases; Shoemaker, 2009). Comparisons were made between self-reported adolescent offenders in the 1995 portion of the National Longitudinal Study of Adolescent Health (Add Health; Harris et al., 2003) survey and arrested offenders in the Federal Bureau of Investigation's (FBI) Crime in the United States (CIUS; FBI, 1995) annual report (Williams, Tuthill, & Lio, 2008). Distribution of arrests were three males to one female for nonviolent crimes and six to one for violent crimes; these sex differences were not apparent in the self-report criminal offense data where males and females reported to have offended at similar rates across all types of crimes. The latter suggests that there may be biases at various levels of the legal system (i.e., tendency to arrest males more than females despite similar self-reported rates of offending) and supports utilization of self-report to obtain information regarding criminal behaviour.

Although there is support for the use of self-report to obtain information regarding criminal activity, there are numerous limitations associated with this approach (Selby et al., 2010). First, without a standard for comparison it is not possible to assess the validity of self-reported crimes (Selby et al., 2010). Second, self-report methods pose the risk of under-reporting, as individuals may not honestly report their criminal behaviour (Huizinga & Elliot, 1986). In turn, self-report also has the potential for over-reporting which has the potential to skew statistics on criminal behaviour. Lastly, self-report methods may lead to the acquisition of inaccurate information due to dishonest or

careless responding, or poor recall of events. Self-report relies on respondent's memories of their behaviours or details of events which may be faulty. Despite these limitations, self-report of criminal activity provides the opportunity to examine the etiology of crime and criminality by allowing for the collection of more comprehensive information on individual, familial, and social/environmental characteristics and influences (Thornberry & Krohn, 2000).

1.3 Theories of Offending.

There is a strong relationship between age and crime, as the majority of crimes are committed by males aged 12 to 25 years (Gottfredson & Hirschi, 1990). Despite this statistic, a small portion (approximately ten percent) of adolescents and emerging adults commit over two-thirds of all offenses among this age group (Yoshikawa, 1994). The question is what separates those who do not engage in criminal activity from those that engage in criminal activity? Furthermore, what separates those who commit occasional minor crimes from those who engage in more lifetime criminal behaviour? The following theories of offending are the most applicable to emerging adult offenders as the theories speculate about potential causes of adolescent and/or emerging adult offending. In addition, some of the theories discuss potential factors that may influence continued criminal activity into adulthood.

1.3.1 A General Theory of Crime (GTC). Gottfredson and Hirschi (1990) propose a general theory of crime (GTC), asserting that criminal behaviour arises out of one common trait, low self-control. Low self-control is suggested to develop out of inadequate socialization and weak family bonds (e.g. poor parenting). The GTC implies that low self-control leads directly to criminal activity. The GTC speculates that criminal

behavior will decline with age due to physiological changes rendering an offender no longer able to carry out criminal activities. Low self-control itself is thought to persist over time. Although this theory and similar versions have gathered some empirical support (e.g., Simons, Simons, Chen, Brody, & Lin, 2007), the simplicity of this theory is problematic. Numerous studies have yielded results highlighting the simplicity of the GTC, suggesting that more variables (e.g. personality, biology, peer relationships, and social bonds) are involved in offending than low self-control (Cauffman, Steinberg, & Piquero, 2005; Longshore, Chang, & Messina, 2005; Simons, Wu, Conger, & Lorenz, 1994).

1.3.2 Moffitt's Theory. Moffitt's (1993) theory of offending focuses on behaviours prior to adolescence. Moffitt asserts that there are two types of offending, differing in regards to the etiology of criminal behaviour as well as criminal course. The first type is adolescence-limited (AL) offending and is characterized by a period of occasional criminal activity that usually ceases in early adulthood. The AL offender demonstrates no behavioural problems in infancy or childhood. Rather, criminal behaviour is proposed to begin in adolescence as goals shift towards obtaining adult possessions, power, and privileges. Moffitt makes reference to biological maturity now surpassing social maturity in society. AL offenders strive to transcend this maturity gap by demanding adult power and privileges through criminal behaviours. The second type of offending Moffitt describes is life-course-persistent (LCP) offending. The LCP offender demonstrates patterns of problem behaviours from birth (i.e., difficult temperament, ADHD, and learning disabilities) that are thought to originate from neuropsychological deficits. Furthermore, this form of adolescent offending is thought to

arise out of high risk environments (e.g., low income, single parent). A reciprocal effect is thought to occur between the high risk environment and neuropsychological deficits, as one inevitably makes the other worse. Therefore, individuals with biological predispositions and high risk social environments are at a greater risk of engaging in adolescent criminal behaviour that will likely continue into emerging adulthood and adulthood.

There is some empirical support for Moffitt's theory (e.g., Moffitt & Caspi, 2001; Moffitt, Caspi, Rutter, & Phil, 2002). However, there is no evidence that adolescents are eager to take on adult roles, power, or privileges (e.g., marriage, parenthood, and full time employment). In actuality the median age of these transitions over the past 50 years has been on the rise (Arnett, 2004) suggesting that these adult features are not actively being sought out.

1.3.3 Psychological risk factors. Shoemaker (2009) explains that the focus of psychological theories is on how psychological conditions or cognitive deficits lead to or influence criminal behaviour. Biological and environmental predispositions (i.e., learning disabilities, low impulse response, poor school performance, difficult family relationships) are acknowledged in relation to the development of a psychological condition. In turn, psychological conditions are thought to reciprocally influence biological and environmental circumstances. However, the primary focus of such theories is on how the psychological condition itself impacts or influences offending.

Although low intelligence and criminal behaviour were once thought to be directly linked (e.g., Fink, 1938), over time research has demonstrated weak support for this relationship (e.g., Sutherland & Cressey, 1978; Vold & Bernard, 1986). Rather,

more intelligent individuals may be less likely to get caught for criminal behaviours (Hirschi & Hindelang, 1977), therefore skewing perceptions of offenders. A more plausible connection between low intelligence and adolescent/emerging adult offending may be mediated by school performance, peer relationships, relationships with teachers, and withdrawal from the school system (Hirschi & Hindelang, 1977). Poor school performance has been associated with adolescent offending (Wilson & Herrnstein, 1985) and high-risk behaviours (Kasen, Cohen, & Brook, 1998). Difficulties in school alone do not entirely explain offending as high-risk behaviours can develop prior to attending school (Moffitt, 1993), but it is a plausible risk factor in the development and maintenance of criminal behaviours among adolescents and subsequently emerging adults.

1.3.4 Summary of theories of offending. Theoretical models of offending encompass a variety of disciplines and interdisciplinary systems. Theories that integrate biology, environmental factors, and psychological influences (i.e., Moffitt's theory), appear to provide a more comprehensive understanding of the possible risk factors associated with offending. Although many theories have been proposed, to date most theories are not well supported. Parsimony may weaken any theory attempting to explain adolescent offending, as this phenomenon is a multifaceted issue. Existing research highlights a pattern of emotional dysregulation, impulse problems, aggression, interpersonal instability, and self-harm behaviours among adolescent/emerging adult offenders, behaviours consistent with BPD (e.g., Alessi et al., 1984; Bailey, 1996; Holley et al., 1995; Kenny et al., 2008; Krischer et al., 2007; Plattner et al., 2007; Wilson et al., 2001). Personality pathology itself may impact criminal behaviour across the life-span.

Moldavsky et al. (2002) examined the differences between adolescents at risk of offending (e.g., worse family circumstances) and adolescent offenders. One of the distinguishing factors between the two groups was the adolescents at risk of offending had less personality disorders and more education than the adolescent offenders. These findings lend support to the notion that personality pathology may be related to criminal behaviour.

1.4 Personality Disorders

The Diagnostic and Statistical Manual of Mental Disorders IV-Text Revision (DSM-IV-TR; APA, 2000) defines personality disorders as enduring, pervasive, inflexible patterns of inner experience and behaviour that deviates markedly from the expectations of the individuals culture, leading to significant distress or impairment in social or occupational functioning. Livesley (2001) characterizes personality disorders as a lack of coherent sense of self, inconsistent personality attributes, maladaptive coping styles, and problems in interpersonal relationships. The DSM-IV-TR categorizes personality disorders into three clusters (i.e., Cluster A, B, and C) based on descriptive similarities. BPD is the focus of the current study and is included under Cluster B along with Antisocial, Histrionic, and Narcissistic Personality Disorders. Personality disorders are estimated to onset in late adolescence or emerging adulthood and are thought to be relatively stable over time (APA, 2000). It is estimated that personality disorders affect approximately 9% of the general population (Lenzenweger, Lane, Loranger, & Kessler, 2007). Across female emerging adult/adult offender populations, prevalence of personality disorders range from approximately 42 to 82% (Fazel & Danesh, 2002; Logan & Blackburn, 2009; Parsons et al., 2001; Von Schonfeld et al., 2006), whereas

male emerging adult/adult offenders prevalence of personality disorders is approximately 65% based on a review of 60 studies from 12 separate countries (Fazel & Danesh, 2002). Cluster B personality disorders range from approximately 32 to 56% among emerging adult/adult offender populations (Loper, Mahmoodzadegan, & Warren, 2008; Timmerman & Emmelkamp, 2005; Trestman et al., 2007). Fazel, Langstrom, Grann, & Faze (2008) examined psychopathology among adolescent/emerging adult serious offenders (15 to 21 years) finding a personality prevalence rate of 27.7% among this sample. Krischer et al. (2007) supports the assumption that personality pathology plays a major role in adolescent/emerging adult offending.

1.5 Borderline Personality Disorder

BPD is prevalent, diagnosed in approximately 2% to 6% of the general population (APA, 2000; Grant et al., 2008). In addition, BPD comprises 10% to 25% of all inpatient psychiatric admissions (Bender et al., 2001; Springer & Silk, 1996; Widiger & Weissman, 1991) and 10% to 20% of outpatients (Korzekwa, Dell, Links, Thabane, & Webb, 2008; Widiger & Weissman, 1991; Zimmerman & Mattia, 1999). Based on studies that assigned a diagnosis of BPD among adolescents/emerging adults, a BPD prevalence rate of 3% was demonstrated in a community population (9 to 19 years; Johnson, Cohen, Brown, Smailes, & Bernstein, 1999), and 43% to 53% among hospitalized inpatient samples (Becker, Grilo, Edell, & McGlashan, 2002; Grilo et al., 1998; Levy et al., 1999), albeit a diagnosis of BPD in adolescence is controversial due to the defined age of onset (i.e., 18 years). BPD is characterized by emotional dysregulation (i.e., emotionally reactive, black and white thinking, poor coping strategies), self-harm (e.g., cutting, burning), instability in interpersonal relationships, identity disturbance,

inappropriate expressions of anger, intense fears of abandonment, impulsivity, feelings of emptiness, dissociation, and paranoia (APA, 2000). According to the DSM-IV-TR (APA, 2000), five of the nine symptoms listed above must be present in order to be diagnosed with BPD. BPD is considered to be one of the most challenging personality disorders to treat as individuals with BPD are difficult to retain in therapy, often are unresponsive to therapy, and make unrealistic demands on therapists (Kiehn & Swales, 2001).

Within the current study, BPD is regarded in a multidimensional framework, an approach that has received much support (Livesley, 2001). Recent arguments suggest that a dimensional model may more accurately represent the degree of maladaptive personality traits (Livesley, 2007; Widiger & Trull, 2007) as the current criteria threshold for a diagnosis of BPD includes five of nine symptoms allowing for much heterogeneity among persons with the same disorder. Specifically, the criteria threshold for BPD (minimum of 5 out of 9 symptoms) produces over 200 variations of the disorder (Jacobo, Blais, Baity, & Harley, 2007). Examining BPD in a multidimensional framework allows focus to be directed towards the presence of BPD features and symptomatology without assigning a diagnosis of BPD. Assessing BPD features and related psychopathology along a continuum enables the examination of weak and strong presentations of BPD, diverse levels that may exert an effect on emerging adult offending uniquely. In addition, specific BPD features (e.g., emotional dysregulation, self-harming behaviour, impulsivity, aggression) can be compared between those with and without a history of offending suggesting which BPD features may be predominantly impacting the relationship between BPD features and criminal behaviour.

1.5.1 Self-harming behaviour. Self-harming behaviours are comprised of a wide array of behaviours including self-mutilation, suicide, suicide attempts, suicidal gestures, and parasuicidal acts (Yates, 2004). Linehan (1986) defines *parasuicidal* acts as nonfatal, intentional, self-injurious behaviour, resulting in tissue damage, illness, or risk of death. Differences present in regards to the intent, mode of injury, lethality, chronicity, and age of onset (Brown, Comtois, & Linehan, 2002; Motz, 2001). A related concept is that of suicidal ideation which involves ruminative thoughts of suicide or death. Suicidal ideation has been associated with 28 to 41% of self-harm cases (Gardner, & Cowdry, 1985; Jones, Congin, Stevenson, Straus, & Frei, 1979; Pattison & Kahan, 1983). Completion of suicide occurs in eight to ten percent of individuals with BPD (APA, 2000). It is arguably one of the most concerning symptoms associated with BPD.

1.5.2 Inappropriate expression of anger/aggression. Inappropriate expression of anger is another concerning BPD feature as it can lead to the infliction of harm on another individual. Current literature perceives aggressive behaviour as a dichotomous construct (Shelton, Sampl, Kesten, Zhang, & Trestman, 2009). Aggressive behaviour has been divided into premeditated aggression (i.e., instrumental, predatory, or callous and unemotional aggression) and impulsive aggression (i.e., affective, reactive, expressive, emotional, or hostile aggression). Wakai and Trestman (2008) describe impulsive aggression as a burst of rage with an inability to perceive future consequences. Shelton et al. (2009) argue that impulsive aggression is the aggression present in those with BPD. In turn, Shelton et al. acknowledges that incarcerated offenders with BPD are the most difficult to manage due to their emotional impulsivity and likelihood of self-harm.

1.5.3 Sex differences. There are significant sex differences in regards to the diagnosis of BPD across various study samples (e.g., community based and clinical samples; Maier, Lichtermann, Klinger, Heun, & Hallmayer, 1992; Zanarini et al., 1998). Overall, approximately 75% of adults diagnosed with BPD are female (APA, 2000). Black et al. (2007) demonstrated that adult female offenders were more likely than male offenders to meet criteria for BPD (55% versus 27%). Similarly, one study found prevalence rates of BPD in an adolescent/emerging adult inpatient population to be 63% for females as compared to 45% amongst males (Becker et al., 2002). Krischer et al. (2007) explored general personality pathology in three samples (i.e., detained adult males and females, incarcerated adolescents, healthy adults). There were differences in symptom presentation between sex as incarcerated adolescent/emerging adult female offenders endorsed more internalizing behaviours (e.g., self-harm and conflict in interpersonal relationships) in comparison to adolescent/emerging adult male offenders.

1.5.4 Comorbid disorders. Research demonstrates high rates of co-occurrences or co-morbidity between BPD and other Axis I (Zanarini, Frankenburg, Hennen, Reich, & Silk, 2004; Zimmerman & Mattia, 1999) and Axis II disorders (Zanarini et al., 1998). In adult samples, the most commonly co-occurring Axis I disorders were mood (e.g., major depression), anxiety (e.g., panic disorder, social phobia, and posttraumatic stress disorder), eating disorders, and substance use disorders (Zanarini et al., 2004; Zimmerman & Mattia, 1999). Zanarini et al. (2004) conducted a longitudinal study among emerging adults/adults (18 to 35 years of age) with BPD examining rates of comorbidity at a six year follow-up. Zanarini et al. found that three-quarters of patients with BPD also met criteria for a mood disorder, 60% met criteria for an anxiety disorder,

34% met criteria for an eating disorder, and 19% met criteria for a substance use disorder. Rates of co-occurring major depression and BPD are typically high, fluctuating around 61% (Zimmerman & Mattia, 1999; Zanarini et al., 2004). Zanarini et al. (1998) examined axis II comorbidity among emerging adults/adults (18 to 50 years), with dependent personality (51%) being the highest co-occurring axis II personality disorder among individuals with BPD. ASPD rates were also high at 23% in this particular study. Narcissistic personality disorder co-occurrence existed among 15% of those with BPD. There has been limited research on co-morbid rates among a strictly emerging adult sample diagnosed with BPD. However, findings in the emerging adult/adult literature allow speculation that mood, anxiety, substance, and eating disorders (i.e., Axis I disorders) may also be frequently co-morbid with BPD in strictly emerging adult populations.

1.5.5 BPD versus antisocial personality disorder. There is significant overlap in symptom presentation across the Cluster B personality disorders outlined in the DSM-IV-TR (APA, 2000). The main feature distinguishing BPD from histrionic and narcissistic personality disorder is the presence of self-harming behaviour (APA, 2000). Self-harm, however, does not necessarily distinguish BPD from ASPD which is also characterized by impulsivity, aggressiveness, and reckless disregard for the safety of self or others (i.e., potential self-harming behaviours; APA, 2000). The DSM-IV-TR differentiates the two disorders by one main feature, the goals of manipulative behaviour (i.e., self-harm). In individuals with ASPD the goals of manipulative behaviour is often driven by the goal to gain profit or power whereas the main goal of manipulative behaviour in individuals with BPD is to gain the concern of caregivers or to regulate

emotions (APA, 2000). There are sex discrepancies present between BPD and ASPD. As previously mentioned, BPD is diagnosed more often in women (75% female; APA, 2000) whereas ASPD is more likely to be diagnosed in men (80% male; Kessler et al., 1994; Robins & Regier, 1991). Zlotnick (1999) examined ASPD among incarcerated women (mean age = 31 years) while controlling for BPD and PTSD. Results suggest that self-harm/self-mutilation is a function of borderline pathology rather than a feature of ASPD among female offenders. Zlotnick et al. (1999) propose that the outcomes are a result of affect dysregulation leading to different acts in individuals with BPD (i.e., self-destructive acts) as compared to individuals with ASPD (i.e., destructive acts towards others). Complications arise when attempting to differentiate the two disorders in the context of incarceration (Vaillant, 1975). Incarcerated individuals with ASPD may, at times, strongly resemble individuals with BPD, expressing intense anger, aggression, and even suicidal behaviours (Vaillant, 1975). One must ensure that symptoms are present in numerous contexts to be diagnosed with BPD. The current study examined BPD features among emerging adults with a self-reported history of offending. Utilizing a non-incarcerated sample may aid in identifying true BPD features among those with a history of offending.

1.6 Etiological Theories of BPD

1.6.1 Attachment Theory. Attachment theories such as Bowlby's (1979) have been applied to the development of BPD (e.g. Sable, 1997). Attachment theories focus on the significance of the parent-child bond (e.g. maternal sensitivity, proximity seeking, touching, and soothing in childhood; fostering security and autonomy in adolescence) in relation to mental health (Bowlby, 1979). A good parent-child bond is thought to lead to

the development of an enduring emotional connection between child and caregiver. The child is able to remember positive bonds when they are temporarily separated from their caregivers, indicating the development of a positive object permanence (i.e., an understanding that an object still exists even if it is no longer in sight). A poor child-parent bond (as a function of over gratification, poor maternal sensitivity, or neglect) is postulated to lead to unresolved or fearful attachment styles. The unreliable caregiver creates poor bonds. The child continuously fears rejection by the caregiver which invokes constant feelings of anxiety and anger. At this point, the child is unable to recall positive bonds during temporary periods of separation, exacerbating the child's fear of rejection (i.e., anxiety and anger). The child may emotionally detach, a quality that becomes integrated into the individual's personality, carrying over into adulthood. Sable (1997) indicates that this is the etiological process that facilitates the development of BPD. Although histories of family separation, neglect, physical, and/or sexual abuse are common among those with BPD (Battle et al., 2004; Johnson, Smailes, Cohen, Brown, & Bernstein, 2000; Paris, Zweig-Frank, & Guzder, 1994; Trull, 2001), this is not always the case, which suggests that additional factors play a role in the development of BPD beyond that of poor parent-child bonds.

1.6.2 Biosocial Model. A theory of BPD development that has received the most empirical support is Linehan's (1993) biosocial model. According to this model, BPD is thought to emerge from transactions between individual biological predispositions (e.g., pre-existing emotional sensitivity) and invalidating environments (e.g., early parental abandonment, separation, loss, neglect; physical, sexual or emotional abuse). An invalidating environment is characterized by intolerance toward emotional expression,

particularly when the emotions are not context bound (Linehan, 1993). The consequence of an emotionally restrictive environment is reflected in the child's inability to understand, label, regulate, or tolerate their own emotional responses. Furthermore, the child fails to learn how to adaptively problem solve (e.g., active passivity). Linehan (1993) indicates that extreme fluctuations may occur between emotional inhibition and extreme emotional lability, a result of the invalidating environment. The emotional dysregulation experienced then becomes a pervasive personality trait (Linehan, 1993). The primary characteristic of BPD in Linehan's model is emotional dysregulation which persists across many situations or circumstances. Dysregulation implies an accentuated sensitivity and reaction to emotional stimuli, and a slow return to emotional baseline level.

Recently, Linehan's (1993) biosocial model has been expanded to look further at trait impulsivity as a specific temperament that is biologically heritable (Crowell, Beauchaine, & Linehan, 2009). Trait impulsivity (i.e., impulsive behaviours becoming apparent during infancy as a distinguishing personality characteristic) is a proposed biological vulnerability that, in conjunction with an invalidating environment, may lead to BPD pathology (e.g., impulsive self-harming). Furthermore, it is proposed that a difficult child (i.e., difficult temperament) may exacerbate negative environmental influences, having a reciprocal effect. The expansion of the biosocial model occurred as a result of recently reported biological similarities between BPD and impulse control disorders such as ADHD (Joyce et al., 2006; Kim, Kim, & Cho, 2006). As well, impulsive behavioural traits have been found to be 80% heritable when comparing the degree of similarity in rates of impulsivity and ADHD for monozygotic and dizygotic

twins (Price, Simonoff, Waldman, Asherson, & Plomin, 2001; Sherman, Iacono, & McGue, 1997).

1.6.3 Heritability. Biology is thought to impact the development of BPD, either directly or indirectly, through a relationship with the environment. Torgersen et al. (2000) explored hereditary factors in relation to personality disorders by examining 92 monozygotic twin pairs, and 129 dizygotic twin pairs. The concordance rate for BPD was 38% among monozygotic twin pairs and 11% among dizygotic twin pairs. Using a best fitting model, it was found that there was a strong genetic component in which 69% of the variance in symptoms was accounted for by genetic effects, and 31% was accounted for by nonshared environmental effects. Congruent with these findings, Silverman et al. (1991) demonstrated in a family history study that the risk for affective instability and impulsivity was higher for the relatives of individuals diagnosed with BPD compared to relatives for those with other personality disorders or schizophrenia.

1.7 BPD Influences on Offending

Within the literature personality pathology has repeatedly demonstrated an association to criminal behaviour. Hernandez-Avila et al. (2000) examined the relationship between a personality disorder diagnosis and criminal behaviour from pre to post-treatment among drug and alcohol dependent patients. Results demonstrated that the number of personality disorders diagnosed correlated with the number of crimes against property. Further, at post-treatment and one year follow-up, a diagnosis of BPD predicted violent crimes. Warren et al. (2002) examined personality disorders among violent female prison inmates ($n = 261$) demonstrating that BPD was significantly associated with institutional violence. Personality disorders, specifically BPD, are

repeatedly shown to be associated with violent offending among emerging adult/adult offenders (De Barros & Serafim, 2008; Dixon et al., 2008; Hernandez-Avila et al., 2000; Logan & Blackburn, 2009; Ulrich et al., 2004; Warren et al., 2002; Warren & South, 2009). Sansone (2009) reviewed the literature of BPD among offenders identifying five key factors associated with BPD in offenders: (1) large portion are female; (2) history of sexual abuse; (3) committed an impulsive and violent crime; (4) ASPD traits; and (5) perpetrating domestic violence. Gandhi et al. (2001) examined personality disorders in relation to contact with the police by releasing inpatients (16 to 65 years), suitable for release, randomly into the community or hospital. There were significantly greater numbers of police contacts with increasing severity of personality disturbance. Furthermore, patients with personality disorders were six times more likely to have police contacts than those with no personality disorders.

Among the adolescent/emerging adult offender literature, the examination of BPD specifically is rare and largely conducted among serious offenders. In turn, the differentiation between violent and non-violent offenses among those adolescent/emerging adult offenders with BPD is less clearly defined. One study did examine personality disorders in a community sample and their impact on adolescent and emerging adult offending (longitudinal study 1983 to 1993; Johnson et al., 2000). Results suggest that adolescents with a greater number of Cluster A or B personality disorder symptoms were more likely than other adolescents to commit violent acts during adolescence and emerging adulthood (ages ranged from 9 to 28 years over a period of 10 years). Moldavsky et al. (2002) examined various risk factors, including psychopathology, among adolescents at risk for offending, adolescent offenders, and a

clinical sample in an attempt to differentiate the three groups. Results demonstrated that adolescent offenders had less education, significantly higher rates of disruptive and personality disorders (ADHD, conduct disorder, and BPD), and criminality than both other groups. Krischer et al. (2007) examined incarcerated adolescent/emerging adult offenders, adolescent students, and a healthy adult control group for psychopathology. Overall, higher personality disorder traits were observed among the adolescent/emerging adult offenders as compared to adolescent students, suggesting that personality pathology plays a role in adolescent/emerging adult offending. Wilson et al. (2001) examined low self-regulation (i.e., aggression, impulse control, responsibility, consideration) among incarcerated adolescent male offenders (13 to 19 years), and followed these offenders for 4.5 years post release. Among incarcerated male offenders, personality traits were predictive of positive substance abuse screen and recidivism. Specifically, low self-regulation was related to the highest rate of recidivism.

Within clinical settings, approximately 10% of adult psychiatric outpatients and 20% of adult psychiatric inpatients have received a diagnosis of BPD (Widiger & Weissman, 1991). Numerous researchers suggest that prevalence rates for BPD in adult correctional facilities are even higher than those in clinical settings (Jordan et al., 1996; McCann, Ball, & Ivanoff, 2000). BPD in the general population and in clinical settings are associated with high rates of co-morbid psychiatric disorders (Zanarini et al., 2004; Zanarini et al., 1998), heterogeneity of symptom presentation (i.e., 5 of the 9 symptoms present for BPD diagnosis produces over 200 variations; Jacobo et al., 2007), psychosocial impairment, excessive health care use, and suicide (Black, Blum, Pfohl, & Hale, 2004; Grant et al., 2008). Black et al. (2007) identified a BPD prevalence rate of

30% among an emerging adult/adult offender sample. Those who met criteria for BPD were more likely to have reported three or more current offenses, demonstrated a greater likelihood of recidivism, worse functioning overall, and higher rates of diagnostic comorbidity than adult offenders without BPD. BPD symptomatology is a serious health concern with offenders, particularly if prevalence rates are as high as the literature suggests.

1.8 BPD and Offending

As mentioned previously, the etiology of criminal offending is unclear although mental health problems have been reported extensively amongst this population. One proposed underlying construct is that of personality pathology, specifically BPD (Black et al., 2007; McManus et al., 1984; Taylor et al., 2009). Clusters of symptoms frequently highlighted among adolescent/emerging adult offenders include emotion dysregulation, self-harm/suicidal ideation, conflict in interpersonal relationships, inappropriate expressions of anger/aggression, and impulsivity (Alessi et al., 1984; Bailey, 1996; Holley et al., 1995; Kenny et al., 2008; Krischer et al., 2007; Plattner et al., 2007; Wilson et al., 2001), all of which are also symptomatic of BPD. Although research has mainly focused on the occurrence, influence, and prevalence of BPD among emerging adult/adult offenders (Black et al., 2007; Blackburn & Coid, 1999; Davison et al., 2004; Dixon et al., 2008; Grella et al., 2008; Jordan et al., 1996; Logan & Blackburn, 2009; Stuart et al., 2006; Timmerman & Emmelkamp, 2005; Trestman et al., 2007; Warren et al., 2002; Zlotnick, 1999; Zlotnick et al., 2008), research among adolescent/emerging adult offenders is limited. In addition, there is no research to our knowledge on BPD among a strictly emerging adult offender sample. As mentioned previously, the mean

age range within the existing emerging adult/adult offender literature (e.g., mean age ranged from 31 to 34.8 years across studies; Black et al., 2007, Blackburn & Coid, 1999; Davison et al., 2004; Grella et al., 2008; Logan & Blackburn, 2009; Stuart et al., 2006; Timmerman & Emmelkamp, 2005; Trestman et al., 2007; Zlotnick, 1999) is beyond the emerging adult age range which includes the late teens to late 20's. These findings suggest that existing researchers have employed samples less reflective of an emerging adult sample. In addition, the characteristics of emerging adults outlined in Arnett (2000) are more reflective of adolescence than adulthood. Therefore, we will focus on those studies specifically assessing BPD amongst adolescent/emerging adult offenders. Two studies that do report BPD prevalence rates among adolescent/emerging adult offenders report BPD prevalence rates ranging from 27% to 37% (Eppright et al., 1993; McManus et al., 1984). Although both studies contribute to the literature on prevalence of BPD among an adolescent/emerging adult offender population, the diagnostic procedures are both dated (e.g., Diagnostic Interview for Borderline [DIB; Kolb, & Gunderson, 1980], DSM-III and DSM-III-R criteria). Furthermore, the relationship between BPD symptoms and adolescent/emerging adult criminal behaviour, specifically in contrast to a relevant comparison group, is not examined.

The only recent study to assess for BPD within an adolescent/emerging adult offender sample specifically examined the association between BPD traits and increased clinical and social problems among male adolescent offenders (Taylor et al., 2009). The BPD scale of the Millon Adolescent Clinical Inventory (MACI; Millon, 1993) was utilized to assess adolescent male offenders for BPD tendencies. Chart reviews were also conducted to determine history of suicidal behaviours before entering the facility and

placement on suicide watch within the facility in the last three months. Overall 17% ($n = 239$) of the total participants had high BPD traits, with the remaining adolescent/emerging adult male offenders serving as a control group ($n = 1197$). Adolescent/emerging adult offenders with high levels of BPD features displayed increased rates for both suicidal behaviours before entering the residential facility and placement on suicide watch within the last three months (chart review). The MACI demonstrated increased rates of psychopathology (i.e., depression, eating disorder features, anxiety) and worse social relations (family and peers) among those high in BPD traits as compared to the control group. Additional analysis revealed increased utilization of clinical services, higher rates of childhood sexual and physical abuse histories, and higher rates of substance dependence among those high in BPD traits as compared to the control group (i.e., adolescent male offenders without BPD in the same facility). Although this is an important study, there are some methodological limitations (e.g., assessment of BPD features with a single measure, using only male participants, comparison to only other offenders). Furthermore, no differences were demonstrated in regards to type of criminal offense, which may have been related to the inclusion of only severe offenders. Findings may differ in a more heterogeneous offending sample.

There is limited research on offenders in strictly the emerging adulthood period. Undergraduate samples have been utilized, however, to explore features symptomatic of BPD (e.g., impulsivity, suicidal behaviour) among emerging adults with a self-reported history of offending (Langhinrichsen-Rohling et al., 2004; Pfefferbaum & Wood, 1994). Langhinrichsen-Rohling et al. examined suicidal ideation/attempts and negative affect among an undergraduate sample ($n = 383$) with a self-reported history of offending. Self-

reported history of offending was defined in two ways: (1) a lot of criminal acts compared to no or few criminal acts; (2) arrest history but not detained (arrest/not detained), arrest history including detainment (i.e., arrest/detained), and no arrest history. Results demonstrated that those with a history of arrest/ detained had significantly higher levels of negative affect, hostility, impulsivity, and suicide prone behaviour than those without a history of arrest. Participants that were arrested/not detained demonstrated significantly higher levels of negative affect, and suicide prone behaviour as compared to those with no history of arrest. Pfefferbaum et al. (1994) examined impulsiveness in relation to undergraduates ($n = 296$) self-reported history of offending. Overall, thrill seeking was most strongly related to property crimes, impulsiveness was associated with interpersonal offending, and socialization was related to substance crimes.

The goal of the current study was to expand on existing research on adolescent/emerging adult offenders and undergraduate emerging adults with a self-reported history of offending. There were several methodological limitations to the most recent research (i.e., Taylor et al., 2009) on adolescent/emerging adult offending (e.g., utilization of one measure of BPD assessment, inclusion of only male offenders, utilization of only serious offenders, lack of a comparison group). Furthermore, a non-incarcerated adolescent/emerging adult sample has never been utilized to explore the full range of BPD features. It is important to examine factors that may be associated with criminal behaviour in non-incarcerated samples as these are the settings where repeat offending is likely to take place. Furthermore, an incarcerated environment has the potential to elicit behaviours that may resemble mental disorders (i.e., paranoia, self-harm) so it is important to understand the rates of mental disorders occurring outside of a

correctional setting. Vaillant (1975) suggests that specific disorders may mimic one another in an incarcerated setting, therefore in order to fully understand the impact of BPD features on offending behaviour it is essential to also examine such features among individuals with a history of offending in a non-incarcerated environment. To our knowledge, this is the first study to examine the full range of BPD features, using multiple specific BPD assessment measures, among a male and female emerging adult sample with and without a self-reported history of offending. The use of current measures of BPD assessment will provide a more accurate estimate of the prevalence of BPD features among individuals with a history of offending expanding the existing literature. The inclusion of a comparison group without a history of offending improves on the extant literature in an important way, as it moves beyond estimated prevalence rates which can be limited in terms of generalizability (e.g., inclusion of different measures, varied sample characteristics, different methods of assessment) to demonstrate whether individuals with a history of offending demonstrate more prominent BPD features than individuals without a history of offending. Direct comparisons between samples enhance our ability to examine the relationship between BPD and offending. The inclusion of a range of offenses (minor to severe) will allow for specific types of offenses to be examined in relation to BPD features which may further explain the relationship between BPD and offending. Including both male and female emerging adults in this study allowed for the exploration of sex differences in regards to BPD features among those with a history of offending which may have important treatment implications. Lastly, including a strictly emerging adult sample expands the current

literature as no study to date has examined the full range of BPD features among emerging adults with a history of offending.

Due to the difficulties in treating BPD, the severe interpersonal problems and emotional impulsivity associated with the disorder, and the extensive mental health resources utilized by this population, it is important to understand the relationship between BPD features and history of offending in both non-incarcerated (e.g., probation) and incarcerated settings. In particular, it is important to examine BPD features among emerging adults with a history of offending due to the previously noted disproportionate amount of crime committed by this age group (Statistics Canada, 2008a). Understanding criminal behaviour across the lifespan may aid in unraveling the etiology and maintenance of criminal behaviour. This knowledge may aid in decreasing recidivism rates and institutional infractions if appropriate prevention and intervention programs can be developed and implemented. Findings from this research may highlight some of the areas that should receive attention in the development and implementation of tailored assessment protocols and prevention, intervention, relapse prevention programs for incarcerated and non-incarcerated (i.e., probation) individuals.

1.9 Links Between BPD and Emerging Adult Offending

1.9.1 Childhood maltreatment. Childhood trauma (e.g., physical, emotional, or sexual abuse, witnessing violence, neglect) is a well supported etiological correlate in BPD development. Zanarini et al. (1997) examined childhood experiences related to BPD development and demonstrated that among 358 patients with BPD, 91% reported a history of abuse and 92% reported a history of neglect prior to 18 years of age. In turn, childhood trauma histories are prevalent in emerging adult/adult (BJS, 2006a; Dietrich,

2003; Weeks & Widom, 1998) and adolescent/emerging adult offenders (Ryan & Testa, 2005). The cycle of violence theory (Walker, 1979) proposes that victims of child maltreatment are at high risk of engaging in crime, particularly violent offenses; the literature has demonstrated some support for this theory among adolescents/emerging adults and emerging adults/adults (e.g., Kakar, 1996; Smith & Thornberry, 1995; Maxfield & Widom, 1996). Fagan (2005) examined self-reported adolescent physical abuse history in relation to self-reported crime among adolescents, emerging adults, and adults using data from the National Youth Survey (9 waves; wave 1 = 11 to 17 years; wave 3 = 13 to 19 years; wave 6 = 18 to 24 years; wave 9 = 27 to 33 years). There was a significant relationship between physical abuse during adolescence and involvement in crime for all types of offenses and for all time periods. Victimization increased general offending and drug use by approximately 50%. In addition, victimization led to higher rates of serious partner violence among emerging adults (14.9% - non victims versus 46.9% - victims). Overall, 81% of victims report general offending during adolescence, 61% reported general offending during emerging adulthood, and 53.5% reported general offending in adulthood. The literature suggests that traumatic family environments contribute significantly to later criminal offending as well as type of offending (e.g., violent crimes).

In addition, childhood maltreatment has been related to personality pathology in emerging adult/adult offender samples (Christopher, Lutz-Zois, & Reinhardt, 2007; Loper et al., 2008; Warren & South, 2009; Zlotnick, 1999) and adolescent/emerging adult offender samples (Barylnik, 2003; Taylor et al., 2009). Zlotnick (1999) examined ASPD while controlling for BPD and PTSD among incarcerated emerging adults/adults ($n =$

85). There was a significant relationship between BPD and child abuse among the incarcerated female sample. In addition, adolescent/emerging adult offenders engaging in self-harming/suicidal behaviours (Kenny et al., 2008) were more likely to have traumatic childhood experiences as compared to non self-harming adolescent/emerging adult offenders. Given the above, it appears that childhood trauma may be a possible mediating factor in the proposed relationship between BPD features and adolescent, emerging adult, and adult offending. Christopher et al. (2007) examined personality pathology as a potential mediator in the association between childhood sexual abuse victimization and later sexual abuse offending against others. Overall, childhood sexual abuse was significantly related to BPD tendencies, however, personality pathology did not mediate the relationship between childhood sexual abuse victimization and later sexual abuse perpetration. Further research is needed in this area along with the examination of personality pathology as a mediator in the relationship between childhood maltreatment and criminal behaviour in general.

1.9.2 Substance problems. Substance abuse is a common co-occurring disorder for individuals with BPD (Linehan et al., 1999). Substance abuse may represent a means of coping for individuals with BPD (i.e., regulating emotions) or it may strictly be the presence of a co-morbid disorder. Regardless of the reason for such co-occurrence, individuals with BPD are more likely to meet criteria for current substance abuse than individuals with any other psychiatric disorder with the exception of ASPD (Koenigsberg, Kaplan, Gilmore, & Cooper, 1985). Similarly, approximately 75% of emerging adult/adult offenders in state prison presenting with mental health problems also met criteria for substance abuse or dependence (BJS, 2006a). Drug problems (e.g.,

addiction) have been frequently reported among those with a history of offending. In the 2004 Survey of Inmates in State and Federal Correctional Facilities, approximately 32% of State prisoners and 26% of Federal prisoners indicated they had committed their current offense while under the influence of drugs (BJS, 2006b). A recent meta-analysis demonstrated that the likelihood of offending was three to four times greater for drug users than non-drug users, and that property crime (i.e., robbery, burglary, shoplifting) was the most common offense committed by drug users (Bennett, Holloway, & Farrington, 2008). Alcohol problems have also been frequently reported among individuals with a history of offending. The National Crime Victimization Survey (BJS, 2008), an American study, found that approximately 18% of victims of a violent offense perceived their offender as under the influence of alcohol. Among the 5.3 million convicted offenders under the jurisdiction of corrections agencies in 1996, approximately 36% were estimated to have been under the influence of alcohol at the time of the offense (BJS, 1998). Alcohol problems have most commonly been demonstrated among individuals convicted of public-order crimes (BJS, 1998). Based on the presence of substance problems among individuals with a history of offending and individuals with BPD, it is plausible that substance problems may be a possible mediating factor in the proposed relationship between BPD and emerging adult offending particularly if substance abuse is a coping mechanism of BPD.

1.10 Purposes

This study sought to improve on the methodological limitations of prior research (i.e., Taylor et al., 2009) among a strictly emerging adult sample. Specifically, the current study aimed to examine BPD features using multiple valid measures, among male

and female emerging adults comprising two groups: emerging adults with a heterogeneous history of offending (e.g., history of minor to severe offenses) and a comparison group of emerging adults without a history of offending. It is important to understand factors involved in offending among an emerging adult sample due to the high rates of criminal offenses committed by this age group (BJS, 2006a). In turn, examination of BPD characteristics in relation to criminal behaviour in a non-incarcerated sample is beneficial as certain symptom presentations seen in incarcerated samples may be reflective of incarceration rather than an enduring disorder that have the potential to mimic BPD symptoms (e.g., paranoia). Furthermore, it has been suggested that ASPD may mimic BPD in an incarcerated setting (Vaillant, 1975) and therefore utilizing a non-incarcerated sample may provide a more accurate understanding of the link between BPD and criminal behaviour. The purposes were fourfold: (1) assess for BPD features dimensionally using multiple valid measures (i.e., Personality Assessment Inventory; PAI; Morey, 1991; Borderline Evaluation of Severity Over Time; BEST; Pfohl & Blum, 1997; Beck Scale for Suicide Ideation; BSS; Beck, Steer, & Ranieri, (1988); Barratt Impulsiveness Scale-11; BIS-11; Patton, Stanford, & Barratt, 1995) among a heterogeneous male and female emerging adult sample with and without a history of offending; (2) compare BPD features and associated psychopathology across emerging adults both with and without a history of offending; (3) explore the relationship between BPD features, abuse history, type/number of offenses, and demographic information (e.g., ethnicity, sex, age, education level) in the group with an offender history; and (4) examine potential predictors (i.e., BPD features) of offender status.

1.11 Hypotheses

It was hypothesized that:

(1) BPD features would be significantly more elevated in the emerging adult group with an offender history than the group without an offender history as measured by the BEST subscales scores (i.e., affect, negative behaviours), PAI-Borderline Features scale (PAI-BOR) and PAI-BOR subscales (Affective Instability; BOR-A; Identity Problems; BOR-I; Negative Relationships; BOR-N; Self-Harm; BOR-S);

(2) specific BPD symptomatology and associated psychopathology would be significantly more elevated in the emerging adult group with an offender history than the group without an offender history as measured by the BIS-11 (i.e., impulsivity), BSS (self-harm/suicidal ideation), Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) (i.e., depression), State Trait Anxiety Inventory for Adults – Form Y (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) (i.e., state and trait anxiety), PAI clinical scales and subscales (i.e., somatic complaints, anxiety, anxiety-related disorders, depression, mania, paranoia, schizophrenia, antisocial features, alcohol problems, drug problems), and three specific PAI treatment scales and subscales (i.e., aggression, suicidal ideation, stress);

(3) the group with an offender history would have, on average, scores in the clinical range for specific BPD associated psychopathology as measured by relevant PAI clinical scales (i.e., alcohol problems, drug problems, anxiety, depression, paranoia) and two of the PAI treatment scales (i.e., aggression, suicidal ideation);

(4) within the group with an offender history, BPD features would be associated with an increased history of abuse (i.e., emotional, physical, sexual);

(5) within the group with an offender history, BPD features would be associated with a greater number of offenses;

(6) sex differences would be found among our group with an offender history; specifically, we expected to find significantly higher BPD features among emerging adult females with offender histories as compared to emerging adult males with offender histories as measured by the BEST subscales (i.e., affect, negative behaviours), and PAI Borderline Features scale and subscales; and

(7) BPD features would be predictive of group membership (i.e., group with offender history versus group without offender history).

2.0 Method

2.1 Participants

Participants included emerging adults (18 to 26 years of age) from the University of Regina (Regina, Saskatchewan), Saskatchewan Institute of Applied Science and Technology (SIAST; Regina, Saskatchewan), and Adult Campus (Regina, Saskatchewan). Participants comprised two groups: those emerging adults with a history of offending and those without a history of offending as identified via a self-report offending questionnaire. For the purposes of this research, a history of offending is operationalized as a history of an arrested or charged offense. The age range of 18 to 26 years was selected for this study on the basis that emerging adulthood ranges through to the late twenties. In addition, this age range is representative of an undergraduate university population and is appropriate for norm comparisons and reliability of the measures included in this study.

SIAST is a post-secondary institute that provides technical education and skills training in various fields. Adult Campus is a facility that allows emerging adults (18 to 21 years) who have not completed high school academics to complete a high school program or upgrade courses. Participants from SIAST and Adult Campus were recruited through research posters displayed at each of the locations. SIAST and Adult Campus participants were entered in a draw for a \$50 Best Buy gift certificate as a token of appreciation for participating in the study. University of Regina participants were recruited through the psychology participant pool. Students recruited through the psychology participant pool were given a 2% course credit for two hours of participation. The use of the research participant pool to recruit participants in return for course credit is a common practice in psychological research. Ethical approval for this research was obtained from the University of Regina Research Ethics Board (Appendix A).

2.2 Measures

All measures were administered anonymously online via *Survey Monkey*. *Survey Monkey* is a web-survey company that is located in the USA. This company is subject to U.S. laws; in particular, the US Patriot Act that allows authorities access to the records of internet service providers. Survey Monkey's servers record incoming IP addresses - including that of the computer that is used to access the survey. However, no connection is made between participant responses and computer's IP addresses.

Consent (Appendix B) was obtained on-line in a non-controlled setting (i.e., home computer, university computer, personal lap top). Following consent, basic demographic information (i.e., ethnicity, sex, age, education level, relationship status, employment status, current household income, current living arrangements, parents relationship status)

and abuse history (i.e., emotional, physical, sexual abuse) were obtained from participants through a basic demographic form (Appendix C). Offending history (e.g., types of criminal offenses, number of criminal offenses) was obtained from participants through a self-report offending form.

2.2.1 Self-Report of Offending-Revised (Appendix D). The SRO-R was developed for this study based on the Self-Report of Offending (SRO) utilized in the Project on Human Development in Chicago Neighborhoods (PHDCN; Earls et al., 2002). The SRO was adapted from the Self-Report of Delinquency scale (SRD; Elliott & Huizinga, 1989) which has demonstrated acceptable reliability and validity across studies (Jolliffe et al., 2003; Thornberry & Krohn, 2000). Items 3 to 32, 34F, 34G, 35, and 36 of the SRO were included in the SRO-R, with four additional items added. The course of questions was altered, inquiring beyond contact with police to include a series of questions regarding convictions and sentencing. The time frame inquired about in regards to the offenses was also altered to assess for lifetime criminal involvement. SRO-R items include questions about criminal activities such as theft, violence, and substance use (i.e., index and non-index offenses). The SRO-R is divided into two sections, the first inquiring about specific criminal activity and the second asking general questions regarding criminal involvement. The SRO-R does not include specific questions regarding status offenses, however, specific status offenses (i.e., drinking under the legal age limit) may be reported in section II of the SRO-R which inquires about a history of criminal offenses in an open format. The SRO-R served as the self-report offending questionnaire utilized in this study to assess for a history of offending.

2.2.2 Personality Assessment Inventory (Appendix E; PAI; Morey, 1991).

The PAI is a 344-item self-report questionnaire designed to assess a variety of clinical constructs (i.e., personality and psychopathology). Each item is rated on a 4-point scale (i.e., 0 to 3) with responses ranging from *false* to *very true*. Each response holds a specific weight. The items make up 22 non-overlapping full scales: 4 validity scales, 11 clinical scales (ten of which have conceptual subscales), 5 treatment scales, and 2 interpersonal scales. Raw scores are transformed into standardized T-scores which are compared to a large normative sample. T scores greater than or equal to 70 represent a pronounced deviation from typical responses of adults in the normative sample. The PAI clinical scale of primary focus is the borderline features scale (PAI-BOR) which contains four subscales that look at characteristics or traits such as unstable interpersonal relationships (negative relationships, BOR-N), impulsive acts or self-harm behaviours (BOR-S), emotional dysregulation (affective dysregulation, BOR-A), and identity disturbance (BOR-I). Elevations ($T \geq 70$) on these scales are indicative of a high level of BPD features. Additional PAI clinical scales (i.e., Anxiety, Depression, Alcohol Problems, Drug Problems) and treatment scales (i.e., Suicidal Ideation, Aggression) were examined in order to assess associated BPD symptomatology and psychopathology.

The PAI has demonstrated good reliability and validity (Morey, 1991). The PAI full scales demonstrated good internal consistency ($\alpha = .81$ to $.86$) for normative, college, and clinical samples. Validity studies demonstrated the convergent and discriminant validity of PAI scales with more than 50 other measures of psychopathology. Recent research has shown the PAI to be a useful tool in distinguishing patients with a diagnosis of BPD from patients without, and is correlated with BPD diagnosis as determined by

SCID-II structured clinical interviews (Jacobo et al., 2007; Kurtz & Morey, 2001). The PAI-BOR scale is correlated with other borderline inventories including the MMPI Borderline scale ($r = .77$), the Bell Object Relations Inventory insecure attachment scale ($r = .63$), and the NEO-Personality Inventory neuroticism scale ($r = .67$) demonstrating good concurrent validity (see Morey, 1996). Cronbach's alpha coefficients were calculated for the overall sample indicating good reliability for the set of items on the PAI-BOR ($\alpha = .90$).

2.2.3 Borderline Evaluation of Severity Over Time (Appendix F; BEST; Pfohl & Blum, 1997). The BEST evaluates both the severity and change of symptoms in clients with BPD. The BEST is a self-report questionnaire consisting of 15 items each rated on a 5-point scale (i.e., 1 to 5). Scores range from 12 to 72. The degree of impairment from nine BPD criteria over the previous week is rated. Three subscales comprise the BEST. Subscale A (e.g., negative thoughts and feelings) and Subscale B (e.g., negative behaviours) represent the core symptoms of BPD, and are examined based on level of distress over a one week period. Subscale C (e.g., positive behaviours) is a subscale related to treatment compliance, and is reported based on frequency of occurrence over a one week period. High BEST total scores (>39) suggest moderate to high rates of BPD symptoms. The BEST total score demonstrated excellent internal consistency ($\alpha = .90$), and moderate test-retest reliability ($r = .62$) (Blum, Pfohl, St. John, Monahan, & Black, 2002; Pfohl et al., 2009). Blum et al. (2002) indicates that the BEST is moderately correlated ($r = .63$) with the Positive and Negative Affectivity Scale (PANAS; Watson, Clark, & Tellegen, 1988) indicating concurrent validity. The BEST is thought to be a useful tool in the evaluation and initial screening of BPD symptoms

(Blum et al., 2002). Subscale C was not utilized in this study as the emerging adult sample was not a clinical sample and therefore a limited number of the participants experienced treatment. Subsequently, a BEST total score was not reported rather the focus remained on BEST subscales A and B which directly examine BPD features. Cronbach's alpha coefficients were calculated for the overall sample indicating good reliability for the set of items on the BEST A ($\alpha = .85$) and moderate reliability for the set of items on the BEST B ($\alpha = .64$).

2.2.4 Beck Scale for Suicide Ideation (Appendix G; BSS; Beck, Steer, & Ranieri, 1988). The BSS is a concise (21-item) self-report version of the Scale for Suicide Ideation (SSI; Beck, Kovacs, & Weissman, 1979) that assesses suicidality (e.g., suicide risk, suicidal thoughts, suicide behaviours) in adolescents and adults. All items are responded to on a 3-point (0 to 2) Likert scale where individuals are to indicate which statement best describes how they have been feeling over the past week, including the current day. When scoring, 19 of the 21 items are used in scoring and the remaining two items are used strictly as indicators of previous suicide attempts. The first five items serve the purpose of an initial screen for suicidal ideation. Total scores range from 0 to 48 (screening items included), with 24 being the suggested cut off (sensitivity 100%, specificity 100%) score indicative of suicidality (Cochrane-Brink, Lofchy, & Sakinofsky, 2000). In the current study, any score above zero was examined as any positive score may be an indicator of suicidality. The BSS demonstrates good validity and excellent internal consistency ($\alpha = .87$ to $.90$), in both inpatient and outpatient samples (Beck & Steer, 1991), and an undergraduate sample ($\alpha = .90$; Van Orden, Witte, Gordon, Bender, & Joiner, 2008). Test-retest reliability is moderate ($r = .54$) in a sample of 60 adults over

a one week period (Beck & Steer, 1991). Cronbach's alpha coefficient was calculated for the set of items on the BSS, indicating moderate reliability ($\alpha = .61$).

2.2.5 Barratt Impulsiveness Scale - Version 11 (Appendix H; BIS-11; Patton, Stanford, & Barratt, 1995). The BIS-11 was developed to evaluate the personality and behavioural construct of impulsiveness. The BIS-11 is reported to be the most commonly administered self-report measure for assessment of impulsiveness in research and clinical settings across a variety of disorders (substance use disorder, mood disorders, AD/HD, suicidal behaviours, Axis II disorders) and populations (e.g., forensic populations; a summary is provided in Stanford et al., 2009). The BIS-11 is a self-report measure consisting of 30-items each rated on a 4-point scale (i.e., 1 to 4) with responses ranging from *rarely/never* to *almost always/always*. Patton et al. (1995) demonstrated that the BIS-11 Total Score is comprised of three second-order factors/subscales (i.e., Motor Impulsiveness, Nonplanning Impulsiveness, Attentional Impulsiveness) and six first-order factors/subscales (i.e., Attention, Motor, Self-control, Cognitive Complexity, Perseverance, Cognitive Instability). The literature suggests a cut off score of 72 indicating high impulsiveness, with scores ranging from 52 to 71 indicating normal limits of impulsiveness (Stanford et al., 2009). Scores below 52 are reported to be indicative of extremely over controlled individuals, or individuals who have responded in a dishonest manner. The BIS-11 total score demonstrated good internal consistency ($\alpha = .83$), and test-retest reliability ($r = .83$) (Stanford et al., 2009). In addition, the BIS-11 three second-order subscales demonstrated adequate to good internal consistency ($\alpha = .59$ to $.74$) and test re-test reliability ($r = .61$ to $.72$). The BIS-11 is highly correlated with similar self-report measures of impulsivity: the Eysenck Impulsiveness Scale (Eysenck

& Eysenck, 1977), specifically the Impulsiveness subscale ($r = .63$, $p < .001$); and three of the four subscales of the Zuckerman Sensation-Seeking Scale (Zuckerman, Eysenck, & Eysenck, 1978) ($r = .24$ to $.39$) demonstrating convergent validity (Stanford et al., 2009). Cronbach's alpha coefficient was calculated for the overall sample indicating good reliability for the set of items on the BIS-11 ($\alpha = .84$).

2.2.6 Center for Epidemiological Studies Depression Scale (Appendix I; CES-D; Radloff, 1977). The CES-D is a 20-item self report measure that assesses for the presence of depressive feelings and behaviours over a one week period. Items included in the CES-D are comprised of symptoms associated with depression (e.g., depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, loss of appetite, sleep disturbance, psychomotor retardation) which have been used in previously validated scales of depression (Radloff, 1977). Items are rated on a 4-point scale (i.e., 0 to three) weighted by frequency of occurrence during the past week (i.e., responses ranging from *rarely/none of the time* – less than one day, to *most/all of the time* – five to seven days). Items 4, 8, 12, and 16 are reverse scored. Total scores range from 0 to 60 and are calculated by summing the individual item scores, with higher scores indicating more depressive symptomatology. Cut off scores are as follows: scores ranging from 15 to 21 indicate mild to moderate depression, and scores greater than 21 suggest the possibility of major depression. The CES-D has demonstrated high internal consistency across studies ($\alpha = .63$ to $.91$; Devins, Orme, & Costello, 1988; Radloff, 1977) and moderate test-retest reliability after a 3 month delay ($r = .61$) across diverse adult populations (Devins et al., 1988). In addition, the CES-D has demonstrated moderate correlations with the Hamilton Clinician's Rating scale (Hamilton, 1960) and

with the Raskin Rating scale (Raskin, Schulterbrandt, Reatig, & McKeon, 1969) ($r = .44$ to $.54$) among a patient sample which suggests moderate criterion validity (Radloff, 1977). Cronbach's alpha coefficient was calculated for the overall sample indicating good reliability for the set of items on the CES-D ($\alpha = .91$).

2.2.7 State Trait Anxiety Inventory for Adults – Form Y (Appendix J; STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). The STAI is a 40-item self-report questionnaire which measures both state (STAI-S; situational anxiety) and trait anxiety (STAI-T; dispositional anxiety). Each item is rated on a 4-point Likert scale (i.e., 1 to 4) with responses ranging from *almost never/not at all* to *almost always/very much so*. Total scores on each subscale (i.e., state and trait) range from 20 to 80 and are calculated by summing individual item scores. Higher scores are indicative of greater levels of anxiety. The STAI-T has been found to have good internal consistency ($\alpha = .89$ to $.96$) and have high test-retest reliability ($r = .65$ to $.86$; Spielberger et al., 1983). The STAI-S was found to have good internal consistency ($\alpha = .86$ to $.95$) and low to moderate test-retest reliability ($r = .16$ to $.62$; Spielberger et al., 1983). Difference in test-retest reliability coefficients between the STAI-T and the STAI-S are to be expected given that trait anxiety reflects a more enduring personality construct, while state anxiety is expected to fluctuate as it is impacted by temporary situational influences. Cronbach's alpha coefficients were calculated for the sets of items on the STAI-S and STAI-T indicating good reliability for the overall sample ($\alpha = .94$ and $\alpha = .93$, respectively).

2.3 Procedure

Participants include male and female emerging adults obtained from the University of Regina, SIAST, and Adult Campus (Regina, Saskatchewan). Following

online consent, each participant was informed that upon completion of the study participants would receive either a 2% course credit for participation (University of Regina students) or participants would be entered into a draw to win a \$50 Best Buy gift certificate (SIAST and Adult Campus students).

After provision of consent, participants completed a demographic form (5 minutes) and the self-report offending questionnaire (SRO-R; 20 minutes). The self-report offending questionnaire facilitated determination of participants that comprised the two groups: emerging adults with a history of offending (index, non-index, and status offenses), and emerging adults without a history of offending. To classify participants as an emerging adult with a history of offending, participants were required to have a history of an arrested or charged offense.

Following the completion of the initial demographic and self-report offending (SRO-R) forms, participants were asked to complete a number of questionnaires further assessing emerging adult psychological functioning (i.e., PAI [50 minutes], BEST [10 minutes], BSS [10 minutes], BIS-11 [10 minutes], CES-D [10 minutes], and STAI-Form Y [10 minutes]). BPD symptoms were assessed specifically by the first four questionnaires: (1) PAI (specific interest in the Borderline Features scale); (2) BEST (subscale A and B); (3) BSS; and (4) BIS-11. The CES-D and the STAI-Form Y were used to assess associated symptoms of depression and anxiety. Completion of the demographic form, self-reporting offending questionnaire, and the six measures of BPD features and associated psychopathology required approximately 2 hours. Upon completion of the on-line survey, participants were debriefed via a debriefing form (Appendix K).

3.0 Results

3.1 Descriptive Statistics

Two hundred and forty eight ($n = 57$ with a history of offending; $n = 191$ without a history of offending) emerging adults initially participated in this study. Of the 248 participants, 32 (six with a history of offending and 26 without a history of offending) did not complete the questionnaire battery and were therefore excluded from analysis rendering an attrition rate of 13%. In addition, 19 participants (six with a history of offending and 26 without a history of offending) were excluded from the analysis due to age exclusion criteria (i.e., participants must be between 18 to 26 years of age). Lastly, 10 participants (two with a history of offending and eight without a history of offending) were excluded from the study due to invalid PAI profiles. Prior to statistical analysis, outliers were identified. Statistical analysis was conducted with and without the outliers revealing no impact on the results; therefore the outliers were retained in the final analysis. The final sample size consisted of 187 participants (43 with a history of offending versus 144 without a history of offending) ranging from 18 to 26 years (32 males [$M_{\text{age}} = 20.47$ years, $SD = 2.02$] and 155 females [$M_{\text{age}} = 20.08$ years, $SD = 2.08$]). Participants were predominantly Caucasian (83.4%). Participants' highest level of education was first year of university (42.8%), followed by second year of university (27.3%), third year of university (18.7%), fourth year of university (6.4%), more than four years of university (2.7%), and finishing high school (2.1%). Participants' current relationship status included single (46.5%), dating (47.1%), common law/cohabiting/married (5.9%), and separated (0.5%). A large portion (i.e., 61.5%) of participants were employed part-time while attending school. Approximately 1/3 of

participants were strictly students. Participants current household income was dispersed as follows: 27.3% was less than \$30,000; 12.3% ranged from \$30,000 to \$49,000; 31% ranged from \$50,000 to \$99,000; 27.3% ranged from \$100,000 to \$499,000; and 2.1% were greater than \$500,000. Over half (i.e., 64.2%) of the participants' current living arrangements were with one or both parents or extended family. Other living arrangements included living alone/with roommates/sibling/on residence (29.4%), living with spouse/partner or spouse/partner and child (5.3%), and living with children (1.1%). Parents' relationship status was divided into two categories: (1) married/common law and (2) other (i.e., divorced, single, widowed, never together). The majority of participant's parent's relationship status was married/common law (71.7%). For descriptive information by sex within the overall sample, refer to Table 1.

Descriptive information was also collected for participants' self-reported history of abuse (i.e., emotional, physical, sexual abuse). Approximately 1/3 of the participants reported some type of abuse: 29.4% reportedly experienced emotional abuse, 11.8% experienced physical abuse, and 12.3% experienced sexual abuse. See Table 2 for descriptive information on abuse history by sex for the overall sample.

For the purposes of the current study, participants were divided into two groups, those emerging adults with a history of offending ($n = 43$; $M_{\text{age}} = 20.95$ years, $SD = 2.34$, range = 18 - 26 years) and those without a history of offending ($n = 144$; $M_{\text{age}} = 19.91$ years, $SD = 1.92$, range = ages 18 - 26 years) as identified via an offending questionnaire (see Appendix D) based on a self-reported history of an arrested or charged criminal offense (see Tables 3 and 4 for descriptive information for groups).

Independent sample t-tests and chi-square analysis were conducted to examine

Table 1

Demographic Information for the Entire Sample As a Function of Sex

Demographic	Male ^a	Female ^b	Total ^c
Age			
<i>M (SD)</i>	20.47 (2.02)	20.08 (2.08)	20.15 (2.07)
	<i>n (%)</i>	<i>n (%)</i>	<i>N (%)</i>
School			
U of R	29 (90.6)	154 (99.4)	183 (97.9)
SIAST	2 (6.3)	1 (0.6)	3 (1.6)
Adult Campus	1 (3.1)	-	1 (0.5)
Ethnicity			
White/Caucasian	25 (78.1)	131 (84.5)	156 (83.4)
Asian	1 (3.1)	7 (4.5)	8 (4.3)
Black/African	3 (9.4)	5 (3.2)	8 (4.3)
Aboriginal/First Nations	3 (9.4)	4 (2.6)	7 (3.7)
Hispanic	-	2 (1.3)	2 (1.1)
Middle Eastern	-	2 (1.3)	2 (1.1)
Mixed Ethnicity	-	4 (2.6)	4 (2.1)
Highest level of education			
First year university	9 (28.1)	71 (45.8)	80 (42.8)
Second year university	10 (31.3)	41 (26.5)	51 (27.3)
Third year university	6 (18.8)	29 (18.7)	35 (18.7)
Fourth year university	4 (12.5)	8 (5.2)	12 (6.4)
More than 4 years university	-	5 (3.2)	5 (2.7)
Finishing high school	3 (9.4)	1 (0.6)	4 (2.1)
Relationship status			
Single	22 (68.8)	65 (41.9)	87 (46.5)
Dating	8 (25.0)	80 (51.6)	88 (47.1)
Common law/cohabiting/married	2 (6.3)	9 (5.8)	11 (5.9)
Separated	-	1 (0.6)	1 (0.5)
Employment status			
Employed full-time/student	1 (3.1)	11 (7.1)	12 (6.4)
Employed part-time/student	16 (50.0)	99 (63.9)	115 (61.5)
Student	15 (46.9)	45 (29.0)	60 (32.1)
Current household income			
Less than \$30,000	11 (34.4)	40 (25.8)	51 (27.3)
\$30,000 - \$49,999	-	23 (14.8)	23 (12.3)
\$50,000 - \$99,999	14 (43.8)	44 (28.4)	58 (31.0)
\$100,000 - \$499,999	7 (21.9)	44 (28.4)	51 (27.3)
Greater than \$500,000	-	4 (2.6)	4 (2.1)
Current living arrangements			
Living alone/with roommates/sibling/on residence	11 (34.4)	44 (28.4)	55 (29.4)
Living with one or both parents or extended family	19 (59.4)	101 (65.2)	120 (64.2)

Living with spouse/partner/child	2 (6.3)	8 (5.2)	10 (5.3)
Living with children	-	2 (1.3)	2 (1.1)
Parents relationship status			
Married/common law	23 (71.9)	111 (71.6)	134 (71.7)
Other (divorced, single, widowed)	9 (28.1)	44 (28.4)	53 (28.3)

^a*n* = 32. ^b*n* = 155. ^c*N* = 187.

Table 2

History of Abuse for the Entire Sample as a Function of Sex

	Male ^a	Female ^b	Total ^c
Abuse history	<i>n</i> (%)	<i>n</i> (%)	<i>N</i> (%)
History of some type of abuse			
Yes	3 (9.4)	56 (36.1)	59 (31.6)
No	29 (90.6)	99 (63.9)	128 (68.4)
Experienced emotional abuse			
Yes	3 (9.4)	52 (33.5)	55 (29.4)
No	29 (90.6)	103 (66.5)	132 (70.6)
Experienced physical abuse			
Yes	1 (3.1)	21 (13.5)	22 (11.8)
No	31 (96.9)	134 (86.5)	165 (88.2)
Experienced sexual abuse			
Yes	1 (3.1)	22 (14.2)	23 (12.3)
No	31 (96.9)	133 (85.8)	164 (87.7)
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
Age abuse occurred	8.0 (1.41)	11.76 (5.14)	11.59 (5.09)
Number of years abuse occurred	6.0 (2.83)	4.38 (4.74)	4.46 (4.66)

^a*n* = 32. ^b*n* = 155. ^c*N* = 187.

Table 3

Demographic Information as a Function of Group Membership

Demographic	History of offending		<i>t</i> (185)	<i>p</i>
	With ^a	Without ^b		
Age				
<i>M</i> (<i>SD</i>)	20.95 (2.34)	19.91 (1.92)	2.65	.01*
	<i>n</i> (%)	<i>n</i> (%)	χ^2 (df)	<i>p</i>
Sex			.03 (1)	.869
Male	7 (16.3)	25 (17.4)		
Female	36 (83.7)	119 (82.6)		
School			N/A	N/A
U of R	41 (95.3)	142 (98.6)		
SIAST	2 (4.7)	1 (0.7)		
Adult Campus	-	1 (0.7)		
Ethnicity			N/A	N/A
White/Caucasian	34 (79.1)	122 (84.7)		
Asian	-	8 (5.6)		
Black/African	3 (7.0)	5 (3.5)		
Aboriginal/First Nations	4 (9.3)	3 (2.1)		
Hispanic	-	2 (1.4)		
Middle Eastern	-	2 (1.4)		
Mixed Ethnicity	2 (4.7)	2 (1.4)		
Highest level of education			N/A	N/A
First year university	18 (41.9)	62 (43.1)		
Second year university	8 (18.6)	43 (29.9)		
Third year university	10 (23.3)	25 (17.4)		
Fourth year university	4 (9.3)	8 (5.6)		
More than 4 years university	1 (2.3)	4 (2.8)		
Finishing high school	2 (4.7)	2 (1.4)		
Relationship status			N/A	N/A
Single	16 (37.2)	71 (49.3)		
Dating	20 (46.5)	68 (47.2)		
Common law/cohabiting/married	7 (16.3)	4 (2.8)		
Separated	-	1 (0.7)		
Employment status			1.58(2)	.455
Employed full-time/student	3 (7.0)	9 (6.3)		
Employed part-time/student	23 (53.5)	92 (63.9)		
Student	17 (39.5)	43 (29.9)		
Current household income			N/A	N/A
Less than \$30,000	21 (48.8)	30 (20.8)		
\$30,000 - \$49,999	6 (14.0)	17 (11.8)		
\$50,000 - \$99,999	9 (20.9)	49 (34.0)		
\$100,000 - \$499,999	6 (14.0)	45 (31.3)		
Greater than \$500,000	1 (2.3)	3 (2.1)		

Current living arrangements			N/A	N/A
Living alone/with roommate/sibling	16 (37.2)	39 (27.1)		
Living with one/both parents/extended family	22 (51.2)	98 (68.1)		
Living with spouse/partner/child	5 (11.6)	5 (3.5)		
Living with children	-	2 (1.4)		
Parents relationship status			2.16(1)	.141
Married/common law	27 (62.8)	107 (74.3)		
Other (divorced, single, widowed)	16 (37.2)	37 (25.7)		

* $p < .05$. ** $p < .01$. *** $p < .001$.

^a $n = 43$. ^b $n = 144$

Table 4

History of Abuse as a Function of Group Membership

Abuse history	History of offending		χ^2 (1)	<i>p</i>
	With ^a <i>n</i> (%)	Without ^b <i>n</i> (%)		
History of some type of abuse			9.95	.002**
Yes	22 (51.2)	37 (25.7)		
No	21 (48.8)	107 (74.3)		
Experienced emotional abuse			12.73	.001***
Yes	22 (51.2)	33 (22.9)		
No	21 (48.8)	111 (77.1)		
Experienced physical abuse			2.52	.113
Yes	8 (18.6)	14 (9.7)		
No	35 (81.4)	130 (90.3)		
Experienced sexual abuse			3.86	.05*
Yes	9 (20.9)	14 (9.7)		
No	34 (79.1)	130 (90.3)		
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>t</i> (df)	<i>p</i>
Age abuse occurred	13.71 (5.07)	10.26 (4.71)	2.29 (42)	.027*
Number of years abuse occurred	4.17 (5.45)	4.68 (4.08)	-0.35 (40)	.730

* $p < .05$. ** $p < .01$. *** $p < .001$.^a $n = 43$. ^b $n = 144$.

between group differences in regards to demographic information, however certain variables (i.e., school, current living arrangements) were excluded from chi-square analyses due to small sample sizes across the categories within the variable, too many categories comprising a variable (i.e., categories could not be collapsed into two or three categories), and the analyses were not relevant to the purposes of the current study. Independent sample t-tests detected a statistically significant difference between groups in terms of age, $t(185) = 2.65, p = .01, r = .19$. Specifically, the group with a history of offending were significantly older ($M_{\text{age}} = 20.95, SD = 2.34$) than the group without a history of offending ($M_{\text{age}} = 19.91, SD = 1.92$). Although the difference in age is statistically significant, the difference may not be clinically meaningful. Further, this finding may be a function of the narrow age range included in the study (i.e., 18 to 26 years of age). In addition, the effect size for the mean age difference between the two groups is small (i.e., $r = .19$) as the benchmarks for effect size using r are: .10 is a small effect, .30 is a medium effect, and .50 is a large effect (Field, 2009). Certain categorical demographic variables with more than three categories were collapsed into two categories in order to examine between group differences through chi-square analyses. Table 3 (page 60-61) indicates not applicable in the chi-square outcome column for these variables (as well as the variables excluded from the analysis) as the analysis did not include all the categories listed, rather condensed categories were utilized to run the analysis. Specifically, current household income was collapsed into two categories (i.e., less than \$30,000 versus greater than \$30,000). There was a statistically significant association between history of offending (history versus no history of offending) and current household income, $\chi^2(1) = 13.92, p = .001$. Based on the odds ratio, the odds of

having a household income of less than \$30,000 were 3.63 times higher if the participants had a history of offending than if they did not have a history of offending. Ethnicity was collapsed into two categories (i.e., Caucasian versus other). There was no statistically significant association between ethnicity and history of offending (i.e., history versus no history of offending), $\chi^2(1) = 0.77, p = .382$. Level of education was collapsed into two categories (i.e., first year of post-secondary education or less versus more than one year of post-secondary education). There was no statistically significant association between level of education and history of offending (i.e., history versus no history of offending), $\chi^2(1) = 0.06, p = .811$. Lastly, relationship status was collapsed into two categories (i.e., single versus in some type of a relationship/dating). There was no statistically significant association between history of offending (i.e., history versus no history of offending) and relationship status, $\chi^2(1) = 2.174, p = .140$.

With respect to abuse history, chi-square analysis detected a statistically significant association between history of offending (history versus no history of offending) and abuse history (history of at least one type of abuse versus no history of any type of abuse), $\chi^2(1) = 9.95, p = .002$ (see Table 4; page 62). Based on the odds ratio, the odds of having a history of abuse were 3.03 times higher if the participants had a history of offending than if they did not have a history of offending. In addition, there was a statistically significant difference between those with a history of offending and those without in terms of the age the abuse occurred, $t(42) = 2.29, p = .027, r = .33$. Specifically, participants with a history of offending experienced abuse at an older age ($M_{\text{age}} = 13.71$ years, $SD = 5.07$) than participants without a history of offending ($M_{\text{age}} =$

10.26 years, $SD = 4.71$). There was no statistically significant difference regarding the number of years the abuse was experienced.

Descriptive statistics were also computed for the group with a history of offending in terms of criminal variables. The group with a history of offending was comprised of 7 males ($M_{age} = 22.14$ years, $SD = 2.04$) and 36 females ($M_{age} = 20.72$ years, $SD = 2.37$; range = 18 – 26 years). Participants with a history of offending reported a mean age of 15.90 years ($SD = 2.69$; range = 18 – 26 years) for first contact with the police. Mean number of arrests was 2.12 ($SD = 2.13$; range = 1-13). The mean number of years since participants with a history of offending committed their most recent offence was 3.69 years ($SD = 2.72$; range = 0-13 years). Twenty-five percent of participants' most recent offense was in the last year. For a detailed description of self-reported arrest and/or charge history see Table 5.

The most serious offense committed by each participant was also examined. This variable was created by reviewing the Criminal Code of Canada and the documents description of summary convictions and indictable offenses. Frequency of most serious offenses include property offense (41.9%), violent offense (18.6%), status offense (16.3%), public disorder (11.6%), traffic offense (7.0%), and liquor law violation (2.3%). For a comprehensive list of all the criminal offenses arrested or charged for within the history of offending group see Table 6.

3.1.1 BPD Features. Overall means were computed for the PAI-BOR and associated subscales (see Table 7): Mean T-scores on the PAI-BOR, BOR-A, BOR-I, BOR-N, and BOR-S range from 51.22 to 57.06. Scale elevations (i.e., T-score ≥ 70) on the PAI-BOR scale and associated subscales (i.e., BOR-A, BOR-I, BOR-N, and BOR-S)

Table 5

Offense Information for Those with a History of Offending

Offense information	Male ^a	Female ^b	Total ^c
Age			
<i>M (SD)</i>	22.14 (2.04)	20.72 (2.37)	20.95 (2.36)
Age first police contact			
<i>M (SD)</i>	16.00 (3.96)	15.89 (2.45)	15.90 (2.69)
Mean number of arrests			
<i>M (SD)</i>	4.29 (4.54)	1.69 (0.89)	2.12 (2.13)
Mean number of charges			
<i>M (SD)</i>	1.29 (1.60)	0.17 (0.38)	0.35 (0.81)
Mean number of convictions			
<i>M (SD)</i>	0.71 (1.11)	0.06 (0.23)	0.16 (0.53)
Mean number of sentences			
<i>M (SD)</i>	0.43 (0.79)	0.06 (0.23)	0.12 (0.39)
Years since most recent offense			
<i>M (SD)</i>	2.75 (1.89)	3.82 (2.82)	3.69 (2.72)
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
Court			
Yes	6 (85.7)	16 (44.4)	22 (51.2)
No	1 (14.3)	20 (55.6)	21 (48.8)
Charged			
Yes	4 (57.1)	6 (16.7)	10 (23.3)
No	3 (42.9)	30 (83.3)	34 (79.1)
Convicted			
Yes	3 (42.9)	2 (5.6)	5 (11.6)
No	4 (57.1)	34 (94.4)	38 (88.4)
Sentenced			
Yes	5 (71.4)	11 (30.6)	16 (37.2)
No	2 (28.6)	25 (69.4)	27 (62.8)
Detained in correctional facility			
Yes	3 (42.9)	-	3 (7.0)
No	4 (57.1)	36 (100.0)	40 (93.0)
Detained in an adolescent correctional Facility			
Yes	3 (42.9)	-	3 (7.0)
No	4 (57.1)	36 (100.0)	40 (93.0)
Detained in an adult correctional facility			
Yes	2 (28.6)	-	2 (4.7)
No	5 (71.4)	36 (100)	41 (95.3)
Number of times lived in an adolescent correctional facility			
Never	4 (57.1)	36 (100.0)	40 (93.0)
Only once	1 (14.3)	-	1 (2.3)

More than once	2 (28.6)	-	2 (4.7)
Number of times lived in an adult correctional facility			
Never	5 (71.4)	36 (100.0)	41 (95.3)
Only once	1 (14.3)	-	1 (2.3)
More than once	1 (14.3)	-	1 (2.3)
Most serious offense			
Status offense	2 (28.6)	5 (13.9)	7 (16.3)
Violent offense	3 (42.9)	5 (13.9)	8 (18.6)
Property offense	1 (14.3)	17 (47.2)	18 (41.9)
Traffic offense	-	3 (8.3)	3 (7.0)
Public order	-	5 (13.9)	5 (11.6)
Liquor law violation	-	1 (2.8)	1 (2.3)

Note. Most serious offense = most serious offense arrested or charged for.

^a*n* = 7. ^b*n* = 36. ^c*n* = 43.

Table 6

Type and Frequency of Self-Reported Arrested and/or Charged Offenses Among the Group With a History of Offending

Type of offense	History of offending
	<i>n</i> (%)
Theft	14 (17.5)
Public disorder	14 (17.5)
Traffic offense	10 (12.5)
Drinking under the legal age limit	9 (11.3)
Assault	5 (6.3)
Impaired driving	5 (5.0)
Mischief	3 (3.8)
Driving with a suspended license	3 (3.8)
Property offense	2 (2.5)
Break and enter	2 (2.5)
Armed robbery	2 (2.5)
Drug trafficking	2 (2.5)
Drinking in a vehicle/open alcohol	2 (2.5)
Sexual assault	1 (1.3)
Littering	1 (1.3)
Fake identification	1 (1.3)
Proceeds of crime	1 (1.3)
Resisting arrest	1 (1.3)
Possession or trafficking of stolen goods	1 (1.3)
Threats	1 (1.3)

Note. A total of 80 criminal offenses were reported across the group of emerging adults with a history of offending ($n = 43$). Frequency values will not total $n = 43$ as some emerging adults with a history of offending reported having been arrested and/or charged for multiple offenses.

Table 7

Means and Standard Deviations for PAI Scale and Subscale Scores as a Function of Group Membership

Scale	History of Offending		Total Sample ^b	<i>F</i> (1, 185)	<i>p</i>	η^2
	With ^a	Without ^b				
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)			
PAI-SOM	52.05 (8.25)	48.63 (7.74)	49.41 (7.97)	6.27	.013*	.03
SOM-C	50.88 (8.46)	47.61 (7.07)	48.36 (7.51)	6.47	.012*	.03
SOM-S	53.33 (9.62)	50.07 (9.37)	50.82 (9.50)	3.95	.048*	.02
SOMH	50.88 (9.03)	48.40 (6.89)	48.97 (7.48)	3.69	.056	.02
PAI-ANX	57.49 (12.17)	54.53 (11.05)	55.21 (11.35)	2.27	.134	.01
ANX-C	56.93 (11.61)	54.95 (11.25)	55.41 (11.33)	1.01	.316	.01
ANX-A	57.47 (12.52)	53.44 (11.71)	54.37 (11.98)	3.78	.053	.02
ANX-P	55.60 (11.20)	53.97 (11.43)	54.34 (11.37)	0.69	.408	.00
PAI-ARD	57.07 (12.22)	53.93 (11.64)	54.65 (11.82)	2.35	.127	.01
ARD-O	51.91 (10.75)	51.68 (10.89)	51.73 (10.83)	0.01	.905	.00
ARD-P	54.65 (11.90)	53.65 (10.89)	53.88 (11.10)	0.27	.604	.00
ARD-T	58.56 (13.13)	53.35 (12.83)	54.55 (13.05)	5.40	.021*	.03
PAI-DEP	55.07 (12.22)	51.76 (11.40)	52.52 (11.52)	2.76	.098	.02
DEP-C	53.47 (12.60)	52.89 (11.95)	53.02 (12.07)	0.08	.784	.00
DEP-A	53.21 (10.66)	51.78 (12.30)	52.11 (11.93)	0.47	.493	.00
DEP-P	54.95 (10.59)	50.39 (9.96)	51.44 (10.26)	6.76	.010*	.04
PAI-MAN	52.49 (10.47)	51.50 (9.90)	51.72 (10.01)	0.32	.571	.00
MAN-A	50.05 (11.31)	50.61 (10.80)	50.48 (10.89)	0.09	.766	.00
MAN-G	50.51 (10.03)	51.32 (10.15)	51.13 (10.10)	0.21	.647	.00
MAN-I	55.30 (10.49)	51.76 (10.32)	52.57 (10.44)	3.88	.050*	.02
PAI-PAR	57.40 (11.11)	52.91 (11.13)	53.94 (11.25)	5.39	.021*	.03
PAR-H	57.60 (11.96)	53.93 (11.23)	54.78 (11.47)	3.44	.065	.02
PAR-P	55.91 (13.27)	50.94 (10.25)	52.08 (11.17)	6.75	.010*	.04
PAR-R	56.91 (9.19)	51.79 (10.68)	52.97 (10.55)	8.07	.005**	.04
PAI-SCZ	47.79 (9.48)	48.35 (10.90)	48.22 (10.57)	0.09	.763	.00
SCZ-P	47.63 (9.85)	47.80 (9.57)	47.76 (9.61)	0.01	.919	.00
SCZ-S	46.65 (8.89)	48.69 (10.87)	48.22 (10.46)	1.26	.264	.01
SCZ-T	50.63 (9.85)	49.72 (11.09)	49.93 (10.80)	0.23	.631	.00
PAI-BOR	59.47 (10.96)	54.06 (10.92)	55.30 (11.14)	8.11	.005**	.04
BOR-A	55.23 (11.65)	50.94 (11.70)	51.93 (11.79)	4.46	.036*	.02
BOR-I	59.44 (10.52)	56.35 (11.00)	57.06 (10.94)	2.66	.104	.01
BOR-N	60.30 (12.00)	54.48 (11.59)	55.82 (11.91)	8.23	.005**	.04
BOR-S	54.74 (12.09)	50.17 (9.82)	51.22 (10.53)	6.42	.012*	.03
PAI-ANT	62.42 (11.33)	53.38 (9.85)	55.45 (10.87)	26.02	.001***	.12
ANT-A	65.07 (11.03)	51.42 (9.19)	54.56 (11.20)	66.41	.001***	.26
ANT-E	57.37 (11.10)	54.07 (10.79)	54.83 (10.92)	3.06	.082	.02
ANT-S	56.88 (12.65)	53.19 (10.99)	54.04 (11.47)	3.47	.064	.02

PAI-ALC	61.35 (13.81)	51.05 (9.70)	53.42 (11.59)	30.27	.001***	.14
PAI-DRG	56.84 (14.20)	48.51 (8.16)	50.42 (10.44)	23.64	.001***	.11
PAI-AGG	55.02 (11.27)	47.86 (9.81)	49.51 (10.58)	16.45	.001***	.08
AGG-A	53.26 (11.32)	46.56 (10.33)	48.10 (10.91)	13.29	.001***	.07
AGG-V	54.72 (11.30)	48.96 (10.39)	50.28 (10.85)	9.78	.002**	.05
AGG-P	54.44 (9.15)	48.74 (8.88)	50.05 (9.24)	13.45	.001***	.07
PAI-SUI	53.23 (10.16)	51.10 (11.22)	51.59 (11.00)	1.24	.267	.01
PAI-STR	54.23 (9.61)	49.24 (8.15)	50.39 (8.74)	11.40	.001**	.06

Note. PAI = Personality Assessment Inventory; PAI-SOM = Somatic Complaints Scale; SOM-C = Conversion Subscale of the PAI-SOM; SOM-S = Somatization Subscale of the PAI-SOM; SOM-H = Health Concerns Subscale of the PAI-SOM; PAI-ANX = Anxiety Scale; ANX-C = Cognitive Subscale of the PAI-ANX; ANX-A = Affective Subscale of the PAI-ANX; ANX-P = Physiological Subscale of the PAI-ANX; PAI-ARD = Anxiety-Related Disorders Scale; ARD-O = Obsessive-Compulsive Subscale of the PAI-ARD; ARD-P = Phobias Subscale of the PAI-ARD; ARD-T = Traumatic Stress Subscale of the PAI-ARD; PAI-DEP = Depression Scale; DEP-C = Cognitive Subscale of the PAI-DEP; DEP-A = Affective Subscale of the PAI-DEP; DEP-P = Physiological Subscale of the PAI-DEP; PAI-MAN = Mania Scale; MAN-A = Activity Level Subscale of the PAI-MAN; MAN-G = Grandiosity Subscale of the PAI-MAN; MAN-I = Irritability Subscale of the PAI-MAN; PAI-PAR = Paranoia Scale; PAR-H = Hypervigilance Subscale of the PAI-PAR; PAR-P = Persecution Subscale of the PAI-PAR; PAR-R = Resentment Subscale of the PAI-PAR; PAI-SCZ = Schizophrenia Scale; SCZ-P = Psychotic Experience Subscale of the PAI-SCZ; SCZ-S = Social Detachment Subscale of the PAI-SCZ; SCZ-T = Thought Disorder Subscale of the PAI-SCZ; PAI-BOR = Borderline Features Scale; BOR-A = Affective Instability Subscale of the PAI-BOR; BOR-I = Identity Problems Subscale of the PAI-BOR; BOR-N = Negative Relationships Subscale of the PAI-BOR; BOR-S = Self-Harm Subscale of the PAI-BOR; PAI-ANT = Antisocial Features Scale; ANT-A = Antisocial Behaviors Subscale of the PAI-ANT; ANT-E = Egocentricity Subscale of the PAI-ANT; ANT-S = Stimulus-Seeking Subscale of the PAI-ANT; PAI-ALC = Alcohol Problems Scale; PAI-DRG = Drug Problems Scale; PAI-AGG = Aggression Scale; AGG-A = Aggressive Attitude Subscale of the PAI-AGG; AGG-V = Verbal Aggression Subscale of the PAI-AGG; AGG-P = Physical Aggression Subscale of the PAI-AGG; PAI-SUI = Suicidal Ideation Scale; PAI-STR = Stress Scale. η^2 = eta-squared. Eta-squared is a measure of effect size. The benchmarks for eta-squared include: .01 is a small effect size; .06 is a medium effect size, and .14 is a large effect size (Cohen, 1988).

* $p < .05$. ** $p < .01$. *** $p < .001$.

^a $n = 43$. ^b $n = 144$. ^c $n = 187$.

were examined to assess the presence of BPD features across the two groups. A T-score greater than or equal to 70 on the PAI scales suggests the prominence of the disorder, however, a diagnosis should not be made based solely on responses from this measure. The aforementioned scales were re-coded into high (clinically significant = T-score ≥ 70) and low (below threshold = T-score < 70) features based on T-score cut-off criteria. Accordingly, 11.8% ($n = 22$) of the entire sample demonstrated high BPD features on the PAI-BOR. Approximately 21% ($n = 9$) of participants with a history of offending reported high (clinically significant) BPD features compared to 9% ($n = 13$) of participants without a history of offending on the PAI-BOR (see Table 8 for frequency counts across groups).

Overall means were computed for the BEST subscales A ($M = 14.16$, $SD = 5.65$) and B ($M = 5.66$, $SD = 2.24$) (see Table 9). Item responses on the BEST subscales A and B were also examined. The eight items of the BEST A and the four items of the BEST B inquire about the nine criteria for BPD outlined in the DSM-IV-TR (APA, 2000) within a dimensional model. See Table 10 for frequency of items endorsed on the BEST A and B across groups, with attention to responses indicative of severe or extreme symptom presentation.

3.1.2 Associated BPD Symptomatology and Psychopathology. Levels of symptoms associated with BPD (i.e., impulsivity [BIS-11], suicidality [BSS], depression [CES-D], state and trait anxiety [STAI], remaining PAI clinical scales, and relevant PAI treatment scales) were examined across the entire sample and between the two groups (see Tables 7 and 9). Descriptive information for associated BPD symptomatology and psychopathology will be discussed below and followed by examination across groups.

Table 8

Levels of Borderline Personality Disorder Features as Measured by the PAI-BOR and Subscales as a Function of Group Membership

Variable	History of offending		Total sample ^c
	With ^a	Without ^b	
PAI-BOR			
Clinically significant <i>n</i> (%)	9 (20.9)	13 (9.0)	22 (11.8)
Below threshold <i>n</i> (%)	34 (79.1)	131 (91.0)	165 (88.2)
BOR-A			
Clinically significant <i>n</i> (%)	4 (9.3)	13 (9.0)	17 (9.1)
Below threshold <i>n</i> (%)	39 (90.7)	131 (91.0)	170 (90.9)
BOR-I			
Clinically significant <i>n</i> (%)	7 (16.3)	17 (11.8)	24 (12.8)
Below threshold <i>n</i> (%)	36 (83.7)	127 (88.2)	163 (87.2)
BOR-N			
Clinically significant <i>n</i> (%)	9 (20.9)	19 (13.2)	28 (15.0)
Below threshold <i>n</i> (%)	34 (79.1)	125 (86.8)	159 (85.0)
BOR-S			
Clinically significant <i>n</i> (%)	5 (11.6)	6 (4.2)	11 (5.9)
Below threshold <i>n</i> (%)	38 (88.4)	138 (95.8)	176 (94.1)

Note. PAI-BOR = Personality Assessment Inventory Borderline Features Scale; BOR-A = Affective Instability Subscale of the PAI-BOR; BOR-I = Identity Problems Subscale of the PAI-BOR; BOR-N = Negative Relationships Subscale of the PAI-BOR; BOR-S = Self-Harm Subscale of the PAI-BOR; BPD = borderline personality disorder. Clinically significant = T score > 70 on PAI Scales and Subscales; below threshold = T score < 70 on PAI Scales and Subscales. Clinically significant represents those participants with high levels of BPD features (PAI-BOR) or high levels of a specific BPD feature (i.e., BOR-A, BOR-I, BOR-N, BOR-S). Below threshold represents those participants with lower levels of BPD features (PAI-BOR) or lower levels of a specific BPD feature (i.e., BOR-A, BOR-I, BOR-N, BOR-S).

^a*n* = 43. ^b*n* = 144. ^c*N* = 187

Table 9

Means and Standard Deviations for Measures of BPD Features and Associated Constructs as a Function of Group Membership

Scale	History of offending		Total Sample ^c	<i>F</i> (1,185)	<i>p</i>	η^2
	With ^a	Without ^b				
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)			
BSS	0.63 (1.93)	0.72 (2.37)	0.70 (2.27)	0.06	.812	.00
BEST A	15.72 (5.47)	13.69 (5.64)	14.16 (5.65)	4.33	.039*	.02
BEST B	6.26 (2.50)	5.48 (2.14)	5.66 (2.24)	4.04	.046*	.02
BIS-11	62.33 (10.36)	57.51 (9.83)	58.62 (10.13)	7.74	.006**	.04
Attention	10.65 (2.43)	10.06 (2.74)	10.20 (2.68)	1.60	.207	.01
Motor	14.93 (3.14)	13.90 (3.08)	14.13 (3.11)	3.71	.056	.02
Self-Control	12.37 (3.43)	10.98 (3.29)	11.30 (3.37)	5.82	.017*	.03
Cognitive Complexity	12.72 (2.47)	11.34 (2.18)	11.66 (2.32)	12.44	.001**	.06
Perseverance	6.67 (1.91)	6.35 (1.41)	6.43 (1.54)	1.44	.232	.01
Cognitive Instability	4.98 (1.57)	4.88 (1.65)	4.90 (1.63)	0.11	.738	.00
Attentional Impulsivity	15.63 (3.42)	14.94 (3.66)	15.10 (3.61)	1.19	.277	.01
Motor Impulsiveness	21.60 (3.90)	20.25 (3.53)	20.56 (3.65)	4.65	.032*	.03
Nonplanning Impulsiveness	25.09 (4.72)	22.32 (4.65)	22.96 (4.80)	11.70	.001**	.06
CES-D	14.35 (9.72)	11.26 (9.34)	11.97 (9.49)	3.56	.061	.02
STAI-S	39.02 (11.55)	34.67 (10.89)	35.67 (11.16)	5.14	.025*	.03
STAI-T	40.14 (9.35)	37.41 (10.86)	38.04 (10.57)	2.22	.138	.01

Note. BSS = Beck Scale for Suicide Ideation; BEST A = Borderline Evaluation of Severity Over Time Subscale A Negative Thoughts and Feelings; Best B = Borderline Evaluation of Severity Over Time Subscale B Negative Behaviours; BIS-11 = Barratt Impulsiveness Scale – Version 11; CES-D = Center for Epidemiological Studies Depression Scale; STAI-S = State Trait Anxiety Inventory for Adults Situational Anxiety Scale; STAI-T = State Trait Anxiety Inventory for Adults Trait Scale. BIS-11 is the measures total score. BIS Attention, BIS Motor, and BIS Self-Control are the three second order factors/subscales comprising the BIS-11. BIS Cognitive Complexity, BIS Perseverance, BIS Cognitive Instability, BIS Attentional Impulsivity, BIS Motor Impulsiveness, and BIS Nonplanning Impulsiveness are the six first order factors/subscales comprising the BIS-11. η^2 = eta-squared. Eta-squared is a measure of effect size. The benchmarks for eta-squared are: .01 is a small effect size; .06 is a medium effect size, and .14 is a large effect size (Cohen, 1988).

* $p < .05$. ** $p < .01$.

^a $n = 43$. ^b $n = 144$. ^c $N = 187$.

Table 10

Frequency of Symptoms Endorsed on the BEST Subscale A and B as a Function of Group Membership

	History of offending		Total Sample ^c
	With ^a	Without ^b	
Best Subscale A: Thoughts and Feelings	% (n)	% (n)	% (N)
Worrying someone important is tired of you/planning to leave			
None	27.9 (12)	48.6 (70)	43.9 (82)
Mild	27.9 (12)	20.8 (30)	22.5 (42)
Moderate	25.6 (11)	19.4 (28)	20.9 (39)
Severe	4.7 (2)	4.9 (7)	4.8 (9)
Extreme	14.0 (6)	6.3 (9)	8.0 (25)
Major shifts in opinions about others			
None	20.9 (9)	50.7 (73)	43.9 (82)
Mild	27.9 (12)	22.9 (33)	24.1 (45)
Moderate	34.9 (15)	24 (16.7)	39 (20.9)
Severe	14.0 (6)	9 (6.3)	8.0 (15)
Extreme	2.3 (1)	5 (3.5)	3.2 (6)
Extreme changes in how you see Yourself			
None	51.2 (22)	51.4 (74)	51.3 (96)
Mild	18.6 (8)	24.3 (35)	23.0 (43)
Moderate	16.3 (7)	12.5 (18)	13.4 (25)
Severe	9.3 (4)	7.6 (11)	8.0 (15)
Extreme	4.7 (2)	4.2 (6)	4.3 (8)
Severe mood swings several times a Day			
None	51.2 (22)	62.5 (90)	59.9 (112)
Mild	20.9 (9)	22.9 (33)	22.5 (42)
Moderate	18.6 (8)	10.4 (15)	12.3 (23)
Severe	9.3 (4)	2.8 (4)	4.3 (8)
Extreme	-	1.4 (2)	1.1 (2)
Feeling paranoid or like you're losing touch with reality			
None	74.4 (32)	77.8 (112)	77.0 (144)
Mild	14.0 (6)	12.5 (18)	12.8 (24)
Moderate	9.3 (4)	6.3 (9)	7.0 (13)
Severe	2.3 (1)	2.8 (4)	2.7 (5)
Extreme	-	0.7 (1)	0.5 (1)
Feeling angry			
None	20.9 (9)	36.1 (52)	32.6 (61)
Mild	48.8 (21)	37.5 (54)	40.1 (75)

Moderate	25.6 (11)	19.4 (28)	20.9 (39)
Severe	4.7 (2)	4.9 (7)	4.8 (9)
Extreme	-	2.1 (3)	1.6 (3)
Feelings of emptiness			
None	39.5 (17)	51.4 (74)	48.7 (91)
Mild	25.6 (11)	30.6 (44)	29.4 (55)
Moderate	18.6 (8)	9.0 (13)	11.2 (21)
Severe	9.3 (4)	6.9 (10)	7.5 (14)
Extreme	7.0 (3)	2.1 (3)	3.2 (6)
Feeling suicidal			
None	90.7 (39)	88.2 (127)	88.8 (166)
Mild	2.3 (1)	4.9 (7)	4.3 (8)
Moderate	4.7 (2)	4.2 (6)	4.3 (8)
Severe	2.3 (1)	2.8 (4)	2.7 (5)
Extreme	-	-	-
BEST Subscale B: Negative Behaviours			
Going to extremes to keep someone from Leaving			
None	65.1 (28)	77.1 (111)	74.3 (139)
Mild	16.3 (7)	12.5 (18)	13.4 (25)
Moderate	18.6 (8)	6.3 (9)	9.1 (17)
Severe	-	3.5 (5)	2.7 (5)
Extreme	-	0.7 (1)	0.5 (1)
Purposefully doing something to injure yourself or making a suicide attempt			
None	93.0 (40)	93.8 (135)	93.6 (175)
Mild	2.3 (1)	2.8 (4)	2.7 (5)
Moderate	4.7 (2)	1.4 (2)	2.1 (4)
Severe	-	1.4 (2)	1.1 (2)
Extreme	-	0.7 (1)	0.5 (1)
Problems with impulsive behaviour			
None	51.2 (22)	63.2 (91)	60.4 (113)
Mild	25.6 (11)	18.8 (27)	20.3 (38)
Moderate	9.3 (4)	13.9 (20)	12.8 (24)
Severe	11.6 (5)	2.8 (4)	4.8 (9)
Extreme	2.3 (1)	1.4 (2)	1.6 (3)
Temper outbursts			
None	60.5 (26)	76.4 (110)	72.7 (136)
Mild	18.6 (8)	13.9 (20)	15.0 (28)
Moderate	11.6 (5)	6.9 (10)	8.0 (15)
Severe	7.0 (3)	2.1 (3)	3.2 (6)
Extreme	2.3 (1)	0.7 (1)	1.1 (2)

Note. BEST (Pfohl & Blum, 1997). BEST = Borderline Evaluation of Severity Over Time; Subscale A = Negative Thoughts and Feelings; Subscale B = Negative Behaviours.

^an = 43. ^bn = 144. ^cN = 187.

3.1.3 Impulsivity. Overall means were computed for the BIS-11 and subscales (see Table 9): Mean scores on the BIS-11 and subscales (i.e., Attention, Motor, Impulsivity, Motor Impulsivity, Nonplanning Impulsiveness) ranged from 4.90 to 58.62. The BIS-11 total score was re-coded into high impulsiveness (Total score ≥ 72) and below threshold for high impulsiveness (Total score < 72). Below threshold for high impulsiveness should not necessarily be interpreted as low impulsiveness, rather participant scores did not reach the threshold for high impulsiveness. Among the entire sample, 9.6% ($n = 18$) demonstrated high impulsiveness. Across groups, 14.0% ($n = 6$) Self-Control, Cognitive Complexity, Perseverance, Cognitive Instability, Attentional of participants with a history of offending and 8.3% ($n = 12$) of participants without a history of offending obtained total scores indicative of high impulsivity.

3.1.4 Suicidality. BSS total score ($M = 0.70$, $SD = 2.27$) was re-coded into high suicidality (clinically significant = total score ≥ 24) and below threshold (total score < 24). Below threshold does not necessarily mean the absence of suicidality, rather lower levels or below clinical levels of suicidality. No participants demonstrated clinical levels of suicidal ideation. However, 4.8% ($n = 9$) of the entire sample (all females) reported a history of a suicide attempt on item 20 of the BSS. Of those with a history of a suicide attempt, 11.6% ($n = 5$) have a history of offending whereas 2.8% ($n = 4$) have no history of offending.

3.1.5 Depression. For the overall sample, the mean score for the CES-D was 11.97 ($SD = 9.49$; see Table 9; page 73). For descriptive purposes, the CES-D Total score was categorized as low depressive symptoms (i.e., none to very mild depressive symptoms; Total score = 0 to 14), mild to moderate depressive symptoms (Total score = 15 to 21),

and major depressive symptoms (Total score > 21) which may be indicative of major depression (see Table 11). Among the entire sample ($N = 187$) 15.0% demonstrated major depressive symptoms. More specifically, 20.9% of the group with a history of offending and 13.2% of the group without a history of offending endorsed items reflecting the presence of major depressive symptoms.

3.1.6 Anxiety. For the overall sample, mean scores were calculated for both state ($M = 35.67$, $SD = 11.16$) and trait ($M = 38.04$, $SD = 10.57$) anxiety (see Table 9; page 73). The group with a history of offending obtained a mean score of 39.02 ($SD = 11.55$) on state anxiety as compared to the group without a history of offending ($M = 34.67$, $SD = 10.89$). Participants in the group with a history of offending obtained a mean score of 40.14 ($SD = 9.35$) on trait anxiety as compared to the group without a history of offending ($M = 37.41$, $SD = 10.86$).

3.1.7 BPD associated psychopathology on the PAI Scales. For the overall sample descriptive statistics were computed for the remaining PAI clinical scales, three PAI treatment scales, and associated subscales. Mean T-scores range from 46.65 to 60.30. See Table 7 (page 69-70) for mean T-scores and Table 12 for frequencies of clinically significant T-scores on the aforementioned scales and subscales.

3.2 BPD Features as a Function of Group Membership

Hypothesis 1 stated that BPD features would be significantly more elevated in the group with a history of offending than the group without. To test this hypothesis, a series of between-group one-way ANOVAs were conducted for measures specifically examining BPD features (PAI-BOR and subscales, BEST A and B). Statistically significant differences between groups were observed across the PAI-BOR scale and

Table 11

Levels of Depressive Symptoms Measured by the CES-D as a Function of Group Membership

Variable	History of Offending		Total Sample ^c
	With ^a	Without ^b	
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
CES-D			
Low	26 (60.5)	101 (70.1)	127 (67.9)
Mild to moderate	8 (18.6)	24 (16.7)	32 (17.1)
Major symptoms	9 (20.9)	19 (13.2)	28 (15.0)

Note. CES-D = Center for Epidemiological Studies Depression Scale; Low = None to very mild depressive symptoms (CES-D Total score = 0 to 14); Mild to Moderate = mild to moderate depressive symptoms (CES-D Total Score = 15 to 21); Major Symptoms = major depressive symptoms that may be indicative of major depression (CES-D Total score > 21).

^a*n* = 43. ^b*n* = 144. ^c*N* = 187.

Table 12

Frequency of Clinically Significant T-scores on the PAI Clinical Scales, Subscales, and Three PAI Treatment Scales as a Function of Group Membership

	History of offending			History of offending	
	With ^a	Without ^b		With ^a	Without ^b
Clinical Scales	<i>n</i> (%)	<i>n</i> (%)	PAI Subscales	<i>n</i> (%)	<i>n</i> (%)
PAI-SOM	1 (2.3)	4 (2.8)	Conversion	1 (2.3)	3 (2.1)
			Somatization	2 (4.7)	7 (4.9)
			Health Concerns	3 (7.0)	3 (2.1)
PAI-ANX	8 (18.6)	17 (11.8)	Cognitive	6 (14.0)	16 (11.1)
			Affective	8 (18.6)	16 (11.1)
			Physiological	5 (11.6)	13 (9.0)
PAI-ARD	6 (14.0)	10 (6.9)	OCD	3 (7.0)	11 (7.6)
			Phobia	6 (14.0)	14 (9.7)
			PTSD	8 (18.6)	16 (11.1)
PAI-DEP	7 (16.3)	11 (7.6)	Cognitive	5 (11.6)	10 (6.9)
			Affective	3 (7.0)	11 (7.6)
			Physiological	3 (7.0)	6 (4.2)
PAI-MAN	4 (9.3)	7 (4.9)	Activity Level	4 (9.3)	9 (6.3)
			Grandiosity	2 (4.7)	6 (4.2)
			Irritability	4 (9.3)	8 (5.6)
PAI-PAR	6 (13.3)	11 (7.6)	Hypervigilance	8 (18.6)	13 (9.0)
			Persecution	6 (14.0)	5 (3.5)
			Resentment	2 (4.7)	9 (6.3)
PAI-SCZ	1 (2.3)	7 (4.9)	Psychotic Exper.	3 (7.0)	6 (4.2)
			Social Detachment	-	8 (5.6)
			Thought Disorder	3 (7.0)	9 (6.3)
PAI-BOR	9 (20.9)	13 (9.0)	Affect Instability	4 (9.3)	13 (9.0)
			Identity Problems	7 (16.3)	17 (11.8)
			Negative Relation.	9 (20.9)	19 (13.2)
			Self-Harm	5 (11.6)	6 (4.2)
PAI-ANT	11 (25.6)	10 (6.9)	Behaviours	18 (41.9)	7 (4.9)
			Ego Centric	6 (14.0)	11 (7.6)
			Stimulus Seeking	7 (16.3)	14 (9.7)
PAI-ALC	12 (27.9)	10 (6.9)	N/A		
PAI-DRG	8 (18.6)	2 (1.4)	N/A		
Treatment Scales					
PAI-AGG	2 (4.7)	5 (3.5)	Attitude	3 (7.0)	4 (2.8)
			Verbal Aggression	5 (11.6)	7 (4.9)
			Phys. Aggression	2 (4.7)	6 (4.2)
PAI-SUI	4 (9.3)	11 (7.6)	N/A		

PAI-STR	2 (4.7)	4 (2.8)	N/A
---------	---------	---------	-----

Note. BPD = borderline personality disorder; PAI = Personality Assessment Inventory; PAI-SOM = Personality Assessment Inventory Somatic Complaints Scale; PAI-ANX = Personality Assessment Inventory Anxiety Scale; PAI-ARD = Personality Assessment Inventory Anxiety-Related Disorders Scale; PAI-DEP = Personality Assessment Inventory Depression Scale; PAI-MAN = Personality Assessment Inventory Mania Scale; PAI-PAR = Personality Assessment Inventory Paranoia Scale; PAI-SCZ = Personality Assessment Inventory Schizophrenia Scale; PAI-ALC = Personality Assessment Inventory Alcohol Problems Scale; PAI-DRG = Personality Assessment Inventory Drug Problems Scale; PAI-AGG = Personality Assessment Inventory Aggression Scale; PAI-SUI = Personality Assessment Inventory Suicidal Ideation Scale. Clinically significant T-scores suggest the presence of the disorder, however, is not suffice for a diagnosis.

^a*n* = 43. ^b*n* = 144.

associated subscales with the exception of one (see Table 7; 69-70). Specifically, those with a history of offending had significantly higher levels of BPD features as compared to those without as measured by the PAI-BOR, $F(1, 185) = 8.11, p = .005, \eta^2 = .04$. Effect sizes (η^2) are determined based on the following benchmarks: small effect equals .01; medium effect equals .06; and a large effect is equivalent to .14 (Cohen, 1988). A small to medium effect size was observed on the PAI-BOR. Similarly, those with a history of offending had significantly higher levels of affect instability (BOR-A, $F(1, 185) = 4.46, p = .036, \eta^2 = .02$), negative relationships (BOR-N, $F(1, 185) = 8.23, p = .005, \eta^2 = .04$), and self-harm (BOR-S, $F(1, 185) = 6.42, p = .012, \eta^2 = .03$) than those without. Small effect sizes were observed for the BOR-A and BOR-S and a small to medium effect was observed for the BOR-N. No statistically significant difference was observed between groups with respect to identity disturbance.

Consistent with Hypothesis 1, there were statistically significant differences between groups on the BEST A, $F(1, 185) = 4.33, p = .039, \eta^2 = .02$, and BEST B, $F(1, 185) = 4.04, p = .046, \eta^2 = .02$, suggesting that those with a history of offending have significantly more negative thoughts and feelings (e.g., affect dysregulation, fears of abandonment, feelings of emptiness) and negative behaviours (e.g., impulsivity, inappropriate expressions of anger) symptomatic of BPD than those without a history of offending (see Table 9; page 73). Despite statistically significant outcomes, the effect size for the BEST A and B were small.

3.3 Associated BPD Symptomatology and Psychopathology as a Function of Group Membership

Hypothesis 2 stated that specific BPD symptomatology and associated psychopathology would be significantly more elevated in the group with a history of offending than in the group without as measured by the BIS-11 (i.e., impulsivity), BSS (suicidal ideation), CES-D (i.e., depression), STAI (i.e., state and trait anxiety), PAI clinical scales and subscales (i.e., somatic complaints, anxiety, anxiety-related disorders, depression, mania, paranoia, schizophrenia, antisocial features, alcohol problems, drug problems), and three specific PAI treatment scales and subscales (i.e., aggression, suicidal ideation, stress). To test this hypothesis, a series of between-group one-way ANOVAs were conducted for measures examining associated BPD symptomatology and psychopathology (i.e., BSS, BIS-11, CES-D, STAI-S, STAI-T, PAI clinical scales and subscales, specific PAI treatment scales). Results demonstrated mixed support for Hypothesis 2 (see Table 7 and 9; page 69-70, 73). Specifically, participants with a history of offending had significantly higher levels of impulsivity as measured by the BIS-11, $F(1, 185) = 7.74, p = .006, \eta^2 = .04$, than those without an offender history. A small to medium effect size was observed on the BIS-11. Similarly, the group with a history of offending had significantly higher levels of impulsivity on the following BIS-11 subscales: BIS Self-Control, $F(1, 185) = 5.82, p = .017, \eta^2 = .03$, BIS Cognitive Complexity, $F(1, 185) = 12.44, p = .001, \eta^2 = .06$, BIS Motor Impulsiveness, $F(1, 185) = 4.65, p = .032, \eta^2 = .03$, and BIS Nonplanning Impulsiveness, $F(1, 185) = 11.70, p = .001, \eta^2 = .06$, than those without an offender history. Observed effect sizes range from small to medium for the aforementioned subscales. No statistically significant differences were observed between groups on the remaining five BIS-11 subscales (i.e., Attention, Motor, Perseverance, Cognitive Instability, Attentional Impulsivity, see Table

9; page 73). Consistent with Hypothesis 2, there were statistically significant differences between groups in regards to situational anxiety (STAI-S), $F(1, 185) = 5.14, p = .025, \eta^2 = .03$, suggesting that the group with a history of offending have significantly more situational anxiety than the group without (see Table 9; page 73). The STAI-S demonstrated a small to medium effect size.

Statistically significant differences on the PAI scales provided further support for Hypothesis 2 (see Table 7 for complete list of the between-group comparisons for PAI scales and subscales; page 69-70). Results from the one-way ANOVA's for the PAI-BOR will not be reiterated in this section. Participants with a history of offending had significantly higher T-scores on 7 of the 13 remaining PAI clinical scales and specific treatment scales and 11 of 27 remaining PAI subscales than those without. Specifically, statistically significant differences were observed on the following PAI Scales: PAI-SOM, $F(1, 185) = 6.27, p = .013, \eta^2 = .18$; PAI-PAR, $F(1, 185) = 5.39, p = .021, \eta^2 = .17$; PAI-ANT, $F(1, 185) = 26.02, p < .001, \eta^2 = .35$; PAI-AGG, $F(1, 185) = 16.45, p < .001, \eta^2 = .29$; PAI-ALC, $F(1, 185) = 30.27, p < .001, \eta^2 = .38$; PAI-DRG, $F(1, 185) = 23.64, p < .001, \eta^2 = .34$; and PAI-STR, $F(1, 185) = 11.40, p = .001, \eta^2 = .24$. In addition, statistically significant between-group differences were demonstrated on the following PAI subscales: SOM Conversion subscale, $F(1, 185) = 6.47, p = .012, \eta^2 = .18$; SOM Somatization subscale, $F(1, 185) = 3.95, p = .048, \eta^2 = .14$; ARD Traumatic Stress subscale, $F(1, 185) = 5.40, p = .021, \eta^2 = .17$; DEP Physiological subscale, $F(1, 185) = 6.76, p = .010, \eta^2 = .19$; MAN Irritability subscale, $F(1, 185) = 3.88, p = .05, \eta^2 = .14$; PAR Persecution subscale, $F(1, 185) = 6.75, p = .01, \eta^2 = .19$; PAR Resentment subscale, $F(1, 185) = 8.07, p = .005, \eta^2 = .20$; ANT Antisocial Behaviours subscale, $F(1, 185) =$

66.41, $p = .000$, $\eta^2 = .51$; AGG Aggressive Attitude subscale, $F(1, 185) = 13.29$, $p = .000$, $\eta^2 = .26$, AGG Verbal Aggression subscale, $F(1, 185) = 9.78$, $p = .002$, $\eta^2 = .22$; and AGG Physical Aggression Subscale, $F(1, 185) = 13.45$, $p = .000$, $\eta^2 = .26$. Effect sizes (η^2) are determined based on the following benchmarks: small effect equals .01; medium effect equals .06; and a large effect is equivalent to .14 (Cohen, 1988). In sum, the group with a history of offending demonstrated increased levels of psychopathology than the group without a history of offending.

In contrast, some of the current results were not supportive of Hypothesis 2 (see Table 7 and 9; page 69-70, 73). Specifically, there was no statistically significant difference between groups in terms of suicidality (BSS), trait anxiety (STAI-T), or depressive symptoms (CES-D). However, there was a trend toward those with an offender history having significantly more elevated levels of depression. Lastly, no statistically significant differences between groups were observed on the following PAI scales: Anxiety, Depression, Mania, Schizophrenia, and Suicidal Ideation. Overall, there was more psychopathology present in the group with a history of offending than the group without bolstering support for Hypothesis 2.

Hypothesis 3 stated that the group with an offender history would have scores in the clinical range for specific BPD associated psychopathology as measured by relevant PAI clinical scales (i.e., drug problems, alcohol problems, anxiety, depression, paranoia) and two of the PAI treatment scales (i.e., aggression, suicidal tendencies). To test this hypothesis, descriptive statistics were computed (i.e., frequencies) to examine the distribution of clinically significant T-scores for the PAI clinical scales and three treatment scales across groups with and without a history of offending (see Table 12;

page 79-80). Specifically, each of the PAI scales were re-coded into high (clinically significant = T-score ≥ 70) and low (below threshold = T-score < 70) features based on T-score cut-off criteria. With respect to those with a history of offending, the PAI scales with the five highest percentages of elevations ($T \geq 70$) include: Alcohol Problems (27.9%), Antisocial Features (25.6%), Borderline Features (20.9%), Drug Problems (18.6%), and Anxiety (18.6%). In addition, on the Antisocial Features scale, the subscale Antisocial Behaviours had a high percentage of elevations (41.9%). On the Borderline Features scale, the Negative Relationships subscale demonstrated a high percentage of elevations (20.9%). On the Anxiety scale, the Affective subscale had a high percentage of elevations (18.6%). On the Anxiety Related scale, the Traumatic Stress subscale demonstrated a high percentage of elevations (18.6%). Lastly, on the Paranoia scale, the Hypervigilance subscale had a high percentage of elevations (18.6%). On average, the group with a history of offending demonstrated clinical levels of BPD symptomatology and psychopathology more frequently than the group without history of offending demonstrating support for Hypothesis 3.

3.4 Association Between BPD Features and History of Abuse in the Group with a History of Offending

Hypothesis 4 stated that BPD features would be associated with an increased history of abuse (i.e., emotional, physical, sexual) in the group with a history of offending. To test this hypothesis, a chi-square analysis was conducted to examine the association between level of Borderline Features on the PAI- BOR (clinical level [T-score ≥ 70] versus below threshold [T-score < 70]) and abuse history (history of at least one type of abuse versus no history of any type of abuse). No statistically significant

association was observed between level of Borderline Features on the PAI-BOR and abuse history, $\chi^2(1) = 1.10, p = .295$. The results suggest similar abuse experience across those with high and low BPD features among those with a history of offending.

3.5 Association Between BPD Features and Criminal Offense Variables in the Group with a History of Offending

Hypothesis 5 stated that BPD features would be associated with a greater number of offenses in the group with a history of offending. To test this hypothesis, an independent sample t-test was conducted to examine differences between those with clinical (T-score ≥ 70) and below threshold [T-score < 70]) levels of BPD features and number of arrested/charged offenses. No statistically significant differences were observed for number of arrests/charges, $t(41) = 0.36, p = .723$. Further, no statistically significant differences were observed across related variables of age of first police contact, $t(41) = 0.57, p = .570$, and years since most recent offense, $t(41) = 0.75, p = .458$ (see Table 13).

Chi-square analysis was also conducted to examine within-group differences among those with a history of offending in terms of types of offenses. Specifically types of offenses were compared based on high and low BPD features as measured by the PAI-BOR in the group with a history of offending. A total of 42 participants within the group with a history of offending reported the types of offenses they had been arrested or charged for. One participant within the history of offending group reported having spent time in a correctional facility but did not indicate the type of offense committed. Based on the 42 participants' reports, a variable was created for the *most serious offense* committed by each participant as some participants reported multiple offenses. This

Table 13

The Association Between Offending Variables and BPD Features as Measured by the PAI-BOR

Offending variables	History of offending		<i>t</i>	<i>p</i>
	High BPD features ^a	Low BPD features ^b		
Age first police contact				
<i>M</i> (<i>SD</i>)	15.44 (1.67)	16.03 (2.92)	0.57	.570
Mean number of arrests				
<i>M</i> (<i>SD</i>)	1.89 (1.36)	2.18 (2.30)	0.36	.723
Years since most recent offense				
<i>M</i> (<i>SD</i>)	3.0 (2.38)	3.88 (2.82)	0.75	.458
	<i>n</i> (%) (<i>n</i> = 9)	<i>n</i> (%) (<i>n</i> = 33)	<i>χ</i> ² (df)	<i>p</i>
Most serious offense			4.268 (5)	.511
Status offense	-	7 (20.6)		
Violent offense	1 (11.1)	7 (20.6)		
Property offense	5 (55.6)	13 (38.2)		
Traffic offense	1 (11.1)	2 (5.9)		
Public order	2 (22.2)	3 (8.8)		
Liquor law violation	-	1 (2.9)		

Note. BPD = borderline personality disorder; PAI-BOR = Personality Assessment Inventory Borderline Features Scale; high BPD features = T-score > 70 on the PAI-BOR; Low BPD Features = T-score < 70 on the PAI-BOR. Low BPD features does not mean there are no BPD features present rather the features did not reach clinical significance. Most serious offense refers to the most serious offense each individual with a history of offending were arrested or charged for. Status offense refers to drinking below the legal age limit and possession of alcohol under the legal age limit. Violent offense includes assault, sexual assault, impaired driving, and threats. Property offense included both offenses against rights of property and willful fraud and forbidden acts in respect of certain property (e.g., arson, armed robbery, theft, break and enter, drug trafficking, mischief). Traffic offense included driving with a suspended license, speeding, and other driving violations. Public Order included fighting in public and public disorder. Liquor Law violation included open alcohol within in a vehicle; status offenses were separated from this category.

^a*n* = 9. ^b*n* = 34.

variable was created by referencing the Criminal Code of Canada's divisions of offenses (i.e., summary offenses, indictable offenses). Chi-square analysis examined the association between high and low BPD features and types of offenses categorized based on the most serious offense committed by each individual (i.e., status offense, violent offense, property offense, traffic offense, public order, and liquor law violations) among the group with a history of offending. No statistically significant association between level of borderline features on the PAI-BOR (clinical level versus below threshold) and type of offense was observed, $\chi^2(5) = 4.27, p = .511$ (see Table 13).

3.6 Sex Differences in BPD Features in the Group with a History of Offending

Hypothesis 6 stated that sex differences would be found among the group with a history of offending; specifically, we expected to find significantly higher BPD features among females with a history of offending as compared to males with a history of offending as measured by the BEST subscales (i.e., affect, negative behaviours), and PAI-BOR scale and subscales. To test this hypothesis, a series of independent t-tests were conducted. There were statistically significant differences across sex for all measures of BPD features (i.e., PAI-BOR, BOR-A, BOR-I, BOR-N, BEST A, BEST B) with the exception of the BOR-S. See Table 14 for comparison of BPD features across sex. These results are consistent with the literature as females present with BPD features more frequently than males (APA, 2000).

3.7 Predictors of History of Offending

Hypothesis 7 stated that BPD features would be predictive of group membership. To test this hypothesis, it was important to select one measure of BPD features to use in subsequent analyses. In order to do so, Pearson correlations were computed across the

Table 14

BPD Features in the Group with a History of Offending as a Function of Sex

BPD features	History of offending		<i>t</i> (41)	<i>p</i>
	Male ^a	Female ^b		
PAI-BOR				
<i>M</i> (<i>SD</i>)	48.86 (5.15)	61.53 (10.61)	3.07	.004**
BOR-A				
<i>M</i> (<i>SD</i>)	44.57 (4.04)	57.31 (11.52)	5.19	.001***
BOR-I				
<i>M</i> (<i>SD</i>)	50.86 (5.93)	61.11 (10.45)	2.50	.016*
BOR-N				
<i>M</i> (<i>SD</i>)	50.43 (8.68)	62.22 (12.57)	2.53	.015*
BOR-S				
<i>M</i> (<i>SD</i>)	50.43 (8.75)	55.58 (12.57)	1.03	.308
BEST A				
<i>M</i> (<i>SD</i>)	11.71 (2.29)	16.50 (5.58)	3.77	.001**
BEST B				
<i>M</i> (<i>SD</i>)	4.71 (0.76)	6.56 (2.61)	3.54	.001**

Note. PAI-BOR = Personality Assessment Inventory Borderline Scale; BOR-A = Affective Instability Subscale of the PAI-BOR; BOR-I = Identity Problems Subscale of the PAI-BOR; BOR-N = Negative Relationships Subscale of the PAI-BOR; BOR-S = Self-Harm Subscale of the PAI-BOR; BEST A = Borderline Evaluation of Severity Over Time Subscale A Negative Thoughts and Feelings; Best B = Borderline Evaluation of Severity Over Time Subscale B Negative Behaviours; BSS = Beck Scale for Suicide Ideation; BIS-II = Barratt Impulsiveness Scale – Version 11; CES-D = Center for Epidemiological Studies Depression Scale; STAI-S = State Trait Anxiety Inventory for Adults Situational Anxiety Scale; STAI-T = State Trait Anxiety Inventory for Adults Trait Scale; PAI-AGG = Personality Assessment Inventory Aggression Scale; PAI-SUI = Personality Assessment Inventory Suicidal Ideation Scale.

p* < .05. ** *p* < .01. **p* < .001.

^a*n* = 7. ^b*n* = 36.

following BPD specific scales and subscales: PAI-BOR, BOR-A, BOR-I, BOR-N, BOR-S, BEST A, BEST B. Statistically significant associations were observed across all measures (see Table 15). Given the statistically significant correlations across BPD specific measures and the wide use of the PAI-BOR in existing research, PAI-BOR was selected as the variable to be used in subsequent analyses (i.e., as a predictor in regression analyses). Further, Pearson correlations were computed to assess association between PAI-BOR across measures of associated BPD symptomatology and psychopathology (i.e., BSS, BIS-11, CES-D, STAI-S, STAI-T, and PAI scales). Lastly, Pearson correlations were computed to assess the association between PAI-BOR and other associated PAI scales. Statistically significant associations were observed between all measures at the $p < .01$ level with the exception of the one correlation between PAI-ALC and PAI-SUI which was significant at the $p < .05$ level (see Tables 16 and 17).

Binary logistic regression (hierarchical method) was conducted to determine if BPD features could predict group membership (i.e., history of offending versus no history of offending). PAI-BOR was selected as the BPD features measure to be used as the predictor in the following regression analysis. The first step was a test of a model with PAI-BOR as the one predictor variable. The model was statistically significant, $\chi^2(1, N = 187) = 7.54, p = .006$, indicating that PAI-BOR reliably distinguishes group membership. The variance in group membership accounted for is small, however, with Nagelkerke $R^2 = .06$. The percentage of correctly classified cases overall decreased from 77% to 75.9%. Although the regression equation correctly classified 98.6% of the participants without a history of offending, 0% of the participants with a history of offending were correctly classified. See Table 18 for regression coefficients, Wald statistics, odds ratios,

Table 15

Summary of Correlations Between Measures of BPD Features Across the Entire Sample

Variable	PAI-BOR	BOR-A	BOR-I	BOR-N	BOR-S	BEST A	BEST B
PAI-BOR	-----						
BOR-A	.83**	-----					
BOR-I	.85**	.65**	-----				
BOR-N	.81**	.55**	.60**	-----			
BOR-S	.62**	.33**	.41**	.36**	-----		
BEST A	.76**	.70**	.70**	.59**	.35**	-----	
BEST B	.57**	.49**	.45*	.43**	.40**	.73**	-----

Note. $N=187$. PAI-BOR = Personality Assessment Inventory Borderline Features Scale; BOR-A = Affective Instability Subscale of the PAI-BOR; BOR-I = Identity Problems Subscale of the PAI-BOR; BOR-N = Negative Relationships Subscale of the PAI-BOR; BOR-S = Self-Harm Subscale of the PAI-BOR; BEST A = Borderline Evaluation of Severity Over Time Subscale A Negative Thoughts and Feelings; BEST B = Borderline Evaluation of Severity Over Time Subscale B Negative Behaviours;

** $p < .01$

Table 16

Summary of Correlations Between PAI-BOR and Associated Psychopathology Across the Entire Sample

Variable	PAI-BOR	BSS	BIS-11	CES-D	STAI-S	STAI-T
PAI-BOR	-----					
BSS	.32**	-----				
BIS-11	.59**	.20**	-----			
CES-D	.76**	.40**	.41**	-----		
STAI-S	.65**	.32**	.38**	.81**	-----	
STAI-T	.75**	.34**	.45**	.87**	.84**	-----

Note. $N=187$. PAI-BOR = Personality Assessment Inventory Borderline Features Scale; BSS = Beck Scale for Suicide Ideation; BIS-11 = Barratt Impulsiveness Scale - Version 11; CES-D = Center for Epidemiological Studies Depression Scale; STAI-S = State Trait Anxiety Inventory for Adults State Anxiety Scale; STAI-T = State Trait Anxiety Inventory for Adults Trait Scale.

** $p < .01$.

Table 17

Summary of Correlations Between PAI-BOR and Other Associated PAI Scales Across the Entire Sample

Variable	PAI-BOR	PAI-ALC	PAI-DRG	PAI-ANX	PAI-ARD	PAI-DEP	PAI-PAR	PAI-AGG	PAI-SUI
PAI-BOR	-----								
PAI-ALC	.48*	-----							
PAI-DRG	.49**	.50**	-----						
PAI-ANX	.69**	.33**	.37**	-----					
PAI-ARD	.64**	.30**	.31**	.68**	-----				
PAI-DEP	.77**	.29**	.39**	.70**	.61**	-----			
PAI-PAR	.72**	.36**	.37**	.55**	.59**	.61**	-----		
PAI-AGG	.62**	.43**	.42**	.41**	.32**	.44**	.46**	-----	
PAI-SUI	.53**	.18*	.45**	.40**	.36**	.64**	.37**	.34**	-----

Note. $N=187$. PAI = Personality Assessment Inventory; PAI-BOR = Personality Assessment Inventory Borderline Features Scale; PAI-ALC = Personality Assessment Inventory Alcohol Problems Scale; PAI-DRG = Personality Assessment Inventory Drug Problems Scale; PAI-ANX = Personality Assessment Inventory Anxiety Scale; PAI-ARD = Personality Assessment Inventory Anxiety-Related Disorders Scale; PAI-DEP = Personality Assessment Inventory Depression Scale; PAI-PAR = Personality Assessment Inventory Paranoia Scale; PAI-AGG = Personality Assessment Inventory Aggression Scale; PAI-SUI = Personality Assessment Inventory Suicidal Ideation Scale.

* $p < .05$. ** $p < .01$.

Table 18

Predictors of Self-Reported History of Offending

Variable	β (<i>SE</i>)	Wald Test	<i>p</i>	Odds Ratio	95% CI	
					LL	UL
Model 1						
Constant	-3.58 (0.90)	15.66***	.001	0.03		
PAI-BOR	0.04 (0.02)	7.44**	.006	1.04	1.01	1.08
Model 2						
Constant	-5.21 (1.29)	16.23***	.001	0.01		
PAI-BOR	-0.02 (0.02)	1.13	.288	0.98	0.93	1.02
Abuse history	0.98 (0.41)	5.65*	.017	2.66	1.19	5.96
PAI-DRG	0.05 (0.02)	5.82*	.016	1.05	1.01	1.10
PAI-ALC	0.06 (0.02)	9.92**	.002	1.06	1.02	1.10

Note. Model 1, $R^2 = .04$ (Cox & Snell), .06 (Nagelkerke). Model 1, $\chi^2(1) = 7.54$, $p = .006$. Model 2, $R^2 = .17$ (Cox & Snell), .26 (Nagelkerke). Model 2, $\chi^2(4) = 35.80$, $p < .001$. $\Delta\chi^2(3) = 28.25$, $p < .001$. PAI-BOR = Personality Assessment Inventory Borderline Features Scale; abuse history = the participants with a history of some type of abuse (e.g., emotional, physical, sexual abuse); PAI-DRG = Personality Assessment Inventory Drug Problems Scale; PAI-ALC = Personality Assessment Inventory Alcohol Problems Scale. * $p < .05$. ** $p < .01$. *** $p < .001$.

and 95% confidence intervals for odds ratios for PAI-BOR as the predictor of group membership. The odds ratio suggests that participants are 1.04 times more likely to have a history of offending if they have BPD features. However, the odds ratio of 1.04 with a base rate of 1.0 demonstrates minimal change in the likelihood of having a history of offending on the basis of a one unit change in BPD features.

The existing literature identifies abuse history (e.g., Fagan, 2005; Kakar, 1996; Maxfield & Widom, 1996; Smith & Thornberry, 1995) and substance abuse (i.e., drug and alcohol problems; Bennett, Holloway, & Farrington, 2008; BJS, 1998) as risk factors associated with offending. The second step of the hierarchical logistic regression was a test of the full model which included four predictors of group membership: BPD features (PAI-BOR), abuse history (i.e., history of some type of abuse versus no history of abuse), drug problems (PAI-DRG), and alcohol problems (PAI-ALC). The second step was statistically significant, $\chi^2(4, N = 187) = 35.80, p < .001$, indicating that the predictors reliably distinguish between those with and without a history of offending (see Table 18). The variance in group membership accounted for is moderate, with Nagelkerke $R^2 = .26$. The increment in chi-square statistics after abuse history, drug problems, and alcohol problems were added in the second step of the model was statistically significant, $\Delta\chi^2(3) = 28.25, p < .001$, demonstrating an improvement in the model. The percentage of correctly classified cases overall improved to 80.2%. Specifically, the regression equation correctly classified 94.4% of the group without a history of offending and 32.6% of the group with a history of offending. Although the model improved when abuse history, PAI-DRG, and PAI-ALC were included with PAI-BOR as predictors of group membership, PAI-BOR was no longer a statistically significant predictor of group

membership. The odds ratios suggests that participants are 2.66 times more likely to have a history of offending if they have a history of abuse, 1.05 times more likely to have a history of offending if they have drug problems, and 1.06 times more likely if they have alcohol problems. In contrast, the odds ratio for PAI-BOR as a predictor in the full model suggests that participants are slightly less likely ($OR = .98$) to have a history of offending if they have BPD features. Based on the hierarchical logistic regression it appears the relationship between BPD features and group membership may be mediated by history of abuse, drug problems, and/or alcohol problems. In order to determine whether the relationship between BPD features (i.e., PAI-BOR) and history of offending is mediated by the aforementioned variables, it is necessary to complete a mediation analysis.

A mediator is defined as a variable that accounts for the relationship between the predictor variable and the outcome variable (Baron & Kenny, 1986). The Baron and Kenny (1986) method is the most common and frequently cited procedure for mediation analysis in psychological research (Preacher & Hayes, 2004). Despite its broad usage, the procedures outlined by Baron and Kenny (1986) fail to include formal testing of significance of the indirect effect in the outlined criteria for mediation analysis. Preacher and Hayes (2004) outline the importance of formal testing of statistical significance for indirect effects to avoid Type I and Type II error. Formal testing of statistical significance for indirect effects is a more direct method of hypothesis testing than the method outlined by Baron and Kenny (1986) leading to a increase in statistical power. Research suggests that the Baron and Kenny (1986) method demonstrates low statistical power in many situations (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002).

Preacher and Hayes (2004) developed a SPSS macro that formally tests the statistical significance of the indirect effect both parametrically (Sobel test) and nonparametrically (bootstrapping procedure) while concurrently providing the output required to assess mediation with the Baron and Kenny (1986) criteria.

Utilizing Baron and Kenny's criteria, the results indicated that that the total effect of BPD Features, as measured by the PAI-BOR ($B = .04$) on history of offending (with or without a history of offending) was statistically significant ($p = .01$). This finding suggested that there is a greater elevation of BPD features among those with a history of offending than those without a history of offending (see Figure 1). The effect of BPD features ($B = .01$) on history of abuse (history of at least one type of abuse versus no history of any type of abuse) (i.e., mediating variable) was also statistically significant ($p < .001$) (see Figure 2). Specifically, there is a greater elevation of BPD features among those with a history of abuse than those without a history of abuse. The effect of abuse history ($B = .90$) on history of offending, when controlling for BPD features, was also statistically significant ($p < .05$). The latter suggested that participants with a history of abuse were more likely to have a history of offending than those without a history of abuse while controlling for BPD features. Lastly, the direct effect of BPD features ($B = .03$) on history of offending, when controlling for history of abuse, was not statistically different from zero ($p = .052$). The results demonstrate that after controlling for history of abuse, there is no statistically significant relationship between BPD features and history of offending, albeit there was a trend towards significance. Baron and Kenny's criteria for mediation were established. Our results suggest that history of abuse mediated the effect of BPD features on history of offending. There was also the potential

Figure 1. Direct effect of borderline features on history of offending

$^{**}p < .01$.

Figure 2. Borderline features affecting history of offending indirectly through abuse history.

* $p < .05$. *** $p < .001$.

for BPD features to be the mediator in the relationship between abuse history and history of offending as abuse history has been observed as a potential etiological correlate in the development of BPD features in the extant literature. Given the potential alternate relationship (BPD features as the mediating variable), mediation analysis was completed examining BPD features as a potential mediator in the relationship between abuse history and offending. The results did not support BPD features as a mediator in the relationship between abuse history and offending.

Sobel's test (Sobel, 1982) is a parametric approach that formally measures the indirect effect through examination of the total effect. Specifically, Sobel's test was also used to assess whether or not the difference between the total effect and the direct effect (addition of the mediator) of BPD features on history of offending is statistically significant. Results of the Sobel test were consistent with the Baron and Kenny approach suggesting that abuse history mediates the relationship between BPD features and history of offending, $z = 2.06, p < .05$. Although Sobel's test is superior to the Baron and Kenny (1986) method in terms of statistical power (see MacKinnon et al., 2002), the Sobel test is problematic in the sense that it relies on a large sample size and assumes that the distribution of the indirect effect follows a normal distribution under the null hypothesis. It has been argued that the bootstrapping method is a more appropriate approach to formally measuring the size of the indirect effect as it does not assume that the distribution of the indirect effect is normal, therefore avoiding problems regarding power that are often introduced by asymmetries and other forms of non-normality in the sampling distribution of the indirect effect (Shrout & Bolger, 2002). Bootstrapping is a nonparametric approach to effect size estimation and hypothesis testing (Preacher &

Hayes, 2004). The bootstrapped estimate of the true indirect effect was estimated to lie between .0246 and .0015 with 95 % confidence. Because zero is not in the 95% confidence interval, it can be concluded that the indirect effect is different from zero at $p < .05$ (two-tailed). Overall, the results of the three mediation analyses provide converging evidence that the association between borderline features and history of offending was fully mediated by history of abuse.

Although history of abuse significantly mediated the relationship between BPD features and history of offending, logistic regression suggested that drug problems and alcohol problems may also be statistically significant mediators in the relationship. Utilizing Baron and Kenny's criteria, the results indicated that that the total effect of BPD Features, as measured by the PAI-BOR ($B = .04$) on history of offending (with or without a history of offending) was statistically significant from zero ($p = .01$). This finding suggested that there is a greater elevation of BPD features among those with a history of offending than those without a history of offending (see Figure 1). The effect of BPD features ($B = .46$) on drug problems (PAI-DRG; mediating variable) was also statistically significant ($p < .001$) (see Figure 3). Specifically, there is a greater elevation of BPD features among those with higher levels of drug problems than those with lower levels or no drug problems. The effect of drug problems ($B = .06$) on history of offending, when controlling for BPD features, was also statistically significant ($p < .01$). The latter result suggested that participants with a high level of drug problems were more likely to have a history of offending while controlling for BPD features. Lastly, the direct effect of BPD features ($B = .01$) on history of offending, when controlling for drug problems, was not statistically different ($p = .52$). The results demonstrate that after controlling for drug

Figure 3. Borderline features affecting history of offending indirectly through drug problems.

$^{***}p < .001$.

problems, there is no relationship between BPD features and history of offending. Given that all of Baron and Kenny's criteria for mediation were established, the present findings suggest that drug problems mediated the effect of BPD features on history of offending.

Results of the Sobel test were consistent with the Baron and Kenny approach and suggested that the relationship between BPD features and history of offending is mediated by drug problems, $z = 2.94, p < .01$. Lastly, the bootstrapped estimate of the true indirect effect was estimated to lie between .0560 and .0103 with 95 % confidence. Because zero is not in the 95% confidence interval, it can be concluded that the indirect effect is different from zero at $p < .05$ (two-tailed). Overall, the results of the three mediation analyses provide converging evidence that the relationship between borderline features and history of offending was mediated by drug problems.

Based on results from the logistic regression, alcohol problems was tested as a mediator in the relationship between BPD features and history of offending. Once more, utilizing Baron and Kenny's criteria, the results indicated that the total effect of BPD Features, as measured by the PAI-BOR ($B = .04$) on history of offending (with or without a history of offending) was statistically significant ($p < .01$). This finding suggested that there is a greater elevation of BPD features among those with a history of offending than those without a history of offending (see Figure 1). The effect of BPD features ($B = .50$) on alcohol problems (PAI-ALC; mediating variable) was also statistically significant ($p < .001$) (see Figure 4). Specifically, there is a greater elevation of BPD features among those with higher levels of alcohol problems than those with lower levels or no alcohol problems. The effect of alcohol problems ($B = .07$) on history of offending, when controlling for BPD features, was also statistically significant ($p < .001$). The latter

Figure 4. Borderline features affecting history of offending indirectly through alcohol problems.

*** $p < .001$.

finding suggested that participants with a high level of alcohol problems were more likely to have a history of offending, while controlling for BPD features. Lastly, the direct effect of BPD features ($B = .01$) on history of offending, when controlling for alcohol problems, was not statistically significant ($p = .72$). The results demonstrate that after controlling for alcohol problems, there is no relationship between BPD features and history of offending. Given that all of Baron and Kenny's criteria for mediation were established, the present findings suggested that alcohol problems mediated the effect of BPD features on history of offending.

Results of the Sobel test were consistent with the Baron and Kenny strategy and suggesting that the relationship between BPD features and history of offending is mediated by alcohol problems, $z = 3.43$; $p < .001$. Lastly, the bootstrapped estimate of the true indirect effect was estimated to lie between .0620 and -.0170 with 95 % confidence. Because zero is not in the 95% confidence interval, it can be concluded that the indirect effect is different from zero at $p < .05$ (two-tailed). Overall, the results of the three mediation analyses provide converging evidence that the relationship between borderline features and history of offending was fully mediated by alcohol problems. In sum, mediation analysis suggests that abuse history, drug problems, and alcohol problems are all statistically significant mediators in the relationship between BPD features and history of offending.

4.0 Discussion

The purposes of the current study were fourfold: (1) assess for BPD features dimensionally using multiple valid measures among a heterogeneous male and female emerging adult sample with and without a history of offending; (2) compare BPD features and associated psychopathology across both emerging adults with and without a history of offending; (3) explore the relationship between BPD features, abuse history, type/number of offenses, and demographic information in the group with an offender history; and (4) examine potential predictors (i.e., BPD features) of offender status. In order to address the above, a demographic form and multiple measures designed to assess for BPD features, associated BPD symptomatology and psychopathology were administered to a sample of 187 emerging adults (43 with a history of offending and 144 without a history of offending). Group membership (i.e., group with a history of offending versus group without a history of offending) and criminal variables were established and evaluated based on a self-report offending questionnaire. Additional foci of the study included the evaluation of criminal variables and abuse history in relation to BPD features within the group with a history of offending. Lastly, potential predictors of offender status were examined in detail. Specific study findings and association with existing research are discussed in accordance with the order in which the purposes were previously itemized. Future directions and clinical implications will follow.

4.1 Prevalence of Clinical BPD Features

Overall, 11.8% of the full sample demonstrated clinical BPD features. The frequency of BPD features among undergraduate emerging adults (i.e., 11.8%) is similar to that found by Trull (1995). Trull examined the prevalence rate of BPD features among

a non-clinical college sample ($N = 1697$). Consistent with the current study, the PAI-BOR (Morey, 1991) was utilized as the estimate of BPD features. Approximately 15% of Trull's sample demonstrated clinical BPD features on the PAI-BOR. BPD prevalence rates identified by the current study and Trull are higher than rates of BPD in the general population (i.e., 2%-6%; APA, 2000; Grant et al., 2008), albeit the general population base rate focuses on a diagnosis rather than the presence of BPD features within a dimensional framework. Use of a dimensional framework is likely to lead to higher estimates of BPD as such a framework does not rely on the diagnostic criteria threshold outlined in the DSM-IV-TR (APA, 2000; 5/9 BPD symptoms present) to provide a BPD diagnosis. Rather, a dimensional framework focuses on the level or amount of features present.

A base rate of BPD features in an emerging adult population with a history of offending was established. Specifically, 20.9% of the emerging adults with a history of offending demonstrated clinical BPD features ($T \geq 70$) on the PAI-BOR Scale as compared to 9% of emerging adults without a history of offending. The current findings suggest that clinical levels of BPD features are more frequent (i.e., 20.9%) among emerging adults with a history of offending than those without, despite utilizing a non-incarcerated sample. Furthermore, 20.9% is similar to rates of self-reported clinical BPD features (i.e., 17%) demonstrated by Taylor et al. (2009) among incarcerated male adolescent/emerging adult offenders. The current study demonstrated a slightly higher prevalence rate of BPD and this finding may be the result of having a predominantly female sample (i.e., BPD features are more prevalent in females), and the inclusion of a slightly older age group (i.e., features become more pronounced). In comparison to

additional established base rates of BPD features/diagnosis among adolescent/emerging adult offenders (i.e., approximately 17% to 37%; Eppright et al., 1993; McManus et al., 1984; Taylor et al., 2009) and emerging adult/adult offenders (i.e., approximately 13% to 57%; Black et al., 2007; Blackburn & Coid, 1999; Davison et al., 2001; Dixon et al., 2008; Grella et al., 2008; Jordan et al., 1996; Logan & Blackburn, 2009; Stuart et al., 2006; Timmerman & Emmelkamp, 2005; Trestman et al., 2007; Warren et al., 2002; Zlotnick, 1999; Zlotnick et al., 2008) the base rate in the current study fell in the lower end of each of the established ranges, albeit the aforementioned ranges were found in incarcerated samples. The latter may be the result of utilizing a non-incarcerated group with a history of offending. Through examination of the BPD prevalence rate observed in the current study among emerging adults with a history of offending in comparison to existing studies on incarcerated samples it appears that emerging adults who are incarcerated may have more elevated BPD features than those with a history of offending. Further research would be required to verify this proposition.

It has been estimated that BPD comprises 10% to 25% of all inpatient psychiatric admissions (Bender et al., 2001; Springer & Silk, 1996; Widiger & Weissman, 1991) and 10 to 20% of outpatients (Korzekwa et al., 2008; Widiger & Weissman, 1991; Zimmerman & Mattia, 1999). The frequency of clinical BPD features (i.e., 20.9%) among emerging adults with a history of offending depicted in the current study is consistent with the prevalence rates of a BPD diagnosis in inpatient and outpatient clinical samples. In the current study BPD feature prevalence rates may have surpassed the estimates of BPD in clinical samples if a larger sample size had been obtained. Due to the difficulties in treating BPD, the severe interpersonal problems associated with the

disorder, and the extensive mental health resources utilized by this population, it is important to understand the prevalence of BPD features among those with a history of offending in both non-incarcerated (e.g., probation) and incarcerated settings. This knowledge may aid in decreasing recidivism rates and institutional infractions if appropriate prevention and intervention programs can be developed and implemented.

Multiple measures assessing BPD features (i.e., PAI and BEST) were utilized to assist in determining whether BPD features are increasingly elevated among emerging adults with a history of offending as compared to those without (e.g., BEST). The inclusion of multiple measures is an important strength of the current study relative to prior research. A total score on the BEST, however, is not included in this study as the total score requires scoring the BEST Subscale C which inquires about treatment adherence. Since a non-clinical sample was utilized for this study, BEST Subscale C was not included as many of the participants had not experienced any form of psychological/psychiatric treatment. As a result the BEST total score was not rendered which typically divides participants into those that are experiencing mild, moderate, or severe BPD symptoms. In place of the BEST total score, BEST Subscale A and B were the foci, both of which include items inquiring about the nine BPD symptom criteria outlined in the DSM-IV-TR (APA, 2000). This method allowed for comparisons on the presence of BPD symptoms but does not allow for an estimated prevalence rate of those with moderate to severe BPD features overall.

For the BEST subscales A and B base rates were established by identifying the extent to which each symptom caused distress across the two groups. Notable base rates were identified for the following BPD symptoms in terms of causing extreme distress:

fears of abandonment (14% with offender history versus 6.3% without); and feelings of emptiness (7% with offender history vs. 2.1% without). Notable base rates were further identified for the following BPD symptoms in terms of causing severe distress: instability in interpersonal relationships (14% with an offender history versus 6.3% without); emotional dysregulation (9.3% with an offender history versus 2.8% without); impulsivity (11.6% with an offender history vs. 2.8% without); and inappropriate expressions of anger (7% with an offender history vs. 2.1% without). Base rates for the aforementioned symptoms were observably higher for the group with an offender history than the group without an offender history.

4.2 Demographic Information and Abuse History Across Groups

Significant differences were observed between emerging adults with and without a history of offending in terms of demographic information and abuse history. Specifically, emerging adults with a history of offending tended to be slightly older (20.95 years vs. 19.91 years). Despite the difference in age, emerging adults with a history of offending were more likely than those without to have a current household income of less than \$30,000 (i.e., low income). This is alarming when one considers that the mean family size in the group with an offender history is 3.81 ($SD = 1.65$) and that a household income of less than \$30,000 among a four person family is below the poverty line in Saskatchewan (Canadian Council on Social Development, 2002). This result is consistent with the literature that has consistently demonstrated a link between low income families and crime (Kent, 2009). Specifically, the National Longitudinal Survey of Youth (Kent, 2009) demonstrated that 20% of adolescents from low income families are charged with an adult crime by the age of 24 (i.e., emerging adulthood) as compared

to 16% of adolescents from middle income and 12% of adolescents from high income families. In addition, 29% of adolescents from low income families failed to complete high school, and only 10% of emerging adults from low income families continued on to graduate from a four-year college, which may perpetuate a low income status for subsequent generations. Although the participants with a history of offending in the current study are undergraduates, they may not complete their program and therefore this trend cannot be disregarded. The results of the current study support the existing literature suggesting that low income may be a risk factor for criminal activity.

In addition, history of abuse varied between the two groups. In particular, emerging adults with a history of offending were more likely to have experienced some type of abuse (i.e., emotional, physical, sexual) than those without. In terms of base rates of self-reported types of abuse, emotional abuse was the most frequently reported type of abuse among emerging adults with an offender history (51.2%), followed by sexual abuse (20.9%), and physical abuse (18.6%). Approximately half of the group with an offender history reported experiencing some type of abuse compared to 1/4 of the group without an offender history. Similar rates were reported in Dietrich (2003) as over half of their emerging adult/adult sample of serious incarcerated offenders reported a history of some type of maltreatment. The cycle of violence theory proposes that victims of child maltreatment are at high risk of engaging in crime; the literature has demonstrated some support for this theory among adolescents/emerging adults and emerging adults/adults (e.g., Kakar, 1996; Smith & Thornberry, 1995; Maxfield & Widom, 1996).

Of note was the observed difference in the age the abuse occurred across groups; emerging adults with a history of offending experienced abuse at an older age than

emerging adults without a history of offending (13.71 years vs. 10.26 years). The results from the current study appear to suggest that abuse during adolescence may have a more significant impact on individuals in terms of the potential for criminal behaviour than abuse experienced at a younger age. Potential factors involved in this varied experience may include level of cognitive functioning; as adolescents may have an increased awareness and understanding of the unjust abuse they are experiencing and therefore may resort to engaging in different coping strategies or behaviours, albeit possibly negative (i.e., criminal behaviour). However, these findings may be a function of our sample size. Subsequent research with a larger sample size would be required to explore these speculations further.

4.3 Comparison of BPD Features Across Groups

The current study aimed to improve on the methodological limitations of past research on BPD and adolescent/emerging adult offenders (e.g., Taylor et al., 2009) by assessing for BPD features, associated BPD symptomatology, and psychopathology using multiple valid measures among a heterogeneous male and female emerging adult sample with and without a history of offending. Hypothesis 1 stated that BPD features would be significantly more elevated in the group with a history of offending than the group without. In sum, the results support this hypothesis. Two validated measures (PAI; Morey, 1991; BEST; Pfohl & Blum, 1997) that assess for BPD features specifically were utilized to test the aforementioned hypothesis, demonstrating consistent results, lending further support to this hypothesis. BPD features, specifically affect instability, negative relationships, and self-harm were more prominent in the group with a history of offending than the group without as measured by the PAI. Further, thoughts and feelings

characteristic of BPD (i.e., feelings of emptiness, intense fears of abandonment, emotional dysregulation), and negative behaviours characteristic of BPD (i.e., self-harm, impulsivity, inappropriate expressions of anger, paranoia, instability in interpersonal relationships) were more pronounced in the group with a history of offending than the group without as measured by the BEST.

One specific BPD feature was similar between emerging adults with and without a history of offending. Specifically, identity problems as measured by the Identity Problems subscale on the PAI Borderline Features scale, was not significantly different between groups. This finding may be a consequence of a small sample for the group with a history of offending. Alternatively, identity problems may be a feature of BPD that is less pronounced among emerging adults with a history of offending as compared to those without. Emerging adulthood has been described as a period of time in the life span where identity exploration and confusion is common (Arnett, 2007). Therefore, the lack of significant differences observed between emerging adults with and without a history of offending in terms of identity problems may be a function of the time period focused on within the current research. Specifically, we may expect to find similar rates of identity problems among emerging adults in general (i.e., with or without a history of offending). Differences in regards to this specific symptom may be more prominent among individuals with a history of offending in the adulthood period of the lifespan. To date, there is limited research specifically examining identity problems as a feature of BPD among adults with a history of offending. In one existing study Leichsenring, Kunst, and Hoyer (2003) examined the relationship between borderline personality organization (i.e., identity diffusion, primitive defense mechanisms, and reality testing) and antisocial

features, neuroticism, and interpersonal problems among a sample of incarcerated violent adult offenders (N = 91; Mean age = 34.90). Leichsengring et al. demonstrated a significant association across all variables of interest, suggesting that identity problems were experienced by incarcerated adults. Further research to delineate this relationship further is warranted.

This investigation is the first to examine BPD features, utilizing BPD specific measures, in a sample of emerging adults with an offender history with the inclusion of a comparison group (i.e., emerging adults without a history of offending). Therefore, these findings extend the adolescent/emerging adult offender and emerging adult/adult offender literature beyond estimated prevalence rates to demonstrate that individuals with a history of offending demonstrate more prominent BPD features than individuals without a history of offending. The inclusion of a comparison group facilitated the extension of this avenue of research. In particular, estimated base rates are limited in terms of generalizability across studies due to the inclusion of different measures, varied sample characteristics (e.g., incarcerated, newly incarcerated, history of offending, violent offenders), and different methods of assessment (i.e., dimensional versus diagnostic). Direct comparisons between samples allow us to make stronger conclusions about the association between BPD features and offender status. In turn, findings from such research are able to highlight areas of focus for the development and implementation of tailored assessment protocols and prevention, intervention, relapse prevention programs for incarcerated and non-incarcerated (i.e., probation) individuals.

4.4 Comparison of Associated BPD Symptomatology and Psychopathology Across Groups

Hypothesis 2 stated that specific BPD symptomatology and associated psychopathology would be significantly more elevated in the group with a history of offending than in the group without as measured by the BIS-11 (i.e., impulsivity), BSS (suicidal ideation), CES-D (i.e., depression), STAI (i.e., state and trait anxiety), remaining PAI clinical scales and subscales, and specific PAI treatment scales. The results of the current investigation demonstrate mixed support for Hypothesis 2. Specifically, participants with a history of offending had significantly higher levels of impulsivity than participants without a history of offending. Elevated levels of impulsivity among those with a history of offending is consistent with the literature on incarcerated offenders (Krischer et al., 2007; Wilson et al., 2001) and those with a history of offending (Langhinrichsen-Rohling et al., 2004; Pfefferbaum & Wood, 1994). In the current study, higher levels of the following aspects of impulsivity (as measured by the BIS-11) were experienced by the group with an offender history: self-control (e.g., difficulties with planning and thinking carefully), cognitive complexity (e.g., does not enjoy challenging mental tasks), motor impulsiveness (e.g., acting out at the spur of the moment and demonstrating inconsistent life-style), and nonplanning impulsiveness (e.g., difficulties with planning and thinking carefully, does not enjoy challenging mental tasks). These findings suggest that impulsivity, a specific BPD feature, may play a significant role in offending. The latter is consistent with the General Theory of Crime (GTC; Gottfredson and Hirschi, 1990) that proposes that poor self-control is the primary etiological factor in the development of criminal behaviour. However, the primary criticism of the GTC is that it is overly simplistic (i.e., other factors contribute to the likelihood of offending beyond poor self-control). Findings from the current study supported this criticism in

that additional risk factors (e.g., abuse history, low income, emotional dysregulation, self harm) were also associated with offending history.

Also, in support of Hypothesis 2, the group with a history of offending demonstrated higher elevations of state anxiety (i.e., situational) than those without a history of offending. The findings suggest that state anxiety is more prominent among individuals with a history of offending than those without. Anxiety disorders commonly co-occur among individuals with BPD (Zanarini et al., 2004; Zimmerman & Mattia, 1999). In addition, the rates of anxiety among emerging adult/adult offenders is high (23.9% to 43.6%; i.e., Grella et al., 2008; Trestman et al., 2007). The aforementioned literature did not focus on state and trait anxiety. The current study adds to the current literature in this regard as these specific forms of anxiety, as opposed to a specific anxiety disorder were examined. The current study demonstrates a specific form of anxiety that may be more prominent in individuals with a history of offending. These findings may be associated with the elevations in impulsivity observed in the group with a history of offending. Individuals with a history of offending may experience elevated state anxiety and, given co-existing poor self-control, may impulsively engage in unhelpful coping strategies or behaviours to alleviate the unpleasant feeling of anxiety (e.g., criminal behaviours).

Findings from the current study suggest that individuals with a history of offending may have increased difficulties with anxiety as a response to a situation as opposed to anxiety as a general personality characteristic. This appears consistent with the proposed, new criteria outlined for BPD in the DSM-V (i.e., anxiousness; APA, 2010). Anxiousness is described as intense feelings of nervousness, tenseness, or panic,

often in reaction to interpersonal stresses. Interpersonal stresses are very situation specific, therefore it is understandable that individuals with heightened BPD features (characterized by frequent interpersonal difficulties) may display a higher level of state anxiety. The aforementioned result has important clinical implications as it has the potential to inform assessment and intervention. Future research is required to further examine the various forms of anxiety experienced by offenders and the impact it has on their criminal behaviour.

Further, comparisons between groups on the remaining PAI clinical scales and subscales, and specific treatment scales demonstrated higher levels of paranoia (persecution and resentment), drug problems, alcohol problems, aggression (aggressive attitude, verbal aggression, physical aggression), posttraumatic stress (i.e., anxiety related), and physiological depressive symptoms, in terms of associated BPD symptomatology and psychopathology. The current findings are consistent with the offender literature, as paranoia (Krischer et al., 2007), substance problems (Bennett et al., 2008; BJS, 2006a; BJS, 2006b; Gunter et al., 2008; BJS, 1998; Peters et al., 1998; Stewart & Trupin, 2000), and inappropriate anger/aggression (Plattner et al., 2007; Wilson et al., 2001) have been observed among offenders.

In terms of posttraumatic stress, PTSD is common among emerging adults/adult offenders (11.4% to 28.6%; Grella et al., 2008; Trestman et al., 2007). The current study assessed for the presence of PTSD via the Traumatic Stress subscale of the PAI Anxiety Related Disorders (PAI-ARD) scale. This scale assesses the physiological symptoms of PTSD. Traumatic stress was the only anxiety related disorder subscale notably different between groups as measured by the PAI-ARD (versus PAI Obsessive-Compulsive and

Phobias Subscales). These findings suggest that the physical symptoms of PTSD are more pronounced among emerging adults with a history of offending than emerging adults without a history of offending. As mentioned above, posttraumatic stress is a common experience amongst offenders (e.g., Grella et al., 2008; Trestman et al., 2007) among the offender literature, and observed in the current sample. In addition PTSD co-occurs with BPD at high rates (35%; Zanarini et al., 2004). This controversy requires a brief discussion. To clarify, the greatest similarity between the two disorders relates to the presence of a trauma (e.g. abuse), which is required in order to be diagnosed with PTSD (APA, 2000). On the other hand, there is no such requirement for the diagnosis of BPD, albeit many patients with BPD present with histories of traumatic experiences. Recent arguments propose that individuals meeting criteria for BPD who have histories of trauma should be classified as having PTSD instead as it may be a more fitting diagnosis due to the presence of trauma (Fish, 2004; Herman, Perry, & Van der Kolk, 1989). Feminists have also critiqued the use of the BPD diagnostic label among those who have experienced childhood trauma (Becker, 2000; Fish, 2004, Shaw & Proctor, 2005). Fish (2004) refers to the diagnosis of BPD among previously abused women as a misdiagnosis, one that stigmatizes women by labeling them with a rather untreatable disorder (i.e., BPD) while more treatable posttraumatic conditions (e.g., PTSD) caused by trauma or situational stress go underdiagnosed in female populations. In sum, it is not surprising that traumatic stress was elevated among the sample with a history of offending, as this group also demonstrated elevations in BPD features, and a history of abuse. Despite the controversy, BPD remains its own diagnostic entity in the DSM-IV-

TR (APA, 2000), and will continue to be a listed personality disorder in the upcoming DSM-V (APA, 2010).

Additional differences between groups were identified when the remaining PAI clinical scales and specific treatment scales were examined. Emerging adults with a history of offending demonstrated increased elevations in regards to somatic complaints (i.e., conversion, somatization), antisocial features (i.e., antisocial behaviours), stress, and irritability (i.e., symptom of mania) than emerging adults without a history of offending. Elevations on antisocial features, specifically antisocial behaviours were expected among the group with a history of offending, as they have engaged in one or more ‘antisocial’ criminal behaviours. Elevations in stress among the group with a history of offending is understandable when one considers the presence of BPD features among this group. Individuals with BPD features tend to have poor coping skills and are likely to cope with stress in a less effective way than individuals without BPD features (Linehan, 1993) therefore exacerbating the stress experienced. The PAI Irritability subscale on the Mania Scale focuses on the presence of interpersonal difficulties resulting from an individual’s frustration with the inability or unwillingness of others to keep up with their plans, demands, or expectations (Morey, 1996). Although this symptom is classified under mania, it appears very similar to interpersonal instability often detected in individuals with high levels of BPD features or a BPD diagnosis. Interpersonal difficulties are likely present in the emerging adults group with a history of offending as these individuals have a tendency to act impulsively, and behave in antisocial ways. Lastly, elevations in somatic complaints in the group with a history of offending were observed, specifically in regards to conversion and somatization. Conversion symptoms refer to rare symptoms of

sensory or motor dysfunctions associated with conversion disorder. The Conversion subscale of the PAI Somatic Complaints scale can become elevated among chronic alcoholics who are beginning to suffer from neurological problems as a result of the alcohol abuse. Alcohol problems were elevated in the group with a history of offending so elevations on these two scales may be associated. Somatization refers to frequent experience of various common physical symptoms and complaints of ill health and fatigue (e.g., headaches, back problems, pain; Morey, 1996). Increased levels of somatization is noteworthy, particularly when one considers that the Physiological subscale on the PAI Depression scale was also elevated. Recent research has revealed a relationship between BPD features/diagnosis and perceptions of pain among chronic pain patients (Gooding, 2011). The prevalence of BPD in chronic pain populations is reported to range between 1-17% (Conrad et al., 2007; Fishbain, Goldberg, Meagher, Steele, & Rosomoff, 1986; Gatchel, Garofalo, Ellis, & Holt, 1996; Gooding, 2011; Kinney et al., 1993; Large, 1986; Polatin, Kinney, Gatchel, Lillo, & Mayer, 1993; Reich, Tupin & Abramowitz, 1983). Gooding (2011) demonstrated that BPD was associated with greater perceptions of pain intensity and interference of pain on daily activities, and lower perceived control over pain. Gooding (2011) attributes these findings to the poor coping skills present among individuals with BPD features.

In contrast to the above, some of the current results were not supportive of Hypothesis 2. Specifically, there was no significant difference between groups in terms of suicidal ideation (i.e., suicidal thoughts or ideas), trait anxiety (i.e., a general tendency or disposition to respond with an inappropriate level of anxiety to perceived threats in the environment), and depressive symptoms. However, there was a trend toward those with

an offender history having significantly more elevated levels of depressive symptoms (as measured by the CES-D). Major depression often co-occurs in individuals with BPD (Zanarini et al., 2004; Zimmerman & Mattia, 1999). In addition, major depression is prevalent among incarcerated offenders (i.e., 23% to 30%; BJS, 2006a; Grella et al., 2008; Gunter et al., 2008). A larger sample size for the group with a history of offending may have yielded significant differences in terms of the presence of depressive symptomatology. In addition, no significant differences were observed on the PAI Anxiety, Depression, Mania, Schizophrenia, and Suicidal Ideation scales.

The findings that there was no difference between groups in regards to suicidal ideation on the PAI Suicidal Ideation Scale, or on the BSS (as noted above) requires further discussion as there were significant differences between groups in regards to self-harm as indicated by the PAI Borderline Features Self-Harm subscale. This result was not expected as self-harm and suicidal ideation are both common among incarcerated offenders (Alessi et al., 1984; Bailey, 1996; Holley et al., 1995; Kenny et al., 2008). One may speculate that self-harm itself may be more consistent with the type of negative behaviours demonstrated by individuals with BPD than suicidal ideation. Individuals with BPD have difficulty regulating their emotions and as a result may self-harm to cope with negative emotions or feelings. It is possible that such individuals spend less time thinking about suicide as a function of impulsivity, low self-control, and difficulties regulating emotions and therefore are more likely to act rather than engage in extensive suicidal ideation. The findings from the current study lend further support to clarifying the differences across these two groups in this respect. First, self-harm is one of the criteria for BPD outlined in the DSM-IV-TR (APA, 2000) whereas suicidal ideation is

not. Furthermore, self-harm was observed as significantly different between the two study groups, even in a sample that has arguably high rates of self-harm behaviours (i.e., undergraduate samples; 12-38%; Briere & Gil, 1998; Pol, & Lis, 2009; Whitlock, Eckenrode, & Silverman, 2006). It is important to note that the current study yielded mean BSS scores (i.e., suicidal ideation; $M = 0.70$, $SD = 2.27$) consistent with existing research (e.g., $M = 0.77$, $SD = 2.55$; Van Orden et al., 2008).

Overall, there were higher levels of psychopathology among the group with a history of offending than the group without. Specifically in regards to impulsivity, state anxiety, somatic complaints, traumatic stress, paranoia, physiological symptoms of depression, irritability, thought disorder, antisocial behaviour, substance problems, aggression, and stress. It is important to identify the associated symptoms present among emerging adults with a history of offending as it generates a more complete picture of symptoms that are present beyond the BPD features that may be more readily apparent. This additional information aids in guiding tailored assessment protocols and prevention, intervention, and relapse prevention programs for both incarcerated non-incarcerated (i.e., probation) offenders with BPD features.

Hypothesis 3 stated that the group with a history of offending on average would have scores in the clinical range for specific associated BPD symptomatology and psychopathology as measured by relevant PAI clinical scales (i.e., drug problems, alcohol problems, anxiety, depression, paranoia) and two of the PAI treatment scales (i.e., aggression, suicidal tendencies). The findings provide support for Hypothesis 3. On average, the group with a history of offending demonstrated clinical levels of associated BPD symptomatology and psychopathology more frequently than the group without.

4.5 Abuse History and BPD Features Among the Group with a History of Offending

Hypothesis 4 stated that clinical levels of BPD features would be associated with an increased history of abuse (i.e., emotional, physical, sexual) in the group with a history of offending. The results of the current investigation do not support this hypothesis and are inconsistent with previous research (e.g., Taylor et al., 2009). The results suggest similar abuse experience across those with high and low BPD features among those with a history of offending. This result may be the consequence of a small sample size among the group with a history of offending and therefore fewer individuals with clinical levels of BPD features. An additional explanation may lie with the notion that prevalence of abuse history was high in the group with a history of offending overall and therefore differences could not be detected (i.e., limited range). Further research is required with a larger sample size to examine this relationship further.

4.6 Association Between BPD features and Criminal Offense Variables in the Group with a History of Offending

Hypothesis 5 stated that clinical BPD features would be associated with a greater number of offenses in the group with a history of offending. The current findings did not provide support for this hypothesis, which was inconsistent with prior emerging adult/adult offender research (e.g., Black et al., 2007). These findings may be impacted by a small sample size in the group with a history of offending. Further, these findings may be influenced by the nature of our sample (i.e., incarcerated versus non-incarcerated participants). Specifically, an incarcerated sample would likely have a greater number of offenses as compared to a non-incarcerated sample. Lastly, the results may be the product of utilizing an emerging adult sample, as no differences were detected in regards

to BPD features and number of offenses among adolescent/emerging adult offenders in Taylor et al. (2009). Emerging adults are younger and therefore may have had less time than adults to engage in multiple criminal behaviours (i.e., fewer arrested/charged offenses overall). The latter suggestion is inconsistent with crime trends. Specifically, 31% of all adult criminal court cases involved emerging adults (i.e., 18 to 24 years of age), which is alarmingly disproportionate as emerging adults make up only 12% of the adult population (Statistics Canada, 2008a). Further research is necessary to explore the relationship between clinical BPD features and number of offenses, particularly among a larger offender sample.

Differences were also examined among those with a history of offending in terms of the most serious offense arrested or charged for (i.e., status offense, violent offense, property offense, traffic offense, public order, and liquor law violations) across participants with high and low BPD features. Despite utilizing a heterogeneous group of emerging adults with a history of offending, no significant associations were detected in terms of type of offense and level of BPD features. This result is inconsistent with the emerging adult/adult offender literature that has highlighted an association between violent offenses and BPD features (e.g., De Barros & Serafim, 2008; Dixon et al., 2008; Hernandez-Avila et al., 2000; Logan & Blackburn, 2009; Ulrich et al., 2004; Warren et al., 2002; Warren & South, 2009). In contrast, the findings are consistent with the adolescent/emerging adult offender literature that has not found an association between BPD features and types of offenses (e.g., Taylor et al., 2009). Further research is required among the emerging adults age range to examine the association between type of offense and BPD features.

4.7 Sex Differences in BPD Features in the Group with a History of Offending

Hypothesis 6 stated that sex differences would be found among the group with a history of offending; specifically, we expected to find significantly higher BPD features among females with a history of offending as compared to males with a history of offending. The current findings demonstrate support for Hypothesis 6, however, the findings should be interpreted with caution due to the disproportionate ratio of females to males (36 females versus 7 males) in the current study. Females with a history of offending demonstrated increased elevations in BPD features than males. Specifically, females demonstrated increased elevations in affect instability/emotion dysregulation, identity problems, and negative relationships as measured by the PAI-BOR scale and subscales. Further, females demonstrated increased elevations in thoughts and feelings characteristic of BPD (i.e., feelings of emptiness, intense fears of abandonment, emotional dysregulation), and negative behaviours characteristic of BPD (i.e., self-harm, impulsivity, inappropriate expressions of anger, paranoia, instability in interpersonal relationships) as measured by the BEST. These results are consistent with the existing literature as females present with BPD features more frequently than males across various samples (e.g., community based and clinical samples; Maier et al., 1992; Zanarini et al., 1998). Overall, approximately 75% of adults diagnosed with BPD are female (APA, 2000). Disproportionate rates of BPD as a function of sex have been observed in the current sample and in the emerging adult/adult offender (55% versus 27%; Black et al., 2007) and adolescent/emerging adult offender extent literature (63% versus 45%; Becker et al., 2002). However, there was no significant difference observed in the current study across sex regarding self-harm on the PAI-BOR Self-Harm Subscale. Again, this result

may be the consequence of a small sample size for the group with a history of offending, and an unequal distribution of males and females.

4.8 Predictors of History of Offending

Hypothesis 7 stated that BPD features would be predictive of group membership (i.e., group with a history of offending versus group without a history of offending). Initial results provided support for Hypothesis 7. However, upon further examination it became apparent that additional risk factors (i.e., abuse history, substance problems) associated with offending in the literature may play a role in this relationship. History of abuse (Fagan, 2005; Kakar, 1996; Maxfield & Widom, 1996; Smith & Thornberry, 1995), drug problems (Bennett et al., 2008; BJS, 2006b), and alcohol problems (BJS, 2008; BJS, 1998), established risk factors for development of criminal behaviour, were also examined as potential predictors of group membership. When history of abuse, drug problems, and alcohol problems were included in the regression model, BPD features were no longer a significant predictor of group membership. The final model accounted for 26% of the variance in group membership. BPD features alone accounted for only 6% of the variance in group membership. Results suggest that alone PAI-BOR is a significant predictor of group membership, however, once abuse history, drug problems, and alcohol problems are involved PAI-BOR was no longer a significant predictor. Based on these results it appeared the relationship between PAI-BOR and history of offending may be mediated by history of abuse, drug problems, and/or alcohol problems.

Mediation analyses were completed to examine the aforementioned relationships. Results from the mediation analysis confirmed this notion. Specifically, abuse history, drug problems, and alcohol problems, each independently accounted for the relationship

between BPD features and history of offending. One potential explanation for this outcome is that individuals with BPD features and associated poor coping mechanisms, may abuse substances to cope with difficulties (i.e., interpersonal instability) and regulate emotions. In turn, substance problems are frequently associated with offending and therefore the two in combination may increase the likelihood of criminal activity.

In terms of abuse history, it appears inconsistent that abuse would mediate the relationship between BPD features and history of offending as abuse/maltreatment is a well supported etiological correlate in the development of BPD (e.g., Zanarini et al., 1997). One would assume that BPD would mediate the relationship between abuse and history of offending, however, this was not the case. Similarly, Christopher et al. (2007) examined personality pathology (i.e., BPD tendencies) as a potential mediator in the association between childhood sexual abuse victimization and later sexual abuse offending against others. Overall, childhood sexual abuse was significantly related to BPD tendencies, however, BPD tendencies did not mediate the relationship between childhood sexual abuse victimization and later sexual abuse perpetration. A similar pattern was observed in the current study. Specifically, abuse history mediated the relationship between BPD features and history of offending. Our findings may be partially explained by Linehan's (1993) biosocial model of BPD. Linehan posits that individuals with BPD are born with specific biological predispositions (e.g., pre-existing emotional sensitivity), are exposed to invalidating environments (e.g., early parental abandonment, separation, loss, neglect; physical, sexual or emotional abuse), and in response are not able to regulate their emotions. Emotion dysregulation subsequently becomes a pervasive personality trait, a key feature of BPD. In turn, these individuals do

not learn how to adaptively problem solve. Most recently, Linehan and colleagues have examined trait impulsivity as a specific temperament that is biologically heritable (Crowell et al., 2009). These individuals with difficult temperaments (i.e., impulsive) may exacerbate existing negative environmental influences. With the current findings in mind, an individual may be born with trait impulsivity (a characteristic of BPD) in conjunction with an invalidating environment (e.g., abuse), in response are not able to appropriately regulate themselves or problem solve (e.g., self-injure to regulate mood, engage in criminal acts to meet their needs financially or emotionally). The latter may explain why some individuals experience BPD without a history of trauma (i.e., the invalidating environment may not necessarily be trauma). In turn, the latter may also serve to explain why some individuals with BPD do not engage in criminal activity (i.e., individual may not have problem solving difficulties that would lead to criminal behaviour). Further research is needed in this area to further examine what risk factors mediate the relationship between BPD and history of offending. In addition, it is important to know which specific BPD features may in fact mediate the relationship between BPD and history of offending (e.g., impulsivity, inappropriate expressions of anger, emotional dysregulation). A larger sample size would be required to complete this analysis. In turn, it would be beneficial to use the BPD module of the Structured Clinical Interview for DSM-IV diagnosis for Axis II (First, Spitzer, Gibbon, & Williams, 1997) to examine each BPD feature in detail in a mediation analysis.

4.9 Strengths, Limitations, and Future Directions

The current study was the first of its kind to examine BPD features using multiple valid measures (e.g., PAI; BEST) among a heterogeneous emerging adult male and

female sample with and without a history of offending. Types of offenses ranged for minor (e.g., status offenses) to serious (e.g., assault). The inclusion of a comparison group was a key strength of the current study as the extant adolescent/emerging adult offender and emerging adult/adult offender literature specifically examining BPD features has not previously included a comparison group. A further unique feature of this study was the inclusion of participants in the emerging adult age range. Exploring the aforementioned phenomena during this time period is critical given the previously noted disproportionate amount of crimes committed by this age range. Specifically, 31% of all adult criminal court cases involved emerging adults, 18 to 24 years of age, which is alarmingly disproportionate as emerging adults make up only 12% of the adult population (Statistics Canada, 2008a). It is important to examine criminal behaviour across the lifespan (e.g., emerging adult period) in order to clarify its etiology and what facilitates maintenance and continuance of such behaviour (i.e., recidivism).

Although this is a novel study, there were several limitations that require discussion. First, group membership was established based on self-reported history of an arrested or charged offense. As previously discussed self-report is a common method utilized in forensic research, however, there are several limitations involved with this method (e.g., potential over-reporting, under-reporting, reliance on memory and honesty). Future researchers should seek confirming information from an incarcerated sample where documented criminal history can be obtained. Second, the current sample was comprised entirely of undergraduate students. Although the sample was divided into two groups based on the presence or absence of a self-reported history of offending, the group with a history of offending may not be representative of emerging adults with a history of

offending in the community (e.g., different levels of education, financial situation). In turn, the results of the current study may not entirely generalize to an incarcerated sample, although many findings were consistent with the existing offender literature utilizing incarcerated samples. However, as previously noted, it is important to understand psychopathology in relation to offending outside of an incarcerated environment as specific symptom presentations may arise in response to such an environment. Third, our sample had a disproportionate ratio of female to male participants (i.e., 155 females versus 32 males). Specifically, within the group with a history of offending the ratio of females to males was disproportionate (36 females versus 7 males). This distribution may have impacted the findings as previous research indicates that females are more likely to present with BPD features than males. However, Taylor et al. (2009) examined BPD features among a strictly male incarcerated serious offender sample demonstrating similar results. In addition, it was hypothesized that females with a history of offending would present with more elevated BPD features than males with a history of offending. Results supported the sex difference hypothesis, however, a more equivalent sex ratio would be preferred for future research. Fourth, the group with a history of offending was small ($n = 43$). Future research should utilize a larger sample size for the group with a history of offending. In particular, equivalent sample sizes would be preferred for the two groups (with and without a history of offending). Fifth, the sample was largely Caucasian. It would be beneficial for future research to have a more varied ethnic distribution in order to facilitate examination of the potential association between ethnicity and history of offending among emerging adults. Sixth, although the BEST is a well established measure, an alternative second measure should

be utilized in future research on non-clinical samples. The BEST subscale C was not a good fit for use in a non-clinical population as it inquires about treatment adherence and most non-clinical samples have no or very limited treatment experience. The Personality Diagnostic Questionnaire - 4 - BPD scale (PDQ4-BPD; Hyler, 1994) may be an adequate measure for an undergraduate sample. Finally, the current study relied on self-report via a web-based data collection methodology. This type of study could be strengthened by including a clinical interview, (i.e., Structured Clinical Interview for DSM-IV diagnosis for Axis II; First et al., 1997) to establish a diagnosis, albeit the focus in the current study was on exploring BPD features dimensionally. Furthermore, there are several limitations associated with web-based data collection (e.g., random responding, potential for multiple submissions by the same participant, software issues, falsification of participant identity). Despite web-based data collection limitations numerous procedures were put in place to protect against the potential of random responding (e.g., validity scales within measures) and multiple submissions (e.g., statistical software that has the ability to identify duplicate entries; SPSS 18.0).

4.10 Scientific and Clinical Implications

The results of the study offer empirical evidence in regards to BPD symptomatology within an emerging adult group with a history of offending, estimated prevalence, and associated characteristics (e.g., type of criminal offense, number of offenses), therefore advancing current understanding of this unique population. In sum, BPD features (i.e., affect instability, negative relationships, self-harm, inappropriate expression of anger, feelings of emptiness, paranoia, impulsivity, intense fears of abandonment), associated BPD symptomatology (i.e., impulsivity, paranoia, aggression,

substance problems), and psychopathology (i.e., state anxiety, traumatic stress, somatic complaints, physiological symptoms of depression, thought disorder, irritability, antisocial behaviours, stress) were more elevated in the group with a history of offending than the group without. There was no relationship detected in the group with a history of offending in terms of BPD features (high versus low) and number or types of offenses. Comparisons of BPD features between groups of emerging adults with and without a history of offending contributes to the current understanding of how BPD may influence criminal behaviours and, possibly, recidivism. Specifically, BPD features (e.g., impulsivity, emotion dysregulation, intense expressions of anger) may lead to the engagement in the criminal act itself (e.g., individual can not self-regulate), not necessarily the type of criminal act. Further research is needed to verify this possibility. The current findings have important clinical implications. First, in an emerging adult, non-incarcerated group with a history of offending significant levels of psychopathology were present. These findings alone highlight a group of individuals who require access to appropriate mental health services. Second, our findings point to specific variables that predict group membership (i.e., BPD features, abuse history, substance problems). The latter draws attention to areas that should be considered when developing assessment protocols and prevention, intervention, and relapse prevention programs for both incarcerated and non-incarcerated (e.g., those on probation or newly released from corrections). Third, current findings are supportive of the utility of existing interventions (or possibly modified existing interventions) such as Dialectical Behavior Therapy (DBT; the empirically supported intervention for BPD) that can be implemented within the corrections system (i.e., Trupin et al., 2002). Current findings and subsequent research

can help to inform the modification and/or development of innovative prevention, intervention, and relapse prevention programs better equipped to treat emerging adult offenders demonstrating BPD tendencies (e.g., DBT adapted to forensic settings). Ultimately, improved assessment of BPD and the application of appropriate prevention and intervention programs may aid in decreasing recidivism rates, and, therefore, costs to society.

5.0 References

- Alessi, N. E., McManus, M., Brickman, A., & Grapentine, L. (1984). Suicidal behavior among serious juvenile offenders. *American Journal of Psychiatry*, 141, 286-287. Retrieved from <http://ajp.psychiatryonline.org/>
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders, fourth edition, text revision*. Arlington, VA: American Psychiatric Association.
- American Psychiatric Association. (2010). *DSM-5: The Future of Psychiatric Diagnosis*. Retrieved from <http://www.dsm5.org/Pages/Default.aspx>
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55, 469-480. doi:10.1037//0003-066X.55.5.469
- Arnett, J. J. (2001). Conceptions of the transition to adulthood: Perspectives from adolescence to midlife. *Journal of Adult Development*, 8, 133-143. Retrieved from <http://www.springer.com/psychology/journal/10804>
- Arnett, J. J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. New York: Oxford University Press.
- Arnett, J. J. (2007). Emerging adulthood: What is it, and what is it good for? *Child Development Perspectives*, 1, 68-73. Retrieved from <http://www.wiley.com/bw/journal.asp?ref=1750-8592>
- Bailey, S. (1996). Adolescents who murder. *Journal of Adolescence*, 19, 19-39. Retrieved from

http://www.elsevier.com/wps/find/journaldescription.cws_home/622849/description

- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality & Social Psychology*, 51, 1173-1182. Retrieved from <http://www.apa.org/pubs/journals/psp/index.aspx>
- Barylnik, J. (2003). Psychopathology, psychosocial characteristics, and family environment in juvenile delinquents. *The German Journal of Psychiatry*, 6 (1433-1055), 30-32. Retrieved from <http://www.gipsy.uni-goettingen.de>
- Battle, C. I., Shea, M. T., Johnson, D. M., Yen, S., Zlotnick, C., Zanarini, M. C., et al. (2004). Childhood maltreatment associated with adult personality disorders: Findings from the collaborative longitudinal personality disorders study. *Journal of Personality Disorders*, 18, 193-211. Retrieved from http://www.guilford.com/cgi-bin/cartscript.cgi?page=pr/jnpd.htm&dir=periodicals/per_psych&cart_id=
- Beck, A. T., Kovacs, M., & Weissman, A. (1979). Assessment of suicidal intention: The scale for suicide ideation. *Journal of Consulting and Clinical Psychology*, 47, 343-352. Retrieved from <http://www.apa.org/pubs/journals/ccp/index.aspx>
- Beck, A. T., & Steer, R. A. (1991). *Beck scale for suicide ideation manual*. Texas: Pearson.
- Beck, A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review*, 8, 77-100.

- Beck, A. T., Steer, R. A., & Ranieri, W. F. (1988). Scale for Suicide Ideation: Psychometric properties of a self-report version. *Journal of Clinical Psychology*, 44, 499-505. Retrieved from [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1097-4679](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1097-4679)
- Becker, D. (2000). When she was bad: Borderline personality disorder in a posttraumatic age. *American Journal of Orthopsychiatry*, 70, 422-431. doi:10.1037/h0087769
- Becker, D. F., Grilo, C. M., Edell, W. S., & McGlashan, T. H. (2002). Diagnostic efficiency of borderline personality disorder criteria in hospitalized adolescents: Comparison with hospitalized adults. *American Journal of Psychiatry*, 159, 2042-2047. Retrieved from <http://ajp.psychiatryonline.org/>
- Bender, D. S., Dolan, R. T., Skodol, A. E., Sanislow, C. A., Dyck, I. R., McGlashan, T. H.,... Gunderson, G. (2001). Treatment utilization by patients with personality disorders. *American Journal of Psychiatry*, 158, 295-302. Retrieved from <http://ajp.psychiatryonline.org/>
- Bennett, T., Holloway, K., & Farrington, D. (2008). The statistical association between drug misuse and crime: A meta-analysis. *Aggression and Violent Behavior*, 13, 107-118. doi:10.1016/j.avb.2008.02.001
- Birmingham, L., Gray, J., Mason, D., & Grubin, D. (2000). Mental illness at reception into prison. *Criminal behaviour and mental health*, 10, 77-87. Retrieved from [http://onlinelibrary.wiley.com/journal/10.1002/\(issn\)1471-2857](http://onlinelibrary.wiley.com/journal/10.1002/(issn)1471-2857)
- Birmingham, L., Mason, D., & Grubin, D. (1996). Prevalence of mental disorder in remand prisoners: Consecutive case study. *British Medical Journal*, 313, 1521-1524. Retrieved from <http://www.bmj.com/>

- Black, D. W., Blum, N., Eichinger, L., McCormick, B., Allen, J., & Sieleni, B. (2008). STEPPS: Systems training for emotional predictability and problem solving in women offenders with borderline personality disorder in prison – a pilot study. *CNS Spectrums*, 13, 881-886. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/18955943/>
- Black, D. W., Gunter, T., Allen, J., Blum, N., Arndt, S., Wenman, G., et al. (2007). Borderline personality disorder in male and female offenders newly committed to prison. *Comprehensive Psychiatry*, 48, 400-405. doi:10.1016/j.comppsy.2007.04.006
- Black, D. J., & Reiss, A. J. (1970). Police control of juveniles. *American Sociological Review*, 35, 63-77. Retrieved from <http://www.jstor.org/stable/i336457>.
- Blackburn, R., & Coid, J. W. (1999). Empirical clusters of DSM-III personality disorders in violent offenders. *Journal of Personality Disorders*, 13, 18-34. Retrieved from http://www.guilford.com/cgi-bin/cartscript.cgi?page=periodicals/jnpd.htm&cart_id=
- Blum, N., Pfohl, B., St. John, D., Monahan, P., & Black, D. W. (2002). STEPPS: A cognitive-behavioral systems-based group treatment for outpatients with borderline personality disorder-a preliminary report. *Comprehensive Psychiatry*, 43, 301-310. doi:10.1053/comp.2002.33497
- Bowlby, J. (1979). Psychoanalysis as art and science. *International Review of Psychoanalysis*, 6, 3-14.

- Briere J., & Gil, E. (1998). Self-mutilation in clinical and general population samples: Prevalence, correlates, and functions. *American Journal of Orthopsychiatry*, 68, 609-620. doi:10.1037/h0080369
- Brown, M. Z., Comtois, K. A., & Linehan, M. M. (2002). Reasons for suicide attempts and nonsuicidal self-injury in women with borderline personality disorder. *Journal of Abnormal Psychology*, 111, 198-202. doi:10.1037/0021-843X.111.1.198
- Bureau of Justice Statistics. (1998). Alcohol and crime: An analysis of national data on the prevalence of alcohol involvement in crime. *U.S. Department of Justice*, 1-46. Retrieved from <https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=168632>
- Bureau of Justice Statistics. (2006a). Mental health problems of prison and jail inmates. *U.S. Department of Justice*, 1-12. Retrieved from <http://bjs.ojp.usdoj.gov/content/pub/pdf/mhppji.pdf>
- Bureau of Justice Statistics. (2006b). Drug use and dependence, state and federal prisoners, 2004. *U.S. Department of Justice*, 1-12. Retrieved from <http://bjs.ojp.usdoj.gov/content/pub/pdf/dudsf04.pdf>
- Bureau of Justice Statistics. (2008). Criminal Victimization, 2007. *U.S. Department of Justice*, 1-12. Retrieved from <http://bjs.ojp.usdoj.gov/content/pub/pdf/cv07.pdf>
- Canadian Council on Social Development (2002). Canadian welfare incomes as a percentage of the poverty line by family type and province, 2001. Retrieved from http://www.ccsd.ca/factsheets/fs/_ncwp/01.htm
- Cauffman, E., Steinberg, L., & Piquero, A. R. (2005). Psychological, neuropsychological and physiological correlates of serious antisocial behavior in adolescence: The

- role of self-control. *Criminology*, 43, 133-175. Retrieved from
<http://www.wiley.com/bw/journal.asp?ref=0011-1384&site=1>
- Christopher, K., Lutz-Zois, C. J., & Reinhardt, A. R. (2007). Female sexual-offenders: Personality pathology as a mediator of the relationship between childhood sexual abuse history and sexual abuse perpetration against others. *Child Abuse & Neglect*, 31, 871-883. doi:10.1016/j.chiabu.2007.02.006
- Cochrane-Brink, K. A., Lofchy, J. S., & Sakinofsky, I. (2000). Clinical rating scales in suicide risk assessment. *General Hospital Psychiatry*, 22, 445-451. Retrieved from
http://www.elsevier.com/wps/find/journaldescription.cws_home/505761/description#description
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (Revised Edition). Hillsdale, NJ: Erlbaum.
- Colins, O., Vermeiren, R., Schuyten, G., & Broekaert, E. (2009). Psychiatric disorders in property, violent, and versatile offending detained male adolescents. *American Journal of Orthopsychiatry*, 79, 31-38. doi:10.1037/a0015337
- Conrad, R., Schilling, G., Bausch, C., Nadstawek, J., Wartenberg, H. C., Wegener, I., Geiser, F., Imbierowicz, K., & Liedtke, R. (2007). *Pain*, 133, 197-209. doi:10.1016/j.pain.2007.07.024
- Cooper, L. M., Wood, P. K., Orcutt, H. K., & Albino, A. (2003). Personality and the predisposition to engage in risky or problem behaviors during adolescence. *Journal of Personality and Social Psychology*, 84, 390-410. doi:10.1037/0022-3514.84.2.390

- Crowell, S. E., Beauchaine, T. P., & Linehan, M. M. (2009). A biosocial developmental model of borderline personality elaborating and extending Linehan's theory. *Psychological Bulletin*, 135, 495-510. doi:10.1037/a0015616
- Davison, S., Leese, M., & Taylor, P. J. (2001). Examination of the screening properties of the personality diagnostic questionnaire 4+ (PDQ-4+) in a prison population. *Journal of Personality Disorders*, 15, 180-194. Retrieved from http://www.guilford.com/cgi-bin/cartscript.cgi?page=periodicals/jnpd.htm&cart_id=
- De Barros, D. M., & De Padua Serafim, A. (2008). Association between personality disorder and violent behavior pattern. *Forensic Science International*, 179, 19-22. doi:10.1016/j.forsciint.2008.04.013
- Department of Justice Canada. (2011). *Youth criminal justice act (S.C. 2002, c. 1)*. Retrieved from <http://www.laws-lois.justice.gc.ca/eng/acts/y-1.5/>
- Devins, G. M., Orme, C. M., & Costello, C. G. (1988). Measuring depressive symptoms in illness populations: psychometric properties of the center for epidemiologic studies depression (CES-D) scale. *Psychology and Health*, 2, 139-156. Retrieved from <http://www.tandf.co.uk/journals/GPSH>
- Dietrich, A. (2003). Characteristics of child maltreatment, psychological dissociation, and somatoform dissociation of Canadian inmates. *Journal of Trauma and Dissociation*, 4, 81-100. Retrieved from <http://www.isst-d.org/jtd/journal-trauma-dissociation-index.htm>
- Dixon, L., Hamilton-Giachritsis, C., & Browne, K. (2008). Classifying partner femicide. *Journal of Interpersonal Violence*, 23, 74-93. doi: 10.1177/0886260507307652

- Earls, F. J., Brooks-Gunn, J., Raudenbush, S. W., & Sampson, R. J. (2002). *Project on human development in Chicago neighborhoods (PHDCN): Selfreport of offending, wave 3, 2000-2002*. Michigan: National Institute of Justice Data Resources Program.
- Earthrowl, M., O'Grady, J., & Birmingham, L. (2003). Providing treatment to prisoners with mental disorders: Development of a policy: Selective literature review and expert consultation exercise. *The British Journal of Psychiatry*, 182, 299-302.
Doi: 10.1192/bjp.182.4.299
- Elliott, D. S., & Huizinga, D. (1989). Improving self-report measures of delinquency. In: M. Klein (Ed.), *Cross-national research in self-reported crime and delinquency* (pp. 155-186). Boston, MA: Kluwer Academic Publishers.
- Eppright, T. D., Kashani, J. H., Robinson, B. D., & Reid, J. C. (1993). Comorbidity of conduct disorder and personality disorders in an incarcerated juvenile population. *American Journal of Psychiatry*, 150, 1233-1236. Retrieved from <http://ajp.psychiatryonline.org/>
- Erikson, E. H. (1950). *Childhood and society*. New York: Norton.
- Eysenck, S. B. G., & Eysenck, H. J. (1977). The place of impulsiveness in a dimensional system of personality description. *British Journal of Social and Clinical Psychology*, 16, 57-68. Retrieved from http://www.periodicals.com/html/ihp_e.html?eb08985
- Fagan, A. A. (2005). The relationship between adolescent physical abuse and criminal offending: Support for an enduring and generalized cycle of violence. *Journal of Family Violence*, 20, 279-290. doi:10.1007/s10896-005-6604-7

- Fazel, S., & Danesh, J. (2002). Serious mental disorder in 23000 prisoners: a systematic review of 62 surveys. *The Lancet*, 359, 545-550. Retrieved from <http://www.thelancet.com/>
- Fazel, M., Langstrom, N., Grann, M., & Faze, S. (2008). Psychopathology in adolescent and young adult criminal offenders (15-21 years) in Sweden. *Social Psychiatry & Psychiatric Epidemiology*, 43, 319-324. doi:10.1007/s00127-007-0295-8
- Field, A. (2009). *Discovering statistics using SPSS*. London: Sage Publications Ltd.
- Fink, A. (1938). *Causes of crime*. New York: A. S. Barnes.
- First, M.B., Gibbon, M., Spitzer, R.L, Williams, J.B.W., & Smith Benjamin, L. (1997). *Structured Clinical Interview for DSM-IV Axis II Disorders – Clinical Version*. Washington, DC: American Psychiatric Press, Inc.
- Fish, V. (2004). Some gender biases in diagnosing traumatized women. In P. J. Caplan & L. Cosgrove (Eds.), *Bias in psychiatric diagnosis* (pp. 213-220). Lanham: The Rowman & Littlefield Publishing Group, Inc.
- Fishbain, D., Goldberg, M., Meagher, R., Steele, R., & Rosomoff, H. (1986). Male and female chronic pain patients categorized by DSM-III psychiatric diagnostic criteria. *Pain*, 26, 181-197. Retrieved from <http://www.painjournalonline.com/>
- Follman, J., Miller, W., & Burg, E. (1972). Reported delinquency of college students and delinquents. *Psychological Reports*, 31, 998.
- Gandhi, N., Tyrer, P., Evans, K., McGee, A., Lamont, A., & Harrison-Read, P. (2001). A randomized controlled trial of community-oriented and hospital-oriented care for discharged psychiatric patients: Influence of personality disorder on police contacts. *Journal of Personality Disorders*, 15, 94-102. Retrieved from

[http://www.guilford.com/cgi-](http://www.guilford.com/cgi-bin/cartscrip)

[bin/cartscrip.cgi?page=periodicals/jnpd.htm&cart_id=](http://www.guilford.com/cgi-bin/cartscrip.cgi?page=periodicals/jnpd.htm&cart_id=)

- Gardner, D. L., & Cowdry, R. W. (1985). Suicidal and parasuicidal behavior in borderline personality disorder. *Psychiatric Clinics of North America*, 8, 389-403. Retrieved from <http://psycnet.apa.org/psycinfo/1986-20026-001>
- Gatchel, R. J., Garofalo, J. P., Ellis, E., & Holt, C. (1996). Major psychological disorders in acute and chronic TMD: An initial examination. *Journal of American Dental Association*, 127, 1365-1370. Retrieved from <http://jada.ada.org/>
- Gooding, N. (2011). Borderline personality disorder and chronic pain: Prevalence in a rehabilitation setting (Unpublished master's thesis). University of Regina, Regina, Saskatchewan.
- Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. California: Stanford University Press.
- Grant, B. F., Chou, P., Goldstein, R. B., Huang, B., Stinson, F. S., Saha, T. D., et al. (2008). Prevalence, correlates, disability, and comorbidity of DSM-IV borderline personality disorder: Results from the wave 2 national epidemiologic survey on alcohol and related conditions. *Journal of Clinical Psychiatry*, 69, 533-545. Retrieved from <http://www.psychiatrist.com/default2.asp>
- Grella, C. E., Greenwell, L., Prendergast, M., Sacks, S., & Melnick, G. (2008). Diagnostic profiles of offenders in substance abuse treatment programs. *Behavioral Sciences and the Law*, 26, 369-388. doi: 10.1002/bsl.825
- Grilo, C. M., McGlashan, T. H., Quinlan, D. M., Walker, M. L., Greenfield, D., & Edell, W. S. (1998). Frequency of personality disorders in two age cohorts of psychiatric

- inpatients. *American Journal of Psychiatry*, 155, 140-142. Retrieved from <http://ajp.psychiatryonline.org/>
- Gunter, T. D., Arndt, S., Wenman, G., Allen, J., Loveless, P., Sieleni, B., & Black, D. (2008). Frequency of mental and addictive disorders among 320 men and women entering the Iowa prison system: Use of the MINI-Plus. *The Journal of the American Academy of Psychiatry and the Law*, 36, 27-34. Retrieved from <http://www.jaapl.org/>
- Hamilton, M. A. (1960). A rating scale for depression. *Journal of Neurologic Neurosurgical Psychiatry*, 23, 56-62. Retrieved from <http://jnnp.bmj.com/>
- Harris, K., Florey, F., Tabor, J., Bearman, P. S., Jones, J., & Udry, J. R. (2003). *The national longitudinal study of adolescent health: Research design*. Retrieved from www.cpc.unc.edu/projects/addhealth/design
- Herman, J. L., Perry, J. C., & Van Der Kolk, B. A. (1989). Childhood trauma in borderline personality disorder. *American Journal of Psychiatry*, 146, 490-495. Retrieved from <http://ajp.psychiatryonline.org/>
- Hernandez-Avila, C. A., Burleson, J. A., Poling, J., Tennen, H., Rounsaville, B. J., & Kranzler, H. R. (2000). Personality and substance use disorders as predictors of criminality. *Comprehensive Psychiatry*, 41, 276-283. doi:10.1053/cp.2000.7423
- Hirschi, T., & Hindelang, M. J. (1977). Intelligence and delinquency: A revisionist review. *American Sociological Review*, 42, 571-587. Retrieved from <http://www.asanet.org/asr/index.html>
- Holley, H. L., Arboleda-Florez, J., & Love, E. J. (1995). Lifetime prevalence of prior suicide attempts in a remanded population and relationship to current mental

illness. *International Journal of Offender Therapy and Comparative Criminology*, 39, 191-209. doi:10.1177/0306624X9503900302

Huizinga, D., & Elliot, D. S. (1986). Reassessing the reliability and validity of self-report delinquent measures. *Journal of Quantitative Criminology*, 2, 293-327. Retrieved from <http://www.springer.com/social+sciences/criminology/journal/10940>

Hughes, R. A. (2000). Health, place, and British prisons. *Health & Place*, 6, 57-62.

Retrieved from

http://www.elsevier.com/wps/find/journaldescription.cws_home/30519/description

Hyler, S. E. (1994). *Personality Questionnaire, PDQ-4+*. New York: New York State Psychiatric Institute.

Jacobo, M.C., Blais, M.A., Baity, M.R., & Harley, R. (2007). Concurrent validity of the Personality Assessment Inventory Borderline Scales in patients seeking dialectical behaviour therapy. *Journal of Personality Assessment*, 88, 74-80.

doi:10.1080/00223890709336837

Johnson, J. G., Cohen, P., Brown, J., Smailes, E. M., & Bernstein, D. P. (1999).

Childhood maltreatment increases risk for personality disorders during early adulthood. *Archives of General Psychiatry*, 56, 600-606. Retrieved from

<http://archpsyc.ama-assn.org/>

Johnson, J. G., Cohen, P., Smailes, E., Kasen, S., Oldham, J. M., Skodol, A. E., et al.

(2000). Adolescent personality disorders associated with violence and criminal behavior during adolescence and early adulthood. *American Journal of*

Psychiatry, 157, 1406-1412. Retrieved from <http://ajp.psychiatryonline.org/>

- Jolliffe, D., Farrington, D. P., Hawkins, D., Catalano, R. F., Hill, K. G., & Kosterman, R. (2003). Predictive, concurrent, prospective and retrospective validity of self-reported delinquency. *Criminal Behaviour and Mental Health*, 13, 179-197. doi:10.1002/cbm.541
- Joyce, P. R., McHugh, P. C., McKenzie, J. M., Sullivan, P. F., Mulder, R. T., Luty, S. E.,...Kennedy, M. A. (2006). A dopamine transporter polymorphism is a risk factor for borderline personality disorder in depressed patients. *Psychological Medicine*, 36, 807-813. doi:10.1017/S0033291706007288
- Jones, I. H., Congin, L., Stevenson, J., Straus, N., & Frei, D. Z. (1979). A biological approach to two forms of human self injury. *Journal of Nervous and Mental Diseases*, 167, 74-78. Retrieved from <http://journals.lww.com/jonmd/pages/default.aspx>
- Jordan, K. B., Schlenger, W. E., Fairbank, J. A., & Caddell, J. M. (1996). Prevalence of psychiatric disorders among incarcerated women: II. convicted felons entering prison. *Archives of General Psychiatry*, 53, 513-519. Retrieved from <http://archpsyc.ama-assn.org/>
- Kakar, S. (1996). *Child abuse and delinquency*. Lanham, MD: University Press of America.
- Kasen, S., Cohen, P., & Brook, J. S. (1998). Adolescent school experiences, and dropout, adolescent pregnancy, and young adult deviant behavior. *Journal of Adolescent Research*, 13, 49-72. Retrieved from <http://jar.sagepub.com/>
- Kenny, D. T., Lennings, C. J., & Munn, O. A. (2008). Risk factors for self-harm and suicide in incarcerated young offenders: Implications for policy and practice.

Journal of Forensic Psychology Practice, 8, 358-382.

doi:10.1080/15228930802199317

Kent, A. (2009). Vulnerable youth and the transition to adulthood: Youth from low-income families. Retrieved from

<http://aspe.hhs.gov/hsp/09/vulnerableyouth/3/index/shtml>

Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshelman, S.,...

Kendler, K. S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. *Archives of General Psychiatry*, 51, 8-19. Retrieved from <http://archpsyc.ama-assn.org/>

Kiehn, B., & Swales, M. (2001). *An overview of Dialectical Behaviour Therapy in the treatment of borderline personality disorder*. Retrieved from

http://www.mentalhelp.net/poc/view_doc.php?type=doc&id=1020

Kim, J., Kim, B., & Cho, S. (2006). The dopamine transporter gene and the impulsivity phenotype in attention deficit hyperactivity disorder: A case-control association study in a Korean sample. *Journal of Psychiatric Research*, 40, 730-737.

doi:10.1016/j.jpsychires.2005.11.002

Kinney, R. K., Gatchel, R. J., Polatin, P. B., Fogarty, W. T., & Mayer, T. G. (1993).

Prevalence of psychopathology in acute and chronic low back pain patients.

Journal of Occupational Rehabilitation, 3, 95-103. doi:10.1007/BF01078162

Klonsky, D. E., Oltmanns, T. F., & Turkheimer, E. (2003). Deliberate self-harm in a nonclinical population: Prevalence and psychological correlates. *American*

Journal of Psychiatry, 160, 1501-1508. Retrieved from

<http://ajp.psychiatryonline.org/>

- Knight, G. P., Littler, M., Losoya, S. H., & Mulvey, E. P. (2004). The self-report of offending among serious juvenile offenders: Cross-gender, cross-ethnic/race measurement equivalence. *Youth Violence and Juvenile Justice*, 2, 273-295. doi:10.1177/1541204004265878
- Koenigsberg, H. W., Kaplan, R. M., Gilmore, M., & Cooper, A. M. (1985). The relationship between syndrome and personality disorder in DSM-III: Experience with 2462 patients. *The American Journal of Psychiatry*, 142, 207-212. Retrieved from <http://ajp.psychiatryonline.org/>
- Korzekwa, M. I., Dell, P. F., Links, P. S., Thabane, L., & Webb, S. P. (2008). Estimating the prevalence of borderline personality disorder in psychiatric outpatients using a two-phase procedure. *Comprehensive Psychiatry*, 49, 380-386. doi:10.1016/j.comppsy.2008.01.007
- Krischer, M. K., Sevecke, K., Lehmkuhl, G., & Pukrop, R. (2007). Dimensional assessment of personality pathology in female and male juvenile delinquents. *Journal of Personality Disorders*, 21, 675-689. Retrieved from http://www.guilford.com/cgi-bin/cartscript.cgi?page=periodicals/jnpd.htm&cart_id=
- Kurtz, J. E., & Morey, L. C. (2001). Use of structured self-report assessment to diagnose borderline personality disorder during major depressive episodes. *Assessment*, 8(3), 291-300. doi:1177/107319110100800305
- Langhinrichsen-Rohling, J., Arata, C., Bowers, D., O'Brien, N., & Morgan, A. (2004). Suicidal behavior, negative affect, gender, and self-reported delinquency in college students. *Suicide and Life-Threatening Behavior*, 34, 255-266. Retrieved

- from http://www.guilford.com/cgi-bin/cartscript.cgi?page=pr/jnsl.htm&dir=periodicals/per_psych&cart_id=
- Large, R. G. (1986). DSM-III diagnoses in chronic pain: Confusion or clarity? *Journal of Nervous and Mental disease*, 174, 295-303. Retrieved from <http://journals.lww.com/jonmd/pages/default.aspx>
- Leichsenring, F., Kunst, H., & Hoyer, J. (2003). Borderline personality organization in violent offenders: Correlations of identity diffusion and primitive defense mechanisms with antisocial features, neuroticism, and interpersonal problems. *Bulletin of the Menninger Clinic*, 67, 314-327. Retrieved from http://www.guilford.com/cgi-bin/cartscript_new.cgi?page=pr/jnme.htm&dir=periodicals/per_psych
- Lenzenweger, M. F., Lane, M. C., Loranger, A. W., & Kessler, R. C. (2007). DSM-IV personality disorders in the national comorbidity survey replication. *Biological Psychiatry*, 62, 553-564. doi: 10.1016/j.biopsych.2006.09.019
- Levy, K. N., Becker, D. F., Grilo, C. M., Mattanah, J. J., Garnet, K. E., Quinlan, D. M.,...McGlashan, T. H. (1999). Concurrent and predictive validity of the personality disorder diagnosis in adolescent inpatients. *American Journal of Psychiatry*, 156, 1522-1528. Retrieved from <http://ajp.psychiatryonline.org/>
- Linehan, M. (1986). Suicidal people: One population or two? In J. J. Mann & M. Stanley (Eds.), *Annals of the New York academy of sciences: Vol. 487. The psychobiology of suicide* (pp. 16-33). New York: New York Academy of Sciences.

- Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York: The Guilford Press.
- Linehan, M. M., Schmidt, H., Dimeff, L. A., Craft, C., Kanter, J., & Comtois, K. A. (1999). Dialectical behavior therapy for patients with borderline personality disorder and drug-dependence. *The American Journal on Addictions*, 8, 279-292. Retrieved from <http://www.wiley.com/bw/journal.asp?ref=1055-0496&site=1>
- Livesley, W. J. (2001). *Handbook of personality disorders: Theory, research, and treatment*. New York: The Guilford Press.
- Livesley, J.W. (2007). A framework for integrating dimensional and categorical classifications of personality disorder. *Journal of Personality Disorders*, 21, 199-224. doi:10.1521/pedi.2007.21.2.199
- Logan, C., & Blackburn, R. (2009). Mental disorder in violent women in secure settings: Potential relevance to risk for future violence. *International Journal of Law and Psychiatry*, 32, 31-38. doi:10.1016/j.ijlp.2008.11.010
- Longshore, D., Chang, E., & Messina, N. (2005). Self-control and social bonds: A combined control perspective on juvenile offending. *Journal of Quantitative Criminology*, 21, 419-437. Retrieved from <http://www.springer.com/social+sciences/criminology/journal/10940>
- Loper, A. B., Mahmoodzadegan, N., & Warren, J. I. (2008). Childhood maltreatment and cluster B personality pathology in female serious offenders. *Sexual Abuse*, 20, 139-160. doi:10.1177/1079063208317463

- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, 7, 83-104. doi:10.1037//1082-989X.7.1.83
- MacKinnon-Lewis, C., Kaufman, M. C., & Frabutt, J. M. (2002). Juvenile justice and mental health: Youth and families in the middle. *Aggression and Violent Behavior*, 7, 353-363. Retrieved from <http://www.sciencedirect.com/science/journal/13591789>
- Maier, W., Lichtermann, D., Klinger, T., Heun, R., & Hallmayer, J. (1992). Prevalences of personality disorders (DSM-III-R) in the community. *Journal of Personality Disorders*, 6, 187-196. Retrieved from http://www.guilford.com/cgi-bin/cartscript.cgi?page=periodicals/jnpd.htm&cart_id=
- Maxfield, M. G., & Widom, C. S. (1996). The cycle of violence: Revisited 6 years later. *Archives of pediatrics & adolescent medicine*, 150, 390-395. Retrieved from <http://archpedi.ama-assn.org/>
- McCann, R. A., Ball, E. M., & Ivanoff, A. (2000). DBT with an inpatient forensic population: The CMHIP forensic model. *Cognitive and Behavioral Practice*, 7, 447-456. Retrieved from <http://www.sciencedirect.com/science/journal/10777229>
- McManus, M., Brickman, A., Alessi, N. E., & Grapentine, L. (1984). Borderline personality in serious delinquents. *Comprehensive Psychiatry*, 25, 446-454. Retrieved from <http://www.comppsyjournal.com/>
- Millon, T. (1993). *The Millon Adolescent Clinical Inventory manual*. Minneapolis, MN: National Computer Systems.

- Moffitt, T. (1993). Adolescence-limited and life-course persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, 100, 674-701. Retrieved from <http://www.apa.org/pubs/journals/rev/index.aspx>
- Moffitt, T. E., & Caspi, A. (2001). Childhood predictors differentiate life-course persistent and adolescence-limited antisocial pathways among males and females. *Development & Psychopathology*, 13, 355-375. Retrieved from <http://journals.cambridge.org/action/displayjournal?jid=dpp>
- Moffitt, T. E., Caspi, A., Rutter, M., & Phil, S. (2002). *Sex differences in antisocial behavior: Conduct disorder, delinquency, and violence in the Dunedin longitudinal study*. New York: Cambridge University Press.
- Moldavsky, M., Stein, D., Lublinsky, E., Meged, S., Barel, Y., Avidan, G.,... Weizman, A. (2002). Individual and familial psychopathology among hospitalized minors at risk, juvenile delinquents, and psychiatric controls. *International Journal of Law and Psychiatry*, 25, 611-622. Retrieved from <http://www.sciencedirect.com/science/journal/01602527>
- Morey, L.C. (1991). *Personality Assessment Inventory*. Psychological Assessment Resources, Inc.
- Morey, L. C. (1996). *An Interpretive guide to the Personality Assessment Inventory (PAI)*. USA: Psychological Assessment Resources, Inc.
- Motz, A. (2001). *The psychology of female violence: Crimes against the body*. Philadelphia: Taylor & Francis.

- Paris, J., Zweig-Frank, H., & Guzder, J. (1994). Psychological risk factors for borderline personality disorder in female patients. *Comprehensive Psychiatry*, 35, 301-305.
doi:10.1016/0010-440X(94)90023-X
- Parsons, S., Walker, L., & Grubin, D. (2001). Prevalence of mental disorder in female remand prisons. *The Journal of Forensic Psychiatry*, 12, 194-202.
doi:10.1080/09585180010027941
- Pattison, M. E., & Kahan, J. (1983). The deliberate self-harm syndrome. *American Journal of Psychiatry*, 140, 867-872. Retrieved from
<http://ajp.psychiatryonline.org/>
- Patton, J. H., Stanford, M. S., & Barratt, E. S. (1995). Factor structure of the Barratt Impulsiveness Scale. *Journal of Clinical Psychology*, 51, 768-774. Retrieved from [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1097-4679](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1097-4679)
- Peters, R. H., Greenbaum, P. E., Edens, J. F., Carter, C. R., & Ortiz, M. M. (1998). Prevalence of DSM-IV substance abuse and dependence disorders among prison inmates. *The American Journal of Drug and Alcohol Abuse*, 24, 573-587.
Retrieved from <http://informahealthcare.com/loi/ada>
- Pfefferbaum, B., & Wood, P. B. (1994). Self-report study of impulsive and delinquent behavior in college students. *Journal of Adolescent Health*, 15, 295-302.
Retrieved from <http://jahonline.org/>
- Pfohl, B., & Blum, M. (1997). *Borderline Evaluation of Severity Over Time (BEST)*. Iowa: Department of Psychiatry.
- Pfohl, B., Blum, N., St. John, D., McCormick, B., Allen, J., & Black, D. (2009). Reliability and validity of the borderline evaluation of severity over time (BEST):

- A self-rated scale to measure severity and change in persons with borderline personality disorder. *Journal of Personality Disorders*, 23, 281-293.
doi:10.1521/pedi.2009.23.3.281
- Plattner, B., Niranjan, K., Jo, B., Hall, R. E., Schallauer, A., Carrion, V., et al. (2007). State and trait emotions in delinquent adolescents. *Child Psychiatry and Human Development*, 38, 155-169. doi:10.1007/s10578-007-0050-0
- Pliszka, S. R., Sherman, J. O., Barrow, M. V., & Irick, S. (2000). Affective disorder in juvenile offenders: A preliminary study. *The American Journal of Psychiatry*, 157, 130-132. Retrieved from <http://ajp.psychiatryonline.org/>
- Polatin, P. B., Kinney, R. K., Gatchel, R. J., Lillo, E., & Mayer, T. G. (1993). Psychiatric illness and chronic low-back pain. *Spine*, 18, 66-71. Retrieved from <http://journals.lww.com/spinejournal/pages/default.aspx>
- Polk, E., & Lis, M. (2009). Research report: Exploring the motivations behind self-injury. *Counseling Psychology Quarterly*, 22, 233-341.
doi:10.1080/09515070903216911
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, 36, 717-731. Retrieved from http://www.interaction-design.org/references/periodicals/behavior_research_methods,_instruments,_%26_computers.html
- Price, T. S., Simonoff, E., Waldman, I., Asherson, P., & Plomin, R. (2001). Hyperactivity in pre-school children is highly heritable. *Journal of the American*

- Academy of Child and Adolescent Psychiatry*, 40, 1362-1364. Retrieved from <http://www.jaacap.com/home>
- Radloff, L. S. (1977). The CES-D scale: A self report for depression scale for research in the general population. *Applied Psychological Measures*, 1, 385-401. Retrieved from <http://apm.sagepub.com/>
- Raskin, A., Schulterbrandt, J., Reatig, N., & McKeon, J. (1969). Replication of factors of psychopathology in interview, ward behavior, and self-report ratings of hospitalized depressives. *Journal of Nervous and Mental Disease*, 148, 87-96. Retrieved from <http://journals.lww.com/jonmd/pages/default.aspx>
- Redding, R. E. (1999). Developments in mental health law. *The Institute of Law, Psychiatry & Public Policy – The University of Virginia*, 19, 1-23. Retrieved from <http://ilppp.virginia.edu/>
- Reich, J., Tupin, J. P., & Abramowitz, S. I. (1983). Psychiatric diagnosis of chronic pain patients. *American Journal of Psychiatry*, 140, 1495-1498. Retrieved from <http://ajp.psychiatryonline.org/>
- Robins, L. N., & Regier, D. A. (1991). *Psychiatric Disorders in American*. New York, NY: Free Press.
- Ryan, J. P., & Testa, M. F. (2003). Child maltreatment and juvenile delinquency: Investigating the role of placement and placement instability. *Children and Youth Services Review*, 27, 227-249. doi:10.1016/j.childyouth.2004.05.007
- Sable, P. (1997). Attachment, detachment and borderline personality disorder. *Psychotherapy*, 34, 171-181. doi:10.1037/h0087674

- Sansone, R. A., & Sansone, L. A. (2009). Borderline personality and criminality. *Psychiatry*, 6, 16-20. Retrieved from <http://www.innovationscns.com/>
- Selby, M. H., Pelham, W. E., Molina, B. S. G., Waschbusch, D. A., Gnagy, E. M., Babinski, D. E., & Biswas, A. (2010). Inconsistent self-report of delinquency by adolescents and young adults with ADHD. *Journal of Abnormal Child Psychology*, 38, 645-656. doi:10.1007/s10802-010-9494-3
- Shaw, C., & Proctor, G. (2005). Women at the margins: A critique of the diagnosis of borderline personality disorder. *Feminism & Psychology*, 15, 483-490. doi:10.1177/0959-353505057620
- Shelton, D., Sampl, S., Kesten, K. L., Zhang, W., & Trestman, R. L. (2009). Treatment of impulsive aggression in correctional settings. *Behavioral Sciences and the Law*, 27, 787-800. doi:10.1002/bsl.889
- Sherman, D. K., Iacono, W. G., & McGue, M. K. (1997). Attention-deficit hyperactivity disorder dimensions: a twin study of inattention and impulsivity-hyperactivity. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 745-753. Retrieved from <http://www.jaacap.com/home>
- Shoemaker, D. J. (2009). *Juvenile delinquency*. New York: Rowman & Littlefield Publishers, Inc.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7, 422-445. doi:10.1037/1082-989X.7.4.422
- Silverman, J., Pinkham, L., Horvath, T., Coccaro, E., Klar, H., Schear, S., et al. (1991). Affective and impulsive personality disorder traits in the relatives of patients with

- borderline personality disorder. *American Journal of Psychiatry*, 148, 1378–1385.
Retrieved from <http://ajp.psychiatryonline.org/>
- Simons, R. L., Simons, L. G., Chen, Y., Brody, G. H., & Lin, K. (2007). Identifying the psychological factors that mediate the association between parenting practices and delinquency. *Criminology*, 45, 481-517. Retrieved from <http://www.wiley.com/bw/journal.asp?ref=0011-1384&site=1>
- Simons, R. L., Wu, C., Conger, R. D., & Lorenz, F. O. (1994). Two routes to delinquency: Differences between early and late starters in the impact of parenting and deviant peers. *Criminology*, 32, 247-276. Retrieved from <http://www.wiley.com/bw/journal.asp?ref=0011-1384&site=1>
- Smith, H. P., & Kaminski, R. J. (2010). Inmate self-injurious behaviors: Distinguishing characteristics within a retrospective study. *Criminal Justice and Behavior*, 37, 81-96. doi:10.1177/0093854809348474
- Smith, C., & Thornberry, T. P. (1995). The relationship between child-hood maltreatment and adolescent involvement in delinquency. *Criminology*, 33, 451-477. Retrieved from <http://www.wiley.com/bw/journal.asp?ref=0011-1384>
- Sobel, M. E., (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290-312). San Francisco: Jossey-Bass.
- Spielberger, C. D., Gorsuch, R. L., Lushene, R., Vagg, P. R., & Jacobs, G. A. (1983). *Manual for the state-trait anxiety inventory (form Y): self-evaluation questionnaire*. Palo Alto, CA: Consulting Psychologists Press.
- Springer, T. & Silk, K.R. (1996). A review of inpatient group therapy for borderline

- personality disorder. *Harvard Review of Psychiatry*, 3(5), 268-278. Retrieved from <http://informahealthcare.com/hrp>
- Stanford, M. S., Mathias, C. W., Dougherty, D. M., Lake, S. L., Anderson, N. E., & Patton, J. H. (2009). Fifty years of the Barratt Impulsiveness Scale: An update and review. *Personality and Individual Differences*, 47, 385-395.
doi:10.1016/j.paid.2009.04.008
- Statistics Canada. (2002). Pilot analysis of recidivism among convicted youth and young adults – 1999/2000 (Catalogue no. 85-002-XPE). *Juristat: Canadian Centre for Justice Statistics*, 22, 1-20. Retrieved from <http://dsp-psd.pwgsc.gc.ca/Collection-R/Statcan/85-002-XIE/85-002-XIE.html>
- Statistics Canada. (2008a). Adult criminal court statistics, 2006/2007 (Catalogue no. 85-002-XIE). *Juristat: Canadian Centre for Justice Statistics*, 28, 1-21. Retrieved from <http://dsp-psd.pwgsc.gc.ca/Collection-R/Statcan/85-002-XIE/85-002-XIE.html>
- Statistics Canada. (2008b). Youth court statistics, 2006/2007 (Catalogue no. 85-002-XIE). *Juristat: Canadian Centre for Justice Statistics*, 28, 1-23. Retrieved from http://dsp-psd.pwgsc.gc.ca/collection_2008/statcan/85-002-x/85-002-xie2008004.pdf
- Stewart, D. G., & Trupin, E. W. (2000). Identifying serious mental and emotional disturbance with the MAYSI. In A. Kavanaugh & D. Peuschold (chairs), *The Massachusetts Youth Screening Inventory*. Symposium presented at meeting of the American Psychology-Law Society, New Orleans.

- Stuart, G. L., Moore, T. M., Gordon, K. C., Ramsey, S. E., & Kahler, C. W. (2006). Psychopathology in women arrested for domestic violence. *Journal of Interpersonal Violence, 21*, 376-389. doi:10.1177/0886260505282888
- Sutherland, E. H., & Cressey, D. R. (1978). *Criminology*. New York: Lippincott.
- Taylor, J., James, L. M., Reeves, M. D., & Kistner, J. A. (2009). Borderline personality traits are associated with poor clinical and psychosocial functioning in delinquent boys. *Journal of Psychopathology and Behavioral Assessment, 31*, 94-103. doi:10.1007/s10862-008-9097-x
- Teitelbaum, L. (2002). Status offenses and status offenders. In M. Rosenheim, F. Zimring, D. Tanenhaus, & B. Dohrn (Eds.), *A century of juvenile justice* (pp. 158-175). Chicago: University of Chicago Press.
- Teplin, L. A., Abram, K. M., & McClelland, G. M. (1996). Prevalence of psychiatric disorders among incarcerated women: I. Pretrial jail detainees. *Archives of General Psychiatry, 53*, 505-512. Retrieved from <http://archpsyc.ama-assn.org/>
- Teplin, L. A., Abram, K. M., McClelland, M., Dulcan, M. K., & Mericle, A. A. (2002). Psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry, 59*, 1133-1143. Retrieved from <http://www.archgenpsychiatry.com>
- Thornberry, T. P., & Krohn, M. D. (2000). The self report method for measuring delinquency and crime. *Criminal Justice, 4*, 33-83. Retrieved from https://www.ncjrs.gov/criminal_justice2000/vol4_2000.html
- Timmerman, I. G. H., & Emmelkamp, P. M. G. (2005). Parental rearing styles and personality disorders in prisoners and forensic patients. *Clinical Psychology and Psychotherapy, 12*, 191-200. doi:10.1002/cpp.449

- Timmons-Mitchell, J., Brown, C., Schulz, C., Webster, S. E., Underwood, L. A., & Semple, W. E. (1997). Comparing the mental health needs of female and male incarcerated juvenile delinquents. *Behavioral Sciences and the Law*, 15, 195-202. Retrieved from <http://ca.wiley.com/wileycda/wileytitle/productcd-vsl.html>
- Torgersen, S., Kringlen, E., & Cramer, V. (2001). The prevalence of personality disorders in a community sample. *Archives of General Psychiatry*, 58, 590-596. Retrieved from <http://archpsyc.ama-assn.org/>
- Trestman, R. L., Ford, J., Zhang, W., & Wiesbrock, V. (2007). Among inmates not identified as acutely mentally ill at intake in Connecticut's jails. *The Journal of the American Academy of Psychiatry and the Law*, 35, 490-500. Retrieved from <http://www.jaapl.org/>
- Trull, T. J. (1995). Borderline personality disorder features in nonclinical young adults: 1. Identification and validation. *Psychological Assessment*, 7, 33-41. Retrieved from <http://www.apa.org/pubs/journals/pas/index.aspx>
- Trull, T. J. (2001). Structural relations between borderline personality disorder features and putative etiological correlates. *Journal of Abnormal Psychology*, 110, 471-481. Retrieved from <http://www.comppsyjournal.com/>
- Trupin, E. W., Stewart, D. G., Beach, B., & Boesky, L. (2002). The effectiveness of a dialectical behaviour therapy program for incarcerated female juvenile offenders. *Child and Adolescent Mental Health*, 7, 121-127. Retrieved from <http://www.wiley.com/bw/journal.asp?ref=1475-357x&site=1>

- Ulrich, S., & Marneros, A. (2004). Dimensions of personality disorders in offenders. *Criminal Behaviour and Mental Health*, 14, 202-213. Retrieved from [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1471-2857](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1471-2857)
- Vaillant, G. E. (1975). Sociopathy as a human process. *Archives of General Psychiatry*, 32, 178-183. Retrieved from <http://archpsyc.ama-assn.org/>
- Van Orden, K. A., Witte, T. K., Gordon, K. H., Bender, T. W., & Joiner, T. E. (2008). Suicidal desire and capability for suicide: Tests of the interpersonal-psychological theory of suicidal behavior among adults. *Journal of Consulting and Clinical Psychology*, 76, 72-83. doi:10.1037/0022-006X.76.1.72
- Vold, G. B., & Bernard, T. J. (1986). *Theoretical Criminology*. New York: Oxford University Press.
- Vollm, B. A., & Dolan, M. C. (2009). Self-harm among UK female prisoners: A cross-sectional study. *Journal of Forensic Psychiatry & Psychology*, 20, 741-751. doi:10.1080/14789940903174030
- Von Schonfeld, C. E., Schneider, F., Schroder, T., Widmann, B., Butthof, U., & Driessen, M. (2006). Prevalence of psychiatric disorders, psychopathology, and the need for treatment in female and male prisoners. *Nervenarzt*, 77, 830-841. doi:10.1007/s00115-005-1946-1
- Wakai, S., & Trestman, R. L. (2008). Impulsivity and aggression. In R. I. Simon, & K. Tardiff (Eds.), *Violence assessment and management* (pp. 211-234). Arlington, VA: American Psychiatric.
- Walker, L. E. (1979). *The Battered Woman*. New York: Harper and Row.

- Warren, J. I., Burnette, M., South, S. C., Chauhan, P., Bale, R., & Friend, R. (2002). Personality disorders and violence among female prison inmates. *The Journal of the American Academy of Psychiatry and the Law*, 30, 502-509. Retrieved from <http://www.jaapl.org/>
- Warren, J. I., & South, S. C. (2009). A symptom level examination of the relationship between Cluster B personality disorders and patterns of criminality and violence in women. *International Journal of Law and Psychiatry*, 32, 10-17. doi:10.1016/j.ijlp.2008.11.005
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070. doi:10.1037/0022-3514.54.6.1063
- Weeks, R., & Widom, C. S. (1998). Self-reports of early childhood victimization among incarcerated adult male felons. *Journal of Interpersonal Violence*, 13, 346-361. doi:10.1177/088626098013003003
- Whitlock, J., Eckenrode, J., & Silverman, D. (2006). Self-injurious behaviors in a college population. *Pediatrics*, 117, 1939-1949. doi:10.1542/peds.2005-2481
- Widiger, T. A. & Trull, T. J. (2007). Plate tectonics in the classification of personality disorder: Shifting to a dimensional model. *American Psychologist*, 62, 71-83. doi:10.1037/0003-066X.62.2.71
- Widiger, T. A., & Weissman, M. M. (1991). Epidemiology of borderline personality disorder. *Hospital and Community Psychiatry*, 42, 1015-1021.

- Williams, K. R., Tuthill, L., & Lio, S. (2008). A portrait of juvenile offending in the United States. In R. Hoge, N. Guerra, & P. Boxer (Eds.), *Treating the Juvenile Offender* (pp. 15-32). New York: The Guilford Press.
- Wilson, J., & Herrnstein, R. J. (1985). *Crime and human nature*. New York: Simon and Schuster.
- Wilson, J. J., Rojas, N., Haapanen, R., Duxbury, E., & Steiner, H. (2001). Substance abuse and criminal recidivism: A prospective study of adolescents. *Child Psychiatry and Human Development*, 31, 297-312. Retrieved from <http://www.springer.com/psychology/child+%26+school+psychology/journal/10578>
- Worden, R. E., & Myers, S. M. (1999). Police encounters with juvenile suspects, Report to the National Research Council's Panel of Juvenile crime: prevention, treatment, and control. Washington, DC.
- Yates, T. M. (2004). The developmental psychopathology of self-injurious behavior: Compensatory regulation in posttraumatic adaptation. *Clinical Psychology Review*, 24, 35-74. doi:10.1016/j.cpr.2003.10.001
- Yoshikawa, H. (1994). Prevention as cumulative protection: Effects of early family support and education on chronic delinquency and its risks. *Psychological Bulletin*, 115, 28-54. Retrieved from <http://www.apa.org/pubs/journals/bul/index.aspx>
- Zanarini, M. C., Frankenburg, F. R., Dubo, E. D., Sickel, A. E., Trikha, A., Levin, A., & Reynolds, V. (1998). Axis II comorbidity of borderline personality disorder. *Comprehensive Psychiatry*, 39, 296-302. doi:10.1016/S0010-440X(98)90038-4

- Zanarini, M. C., Frankenburg, F. R., Hennen, J., Reich, D. B., & Silk, K. R. (2004). Axis I comorbidity in patients with borderline personality disorder: 6-year follow up and prediction of time to remission. *American Journal of Psychiatry*, 161, 2108-2114. Retrieved from <http://ajp.psychiatryonline.org/>
- Zanarini, M.C., Williams, A.A., Lewis, R.E., Reich, R.B., Vera, S.C., Marino, M.F.,... Frankenburg, F.R. (1997). Reported pathological childhood experiences associated with the development of borderline personality disorder. *The American Journal of Psychiatry*, 154, 1101-1106. Retrieved from <http://ajp.psychiatryonline.org/>
- Zimmerman, M., & Mattia, J. I. (1999). Axis I diagnostic comorbidity and borderline personality disorder. *Comprehensive Psychiatry*, 40, 245-252.
doi:10.1016/S0010-440X(99)90123-2
- Zlotnick, C. (1999). Antisocial personality disorder, affect dysregulation and childhood abuse among incarcerated women. *Journal of Personality Disorders*, 13, 90-95. Retrieved from http://www.guilford.com/cgi-bin/cartscript.cgi?page=periodicals/jnpd.htm&cart_id=
- Zlotnick, C., Clarke, J. G., Friedmann, P. D., Roberts, M. B., Sacks, S., & Melnick, G. (2008). Gender differences in comorbid disorders among offenders in prison substance abuse treatment programs. *Behavioral Sciences and the Law*, 26, 403-412. doi:10.1002/bsl.831
- Zuckerman, M., Eysenck, S. B. G., & Eysenck, H. J. (1978). Sensation seeking in England and America: Cross-cultural, age and sex comparisons. *Journal of*

Consulting and Clinical Psychology, 46, 139-149. Retrieved from
<http://www.apa.org/pubs/journals/ccp/index.aspx>

6.0 Appendices

Appendix A

OFFICE OF RESEARCH SERVICES MEMORANDUM

DATE: January 20, 2011

TO: Chelsea A. Delparte
1166 Bayda Crescent
Regina, SK S4N 6Y8

FROM: Dr. Bruce Plouffe
Chair, Research Ethics Board

Re: **Exploring Borderline Personality Disorder Features Dimensionally Among Young Adults with a History of Offending (File #49S1011)**

Please be advised that the University of Regina Research Ethics Board has reviewed your proposal and found it to be:

- ☒ 1. **APPROVED AS SUBMITTED.** Only applicants with this designation have ethical approval to proceed with their research as described in their applications. For research lasting more than one year (Section 1F), **ETHICAL APPROVAL MUST BE RENEWED BY SUBMITTING A BRIEF STATUS REPORT EVERY TWELVE MONTHS.** Approval will be revoked unless a satisfactory status report is received. Any substantive changes in methodology or instrumentation must also be approved prior to their implementation.
- ☐ 2. **ACCEPTABLE SUBJECT TO MINOR CHANGES AND PRECAUTIONS (SEE ATTACHED).** Changes must be submitted to the REB and approved prior to beginning research. Please submit a supplementary memo addressing the concerns to the Chair of the REB. **** Do not submit a new application.** Once changes are deemed acceptable, ethical approval will be granted.
- ☐ 3. **ACCEPTABLE SUBJECT TO CHANGES AND PRECAUTIONS (SEE ATTACHED).** Changes must be submitted to the REB and approved prior to beginning research. Please submit a supplementary memo addressing the concerns to the Chair of the REB. **** Do not submit a new application.** Once changes are deemed acceptable, ethical approval will be granted.
- ☐ 4. **UNACCEPTABLE AS SUBMITTED.** The proposal requires substantial additions or redesign. Please contact the Chair of the REB for advice on how the project proposal might be revised.

Dr. Bruce Plouffe

cc: Kristi D. Wright – Psychology Department

** supplementary memo should be forwarded to the Chair of the Research Ethics Board at the Office of Research Services (Research and Innovation Centre, Room 109) or by e-mail to research.ethics@uregina.ca

Phone: (306) 585-4775
Fax: (306) 585-4893

Appendix B

Consent Form

Project Title: Exploring Borderline Personality Disorder Features Dimensionally Among Young Adults with a History of Offending

Primary Investigator: Chelsea A. Delparte, B.A. Hons.
Department of Psychology
University of Regina
3737 Wascana Parkway
Regina SK S4S 0A2
Phone: (306) 337-3339

Research Supervisor: Kristi D. Wright, Ph.D., R. D. Psych.
Department of Psychology
University of Regina
3737 Wascana Parkway
Regina SK S4S 0A2
Phone: (306) 585-4180

Introduction: You, a current psychology student of the University of Regina, are being invited to take part in an online study to see how personality might differ between young adults with and without a history of criminal behaviour. Students recruited through the psychology participant pool will be given a 2% course credit for two hours of participation. The use of the research participant pool to recruit participants in return for course credit is a common practice in psychological research. Course credit obtained by students can be used to enhance grades in participating psychology courses.

Purpose: The primary purpose of the present study is to examine whether young adults with a history of offending differ from those without a history of offending in terms of personality features and associated characteristics.

Voluntary Participation: Participation in this study is entirely voluntary, so it is up to you to decide whether or not to take part in this study. Before you make a decision, though, it is important for you to understand what the research involves. This consent form will tell you about the study, the purpose of the research, what will happen during the study, and the possible risks, and benefits. If you do decide to take part in this study, you will be asked to sign this consent form. Even after signing the informed consent form, you can choose to drop-out at any time, refuse to answer any questions, as well as request that the information collected not be used. Lack of participation will not result in any negative consequences (e.g., affecting grades, services provided by the university) for yourself.

Who is conducting the study: The Primary Investigator is Chelsea A. Delparte, B.A. Hons. She is a Master's student in Clinical psychology at the University of Regina, Department of Psychology. This project is part of a Master's thesis required for partial fulfillment of the University of Regina's Master's program.

Specific Procedures: Before you agree to participate, we would like to provide you with information about the procedures involved in the study so that you can make an informed decision. You will be asked to read and complete an informed consent form. Following consent, you will be asked to complete a self-report form about history of criminal behaviour and personal characteristics (2 sections, 42 questions, each question containing sub-questions), and fill out six questionnaires asking questions about your personality, feelings, and behaviour. Total time is expected to be approximately 2 hours, however it may take less time.

Benefits: No direct benefit can be guaranteed. However, it is anticipated that the findings from this investigation will aid in a better understanding of the relationship between personality and other feelings and behaviour that may influence criminal activity. Although participants may not benefit directly from this study, it has the potential to greatly improve our understanding of young adult criminal behaviour.

Risks: There are no anticipated risks in terms of participating in this investigation.

Confidentiality: Any information gathered during the data collection process is strictly confidential and will be used for research purposes only by the University of Regina. All information collected will be made anonymous. The electronic file will not contain any identifying information. The consent forms (containing the participant name) will be kept separate from the participant responses. No participant names will be put on the questionnaires, the self-report offending form, or the demographic form. All of the information that we collect will be stored on a lap top/lab computer (requiring an access code) at the University of Regina in the primary investigator's research lab for an indefinite amount of time.

Use of Survey Monkey: It is also important for you to know that "Survey Monkey", a web-survey company that is located in the USA, is the host of this on-line research. This company is subject to U.S. laws; in particular, the US Patriot Act that allows authorities access to the records of internet service providers. Survey Monkey's servers record incoming IP addresses - including that of the computer that you use to access the survey. However, no connection is made between your data and your computer's IP address. If you choose to participate in the survey, you understand that your anonymous responses to the survey questions will be stored and accessed in the USA.

As An Internet-Based Study, What Are the Possible Breaches to Confidentiality and Security: As an Internet-based research study, there is a very small risk that participation may compromise your privacy. A description of these risks follows:

1. To prevent multiple submissions from the same source, this study will record your computer's Internet address, which is a special identification number assigned to your computer by your Internet Service Provider. This information will be stored in a file until the research is completed, at which point the file will be deleted. This information will not be used to identify individuals.
2. The electronic submission of your responses may, in rare instances, be intercepted by unauthorized third parties using sophisticated tools. The likelihood of this occurring is extremely rare and is a risk for anyone when using a computer generally.
3. When using a computer that is connected to the Internet to access websites, information about the websites that you visit will be stored in your Internet browser's history list and in its disk cache. This can be resolved by clearing the history list and disk cache. Note, however, that responses to the survey are only stored temporarily on your computer until you close your browser window. Therefore, after you submit your responses, your computer will automatically delete this information.
4. Given the manner in which this study is being conducted, all of the survey responses will be sent immediately to the survey software website. The survey software website then stores the responses in a private folder accessible only by the primary researchers. All responses will be downloaded weekly and kept in a secure location by the primary researcher until the conclusion of the study. The data stored on these disks cannot be associated with you or your Internet address.

Contact Information: If you have any questions, feedback or comments about the research study or the results of the research study, please feel free to contact the Primary Investigator, Chelsea A. Delparte at (306) 337-3339 (e-mail: delpartc@uregina.ca) or the supervisor of the research project Dr. Kristi D. Wright at (306) 585-4180 (e-mail: kristi.wright@uregina.ca). A summary of study results will be available once all data have been collected and analyzed. This will likely take over a year. If you have any further questions regarding research findings, please feel free to contact us.

If you have any questions or concerns about your rights as a research participant, you may contact the Chair of the Research Ethics Board at (306) 585-4775 (email: research.ethics@uregina.ca).

Participant Consent to Participate:

Are you 18 years of age or older?

Yes

No

Have you read and understood the information page?

Yes

No

Do you freely and voluntarily consent to take part in the research?

Yes

No

Completion of this online questionnaire implies consent to participate in this project. If you have questions you may e-mail the primary investigator, Chelsea Delparte, at delpartc@uregina.ca or, you may contact her supervisor, Dr. Kristi Wright, at kristi.wright@uregina.ca

You may also contact the Chair of the Research Ethics Board at the University of Regina at (306) 585-4775 or by e-mail: research.ethics@uregina.ca

Appendix C

Demographic Information

1. What is your sex?

☐ **Male** ☐ **Female**

2. How old are you?

Age:

3. What is your date of birth? (Month, Day, Year)

Birthday :
 MM DD YY

4. What is your ethnicity?

☐ **White/Caucasian** ☐ **Black/African** ☐ **Hispanic**
☐ **Asian** ☐ **Aboriginal/First Nations** ☐ **Middle Eastern**
☐ **Mixed Ethnicity** ☐ **Other (please specify)**

5. What is your highest level of education?

University: ☐ **first year** ☐ **second year** ☐ **more than 4 years**
 ☐ **third year** ☐ **fourth year**

6. What is your current relationship status?

☐ **Single** ☐ **Divorced** ☐ **Common law/cohabiting**
☐ **Married** ☐ **Separated** ☐ **Dating**
☐ **Widowed** ☐ **Other (please specify)**

7. What is your current employment status? (Select all those that currently apply)

☐ **Employed-full time** ☐ **Employed part-time** ☐ **Employed**
☐ **Student** ☐ **On disability** ☐ **Other (please specify)**

8. What is your current family size?

_____ **number**

9. What is your current household income?

_____ **Less than 30,000** _____ **30,000-49,999** _____ **50,000-99,999**

_____ **100,000-499,000** _____ **greater than 500,000**

10. What are your current living arrangements?

_____ **Living along** _____ **Living with one or more roommates**

_____ **Living with one or both parents** _____ **Living with spouse/partner**

_____ **Living with spouse/partner and children** _____ **Living with children**

_____ **Living with extended family** _____ **Other (please specify)**

11. What is your parents' current relationship status?

_____ **Married** _____ **Divorced** _____ **Separated** _____ **Other (please specify)**

12. Have you ever experienced emotional abuse?

Yes

No

13. Have you ever experienced sexual abuse?

Yes

No

14. Have you ever experienced physical abuse?

Yes

No

15. If you have answered yes to questions 12, 13, or 14, then at what age did the abuse occur?

Age _____

16. For how many years did the abuse occur?

Years _____

Appendix D

Self-Report of Offending – Revised

Date: _____
 mm dd yy

This questionnaire asks about things that people sometimes do. Remember, at the beginning of the study, I told you about the special protection to ensure your privacy? We will ensure that no one will see or find out what your answers are in this study. No one except our research staff will ever see them. Your answers can never be seen by police, the courts, your parents/guardian, or anyone else. This questionnaire is completely anonymous and will only be attached to your questionnaire package which will exclude all identifying information.

These questions will inquire about some things that people do. First, indicate whether you have ever done any of these things and if so answer the questions that follow (e.g., how many times have you done the thing, were you ever arrested for doing the thing, were you ever convicted of doing the thing, when was the last time you did the thing, was there a sentence...).

Please provide your best estimate or guess of the exact number of times you have done each thing.

DO NOT INCLUDE ANY NAMES OR IDENTIFYING INFORMATION (e.g., student number, address, phone number, email address) ON THIS QUESTIONNAIRE

Section I.

1A. Have you ever carried a hidden weapon?

1. Yes – Go to Q. 1B
2. No – Go to Q. 2A

1B. How many times have you done this?

 # of times

1C. Were you ever arrested for this?

1. Yes – Go to Q. 1D
2. No – Go to Q. 2A

1D. Were you ever charged for this?

1. Yes – Go to Q. 1E
2. No – Go to Q. 2A

1E. Were you convicted of this?

1. Yes – Go to Q. 1F
2. No – Go to Q. 2A

1F. How many times were you convicted of carrying a hidden weapon?

 # of times

1G. How old were you when you were first convicted of this?

Age _____

1H. How old were you when you were last convicted of this?

 Age

1I. Was there a sentence for carrying a hidden weapon?

1. Yes – Go to Q. 1J
2. No – Go to 2A

1J. What was your most recent sentence for carrying a hidden weapon? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

1K. How many times have you been sentenced for carrying a hidden weapon?

of times

1L. How old were you when you were first sentenced for this?

Age

1M. How old were you the last time you were sentenced for this?

Age

2A. Have you ever caused trouble in a public place so that people complained about it, such as being loud or disorderly?

1. Yes – Go to Q. 2B
2. No – Go to Q. 3A

2B. How many times have you done this?

of times

2C. Were you ever arrested for this?

1. Yes – Go to Q. 2D
2. No – Go to Q. 3A

2D. Were you ever charged for this?

1. Yes – Go to Q. 2E
2. No – Go to Q. 3A

2E. Were you convicted of this?

1. Yes – Go to Q. 2F
2. No – Go to Q. 3A

2F. How many times were you convicted of this?

of times

2G. How old were you when you were first convicted of this?

Age _____

2H. How old were you when you were last convicted of this?

Age

2I. Was there a sentence for causing trouble in a public place?

1. Yes – Go to Q. 2J
2. No – Go to 3A

2J. What was your most recent sentence for causing trouble in a public place? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

2K. How many times have you been sentenced for causing trouble in a public place?

of times

2L. How old were you when you were first sentenced for this?

Age

2M. How old were you the last time you were sentenced for this?

Age

3A. Have you ever purposely damaged or destroyed property that did not belong to you? (for example, breaking, cutting, or marking up something)

1. Yes – Go to Q. 3B

2. No – Go to Q. 4A

3B. How many times have you done this?

of times

3C. Were you ever arrested for this?

1. Yes – Go to Q. 3D

2. No – Go to Q. 4A

3D. Were you ever charged for this?

1. Yes – Go to Q. 3E

2. No – Go to Q. 4A

3E. Were you convicted of this?

1. Yes – Go to Q. 3F

2. No – Go to Q. 4A

3F. How many times were you convicted of this?

of times

3G. How old were you when you were first convicted of this?

Age

3H. How old were you when you were last convicted of this?

Age

3I. Was there a sentence for purposely damaging or destroying property that did not belong to you?

1. Yes – Go to Q. 3J

2. No – Go to 4A

3J. What was your most recent sentence for purposely damaging or destroying property that did not belong to you? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

3K. How many times have you been sentenced for purposely damaging or destroying property that did not belong to you?

of times

3L. How old were you when you were first sentenced for this?

Age

3M. How old were you the last time you were sentenced for this?

Age

4A. Have you ever purposely set fire to a house, building, car, or vacant lot?

1. Yes – Go to Q. 4B
2. No – Go to Q. 5A

4B. How many times have you done this?

of times

4C. Were you ever arrested for this?

3. Yes – Go to Q. 4D
4. No – Go to Q. 5A

4D. Were you ever charged for this?

1. Yes – Go to Q. 4E
2. No – Go to Q. 5A

4E. Were you convicted of this?

1. Yes – Go to Q. 4F
2. No – Go to Q. 5A

4F. How many times were you convicted of this?

of times

4G. How old were you when you were first convicted of this?

Age _____

4H. How old were you when you were last convicted of this?

Age

4I. Was there a sentence for purposely setting fire to a house, building, car, or vacant lot?

1. Yes – Go to Q. 4J
2. No – Go to 5A

4J. What was your most recent sentence for purposely setting fire to a house, building, car, or vacant lot? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

4K. How many times have you been sentenced for purposely setting fire to a house, building, car, or vacant lot?

of times

4L. How old were you when you were first sentenced for this?

Age

4M. How old were you the last time you were sentenced for this?

Age

5A. Have you ever entered or broke into a building to steal something?

1. Yes – Go to Q. 5B
2. No – Go to Q. 6A

5B. How many times have you done this?

of times

5C. Were you ever arrested for this?

1. Yes – Go to Q. 5D
2. No – Go to Q. 6A

5D. Were you ever charged for this?

1. Yes – Go to Q. 5E
2. No – Go to Q. 6A

5E. Were you convicted of this?

1. Yes – Go to Q. 5F
2. No – Go to Q. 6A

5F. How many times were you convicted of this?

of times

5G. How old were you when you were first convicted of this?

Age

5H. How old were you when you were last convicted of this?

Age

5I. Was there a sentence for entering or breaking into a building to steal something?

1. Yes – Go to Q. 5J
2. No – Go to 6A

5J. What was your most recent sentence for entering or breaking into a building to steal something? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

5K. How many times have you been sentenced for entering or breaking into a building to steal something?

of times

5L. How old were you when you were first sentenced for this?

Age

5M. How old were you the last time you were sentenced for this?

Age

6A. Have you ever stolen something from a store?

1. Yes – Go to Q. 6B
2. No – Go to Q. 7A

6B. How many times have you done this?

of times

6C. Were you ever arrested for this?

1. Yes – Go to Q. 6D
2. No – Go to Q. 7A

6D. Were you ever charged for this?

1. Yes – Go to Q. 6E
2. No – Go to Q. 7A

6E. Were you convicted of this?

1. Yes – Go to Q. 6F
2. No – Go to Q. 7A

6F. How many times were you convicted of this?

of times

6G. How old were you when you were first convicted of this?

Age _____

6H. How old were you when you were last convicted of this?

Age

6I. What was the total cost of the items you stole?

\$ __, __ __ __. __ __

6J. Was there a sentence for stealing something from a store?

1. Yes – Go to Q. 6K
2. No – Go to 7A

6K. What was your most recent sentence for stealing something from a store? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

6L. How many times have you been sentenced for stealing something from a store?

of times

6M. How old were you when you were first sentenced for this?

Age

6N. How old were you the last time you were sentenced for this?

Age

7A. Have you ever taken something that did not belong to you from any member of your household?

1. Yes – Go to Q. 7B
2. No – Go to Q. 8A

7B. How many times have you done this?

of times

7C. Were you ever arrested for this?

1. Yes – Go to Q. 7D
2. No – Go to Q. 8A

7D. Were you ever charged for this?

1. Yes – Go to Q. 7E
2. No – Go to Q. 8A

7E. Were you convicted of this?

1. Yes – Go to Q. 7F
2. No – Go to Q. 8A

7F. How many times were you convicted of this?

of times

7G. How old were you when you were first convicted of this?

Age

7H. How old were you when you were last convicted of this?

Age

7I. Was there a sentence for taking something that did not belong to you from a member of your household?

1. Yes – Go to Q. 7J
2. No – Go to 8A

7J. What was your most recent sentence for taking something that did not belong to you from any member of your household? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

7K. How many times have you been sentenced for taking something that did not belong to you from any member of your household?

of times

7L. How old were you when you were first sentenced for this?

Age

7M. How old were you the last time you were sentenced for this?

Age

8. Have you ever had a job?

1. Yes – Go to 8A
2. No – Go to 9A

8A. Have you ever taken something that did not belong to you from your place of work or your employer?

1. Yes – Go to Q. 8B
2. No – Go to Q. 9A

8B. How many times have you done this?

of times

8C. Were you ever arrested for this?

1. Yes – Go to Q. 8D
2. No – Go to Q. 9A

8D. Were you ever charged for this?

1. Yes – Go to Q. 8E
2. No – Go to Q. 9A

8E. Were you convicted of this?

1. Yes – Go to Q. 8F
2. No – Go to Q. 9A

8F. How many times were you convicted of this?

of times

8G. How old were you when you were first convicted of this?

Age _____

8H. How old were you when you were last convicted of this?

Age

8I. Was there a sentence for taking something that did not belong to you from your place of work or your employer?

1. Yes – Go to Q. 8J
2. No – Go to 9A

8J. What was your most recent sentence for taking something that did not belong to you from your place of work or your employer? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

8K. How many times have you been sentenced for taking something that did not belong to you from your place of work or your employer?

of times

8L. How old were you when you were first sentenced for this?

Age

8M. How old were you the last time you were sentenced for this?

Age

9A. Have you ever snatched someone's purse or wallet or picked someone's pocket?

1. Yes – Go to Q. 9B
2. No – Go to Q. 10A

9B. How many times have you done this?

of times

9C. Were you ever arrested for this?

1. Yes – Go to Q. 9D
2. No – Go to Q. 10A

9D. Were you ever charged for this?

1. Yes – Go to Q. 9E
2. No – Go to Q. 10A

9E. Were you convicted of this?

1. Yes – Go to Q. 9F
2. No – Go to Q. 10A

9F. How many times were you convicted of this?

of times

9G. How old were you when you were first convicted of this?

Age _____

9H. How old were you when you were last convicted of this?

Age

9I. Was there a sentence for snatching someone's purse or wallet or picking someone's pocket?

1. Yes – Go to Q. 9J
2. No – Go to 10A

9J. What was your most recent sentence for snatching someone's purse or wallet or picking someone's pocket? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

9K. How many times have you been sentenced for snatching someone's purse or wallet or picking someone's pocket?

of times

9L. How old were you when you were first sentenced for this?

Age

9M. How old were you the last time you were sentenced for this?

Age

10A. Have you ever taken something that did not belong to you from a car?

1. Yes – Go to Q. 10B
2. No – Go to Q. 11A

10B. How many times have you done this?

of times

10C. Were you ever arrested for this?

1. Yes – Go to Q. 10D
2. No – Go to Q. 11A

10D. Were you ever charged for this?

1. Yes – Go to Q. 10E
2. No – Go to Q. 11A

10E. Were you convicted of this?

1. Yes – Go to Q. 10F
2. No – Go to Q. 11A

10F. How many times were you convicted of this?

of times

10G. How old were you when you were first convicted of this?

Age

10H. How old were you when you were last convicted of this?

Age

10I. Was there a sentence for taking something that did not belong to you from a car?

1. Yes – Go to Q. 10J
2. No – Go to 11A

10J. What was your most recent sentence for taking something that did not belong to you from a car? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

10K. How many times have you been sentenced for taking something that did not belong to you from a car?

of times

10L. How old were you when you were first sentenced for this?

Age

10M. How old were you the last time you were sentenced for this?

Age

11A. Have you ever knowingly bought or sold stolen goods?

1. Yes – Go to Q. 11B
2. No – Go to Q. 12A

11B. How many times have you done this?

of times

11C. Were you ever arrested for this?

1. Yes – Go to Q. 11D
2. No – Go to Q. 12A

11D. Were you ever charged for this?

1. Yes – Go to Q. 11E
2. No – Go to Q. 12A

11E. Were you convicted of this?

1. Yes – Go to Q. 11F
2. No – Go to Q. 12A

11F. How many times were you convicted of this?

of times

11G. How old were you when you were first convicted of this?

Age _____

11H. How old were you when you were last convicted of this?

Age

11I. Was there a sentence for knowingly buying or selling stolen goods?

1. Yes – Go to Q. 11J
2. No – Go to 12A

11J. What was your most recent sentence for knowingly buying or selling stolen goods?
(e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

11K. How many times have you been sentenced for knowingly buying or selling stolen goods?

of times

11L. How old were you when you were first sentenced for this?

Age

11M. How old were you the last time you were sentenced for this?

Age

12A. Have you ever stolen a car or motorcycle to keep or sell?

1. Yes – Go to Q. 12B
2. No – Go to Q. 13A

12B. How many times have you done this?

of times

12C. Were you ever arrested for this?

1. Yes – Go to Q. 12D
2. No – Go to Q. 13A

12D. Were you ever charged for this?

1. Yes – Go to Q. 12E
2. No – Go to Q. 13A

12E. Were you convicted of this?

1. Yes – Go to Q. 12F
2. No – Go to Q. 13A

12F. How many times were you convicted of this?

of times

12G. How old were you when you were first convicted of this?

Age

12H. How old were you when you were last convicted of this?

Age

12I. Was there a sentence for stealing a car or motorcycle to keep or sell?

1. Yes – Go to Q. 12J
2. No – Go to 13A

12J. What was your most recent sentence for stealing a car or motorcycle to keep or sell?
(e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

12K. How many times have you been sentenced for stealing a car or motorcycle to keep or sell?

of times

12L. How old were you when you were first sentenced for this?

Age

12M. How old were you the last time you were sentenced for this?

Age

13A. Have you ever used checks illegally to pay for something?

1. Yes – Go to Q. 13B
2. No – Go to Q. 14A

13B. How many times have you done this?

of times

13C. Were you ever arrested for this?

1. Yes – Go to Q. 13D
2. No – Go to Q. 14A

13D. Were you ever charged for this?

1. Yes – Go to Q. 13E
2. No – Go to Q. 14A

13E. Were you convicted of this?

1. Yes – Go to Q. 13F
2. No – Go to Q. 14A

13F. How many times were you convicted of this?

of times

13G. How old were you when you were first convicted of this?

Age _____

13H. How old were you when you were last convicted of this?

Age

13I. Was there a sentence for using checks illegally to pay for something?

1. Yes – Go to Q. 13J
2. No – Go to 14A

13J. What was your most recent sentence for using checks illegally to pay for something?
(e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

13K. How many times have you been sentenced for using checks illegally to pay for something?

of times

13L. How old were you when you were first sentenced for this?

Age

13M. How old were you the last time you were sentenced for this?

Age

14A. Have you ever used credit or bank cards without the owners permission?

1. Yes – Go to Q. 14B
2. No – Go to Q. 15A

14B. How many times have you done this?

of times

14C. Were you ever arrested for this?

1. Yes – Go to Q. 14D
2. No – Go to Q. 15A

14D. Were you ever charged for this?

1. Yes – Go to Q. 14E
2. No – Go to Q. 15A

14E. Were you convicted of this?

1. Yes – Go to Q. 14F
2. No – Go to Q. 15A

14F. How many times were you convicted of this?

of times

14G. How old were you when you were first convicted of this?

Age

14H. How old were you when you were last convicted of this?

Age

14I. Was there a sentence for using credit or bank cards without the owners permission?

1. Yes – Go to Q. 14J
2. No – Go to 15A

14J. What was your most recent sentence for using credit or bank cards without the owners permission? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

14K. How many times have you been sentenced for using credit or bank cards without the owners permission?

of times

14L. How old were you when you were first sentenced for this?

Age

14M. How old were you the last time you were sentenced for this?

Age

15A. Have you ever sold marijuana or pot?

1. Yes – Go to Q. 15B
2. No – Go to Q. 16A

15B. How many times have you done this?

of times

15C. Were you ever arrested for this?

1. Yes – Go to Q. 15D
2. No – Go to Q. 16A

15D. Were you ever charged for this?

1. Yes – Go to Q. 15E
2. No – Go to Q. 16A

15E. Were you convicted of this?

1. Yes – Go to Q. 15F
2. No – Go to Q. 16A

15F. How many times were you convicted of this?

of times

15G. How old were you when you were first convicted of this?

Age

15H. How old were you when you were last convicted of this?

Age

15I. Was there a sentence for selling marijuana or pot?

1. Yes – Go to Q. 15J
2. No – Go to 16A

15J. What was your most recent sentence for selling marijuana or pot? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

15K. How many times have you been sentenced for selling marijuana or pot?

of times

15L. How old were you when you were first sentenced for this?

Age

15M. How old were you the last time you were sentenced for this?

Age

16A. Have you ever sold cocaine or crack?

1. Yes – Go to Q. 16B
2. No – Go to Q. 17A

16B. How many times have you done this?

of times

16C. Were you ever arrested for this?

1. Yes – Go to Q. 16D
2. No – Go to Q. 17A

16D. Were you ever charged for this?

1. Yes – Go to Q. 16E
2. No – Go to Q. 17A

16E. Were you convicted of this?

1. Yes – Go to Q. 16F
2. No – Go to Q. 17A

16F. How many times were you convicted of this?

of times

16G. How old were you when you were first convicted of this?

Age

16H. How old were you when you were last convicted of this?

Age

16I. Was there a sentence for selling cocaine or crack?

1. Yes – Go to Q. 16J
2. No – Go to 17A

16J. What was your most recent sentence for selling cocaine or crack? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

16K. How many times have you been sentenced for selling cocaine or crack?

of times

16L. How old were you when you were first sentenced for this?

Age

16M. How old were you the last time you were sentenced for this?

Age

17A. Have you ever sold heroin?

1. Yes – Go to Q. 17B
2. No – Go to Q. 18A

17B. How many times have you done this?

of times

17C. Were you ever arrested for this?

1. Yes – Go to Q. 17D
2. No – Go to Q. 18A

17D. Were you ever charged for this?

1. Yes – Go to Q. 17E
2. No – Go to Q. 18A

17E. Were you convicted of this?

1. Yes – Go to Q. 17F
2. No – Go to Q. 18A

17F. How many times were you convicted of this?

of times

17G. How old were you when you were first convicted of this?

Age _____

17H. How old were you when you were last convicted of this?

Age

17I. Was there a sentence for selling heroin?

1. Yes – Go to Q. 17J
2. No – Go to 18A

17J. What was your most recent sentence for selling heroin? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

17K. How many times have you been sentenced for selling heroin?

of times

17L. How old were you when you were first sentenced for this?

Age

17M. How old were you the last time you were sentenced for this?

Age

18A. Have you ever sold drugs (other than those already asked about)?

1. Yes – Go to Q. 18B
2. No – Go to Q. 19A

18B. How many times have you done this?

of times

18C. Were you ever arrested for this?

1. Yes – Go to Q. 18D
2. No – Go to Q. 19A

18D. Were you ever charged for this?

1. Yes – Go to Q. 18E
2. No – Go to Q. 19A

18E. Were you convicted of this?

1. Yes – Go to Q. 18F
2. No – Go to Q. 19A

18F. How many times were you convicted of this?

of times

18G. How old were you when you were first convicted of this?

Age _____

18H. How old were you when you were last convicted of this?

Age

18I. Was there a sentence for selling drugs?

1. Yes – Go to Q. 18J
2. No – Go to 19A

18J. What was your most recent sentence for selling drugs? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

18K. How many times have you been sentenced for selling drugs?

of times

18L. How old were you when you were first sentenced for this?

Age

18M. How old were you the last time you were sentenced for this?

Age

19A. Have you ever purchased illegal drugs (e.g., marijuana, cocaine, heroin, crack, etc.)

1. Yes – Go to Q. 19B
2. No – Go to Q. 20A

19B. How many times have you done this?

of times

19C. Were you ever arrested for this?

1. Yes – Go to Q. 19D
2. No – Go to Q. 20A

19D. How much of the illegal drug did you purchase?

quantity

19E. Were you ever charged for this?

1. Yes – Go to Q. 19F
2. No – Go to Q. 20A

19F. Were you convicted of this?

1. Yes – Go to Q. 19G
2. No – Go to Q. 20A

19G. How many times were you convicted of this?

of times

19H. How old were you when you were first convicted of this?

Age

19I. How old were you when you were last convicted of this?

Age

19J. Was there a sentence for purchasing illegal drugs?

1. Yes – Go to Q. 19K
2. No – Go to 20A

19K. What was your most recent sentence for purchasing illegal drugs (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

19L. How many times have you been sentenced for purchasing illegal drugs?

of times

19M. How old were you when you were first sentenced for this?

Age

19N. How old were you the last time you were sentenced for this?

Age

20A. Have you ever threatened to cause bodily harm to another person, with the means to follow through on that threat?

1. Yes – Go to Q. 20B
2. No – Go to Q. 21A

20B. How many times have you done this?

of times

20C. Were you ever arrested for this?

3. Yes – Go to Q. 20D
4. No – Go to Q. 21A

20D. Were you ever charged for this?

1. Yes – Go to Q. 20E
2. No – Go to Q. 21A

20E. Were you convicted of this?

1. Yes – Go to Q. 20F
2. No – Go to Q. 21A

20F. How many times were you convicted of this?

of times

20G. How old were you when you were first convicted of this?

Age _____

20H. How old were you when you were last convicted of this?

Age

20I. Who have you been convicted of threatening to cause bodily harm to? (Circle all that apply)

1. sibling	2. mother
3. father	4. child
5. partner	6. roommate
7. friend	8. neighbour
9. acquaintance	10. gang member
11. stranger	
12 other (specify):	
a.	_____
b.	_____
c.	_____

20J. Was there a sentence for threatening to cause bodily harm to another person, with the means to follow through on that threat?

1. Yes – Go to Q. 20K
2. No – Go to 21A

20K. What was your most recent sentence for threatening to cause bodily harm to another person, with the means to follow through on that threat? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

20L. How many times have you been sentenced for threatening to cause bodily harm to another person, with the means to follow through on that threat?

of times

20M. How old were you when you were first sentenced for this?

Age

20N. How old were you the last time you were sentenced for this?

Age

21A. Have you ever hit someone with whom you lived, with the idea of hurting them?

1. Yes – Go to Q. 21B
2. No – Go to Q. 22A

21B. How many times have you done this?

of times

21C. Were you ever arrested for this?

1. Yes – Go to Q. 21D
2. No – Go to Q. 22A

21D. Were you ever charged for this?

1. Yes – Go to Q. 21E
2. No – Go to Q. 22A

21E. Were you convicted of this?

1. Yes – Go to Q. 21F
2. No – Go to Q. 22A

21F. How many times were you convicted of this?

of times

21G. How old were you when you were first convicted of this?

Age _____

21H. How old were you when you were last convicted of this?

Age

21I. Who have you been convicted of hitting, with whom you lived, with the idea of hurting them? (Circle all that apply)

- 1. sibling 2. mother
- 3. father 4. child
- 5. partner 6. roommate
- 7. other (specify):
- a. _____
- b. _____
- c. _____

21J. Was anyone hit/hurt seriously enough to see a doctor

- 1. Yes
- 2. No

21K. Was there a sentence for hitting someone with whom you lived, with the idea of hurting them?

- 1. Yes – Go to Q. 21L
- 2. No – Go to 22A

21L. What was your most recent sentence for hitting someone with whom you lived, with the idea of hurting them? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

21M. How many times have you been sentenced for hitting someone with whom you lived, with the idea of hurting them?

of times

21N. How old were you when you were first sentenced for this?

Age

21O. How old were you the last time you were sentenced for this?

Age

22A. Have you ever hit someone with whom you did not live with the idea of hurting them?

1. Yes – Go to Q. 22B
2. No – Go to Q. 23A

22B. How many times have you done this?

of times

22C. Were you ever arrested for this?

1. Yes – Go to Q. 22D
2. No – Go to Q. 23A

22D. Were you ever charged for this?

1. Yes – Go to Q. 22E
2. No – Go to Q. 23A

22E. Were you convicted of this?

1. Yes – Go to Q. 22F
2. No – Go to Q. 23A

22F. How many times were you convicted of this?

of times

22G. How old were you when you were first convicted of this?

Age

22H. How old were you when you were last convicted of this?

Age

22I. Who have you been convicted of hitting, with whom you did not live, with the idea of hurting them? (Circle all that apply)

1. sibling	2. mother
3. father	4. child
5. partner	6. roommate
7. friend	8. neighbour
9. acquaintance	10. gang member
11. stranger	
12. other (specify):	
a. _____	
b. _____	
c. _____	

22J. Was anyone hit/hurt seriously enough to see a doctor

1. Yes
2. No

22K. Was there a sentence for hitting someone with whom you did not live with the idea of hurting them?

1. Yes – Go to Q. 22L
2. No – Go to 23A

22L. What was your most recent sentence for hitting someone with whom you did not live with the idea of hurting them? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

22M. How many times have you been sentenced for hitting someone with whom you did not live with the idea of hurting them?

of times

22N. How old were you when you were first sentenced for this?

Age

22O. How old were you the last time you were sentenced for this?

Age

23A. Have you ever attacked someone with a weapon? (e.g., shot at someone, hit someone with a weapon)

1. Yes – Go to Q. 23B
2. No – Go to Q. 24A

23B. How many times have you done this?

of times

23C. Were you ever arrested for this?

1. Yes – Go to Q. 23D
2. No – Go to Q. 24A

23D. Were you ever charged for this?

1. Yes – Go to Q. 23E
2. No – Go to Q. 24A

23E. Were you convicted of this?

1. Yes – Go to Q. 23F
2. No – Go to Q. 24A

23F. How many times were you convicted of this?

of times

23G. How old were you when you were first convicted of this?

Age _____

23H. How old were you when you were last convicted of this?

Age

23I. Who have you been convicted of attacking with a weapon? (Circle all that apply)

1. sibling	2. mother
3. father	4. child
5. partner	6. roommate
7. friend	8. neighbour
9. acquaintance	10. gang member
11. stranger	
12. other (specify):	
a. _____	
b. _____	
c. _____	

23J. Was anyone hurt seriously enough to see a doctor

1. Yes
2. No

23K. Was there a sentence for attacking someone with a weapon?

1. Yes – Go to Q. 23L
2. No – Go to 24A

23L. What was your most recent sentence for attacking someone with a weapon? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

23M. How many times have you been sentenced for attacking someone with a weapon?

of times

23N. How old were you when you were first sentenced for this?

Age

23O. How old were you the last time you were sentenced for this?

Age

24A. Have you ever used a weapon or force to get money or things from people?

1. Yes – Go to Q. 24B
2. No – Go to Q. 25A

24B. How many times have you done this?

of times

24C. Were you ever arrested for this?

1. Yes – Go to Q. 24D
2. No – Go to Q. 25A

24D. Were you ever charged for this?

1. Yes – Go to Q. 24E
2. No – Go to Q. 25A

24E. Were you convicted of this?

1. Yes – Go to Q. 24F
2. No – Go to Q. 25A

24F. How many times were you convicted of this?

of times

24G. How old were you when you were first convicted of this?

Age _____

24H. How old were you when you were last convicted of this?

Age

24I. Where have you been convicted of using a weapon or force to get money or things from people? (Circle all that apply)

1. school
2. home
3. street
4. business
5. bar
6. car
7. other (specify):
 - a. _____
 - b. _____
 - c. _____

24J. Was anyone hurt seriously enough to see a doctor

1. Yes
2. No

24K. Was there a sentence for using a weapon or force to get money or things from people?

1. Yes – Go to Q. 24L
2. No – Go to 25A

24L. What was your most recent sentence for using a weapon or force to get money or things from people? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

24M. How many times have you been sentenced for using a weapon or force to get money or things from people?

of times

24N. How old were you when you were first sentenced for this?

Age

24O. How old were you the last time you were sentenced for this?

Age

25A. Have you ever thrown objects, such as rocks or bottles, at people (other than events you have already mentioned)?

1. Yes – Go to Q. 25B
2. No – Go to Q. 26A

25B. How many times have you done this?

of times

25C. Were you ever arrested for this?

1. Yes – Go to Q. 25D
2. No – Go to Q. 26A

25D. Were you ever charged for this?

1. Yes – Go to Q. 25E
2. No – Go to Q. 26A

25E. Were you convicted of this?

1. Yes – Go to Q. 25F
2. No – Go to Q. 26A

25F. How many times were you convicted of this?

of times

25G. How old were you when you were first convicted of this?

Age

25H. How old were you when you were last convicted of this?

Age

25I. When you were convicted of throwing objects at people was anyone hurt seriously enough to see a doctor?

1. Yes
2. No

25J. Was there a sentence for throwing objects at people?

1. Yes – Go to Q. 25K
2. No – Go to 26A

25K. What was your most recent sentence for throwing objects at people? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

25L. How many times have you been sentenced for throwing objects at people?

of times

25M. How old were you when you were first sentenced for this?

Age

25N. How old were you the last time you were sentenced for this?

Age

26A. Have you ever been involved in a gang fight in which someone was hurt or threatened with harm?

1. Yes – Go to Q. 26B
2. No – Go to Q. 27A

26B. How many times have you done this?

of times

26C. Were you ever arrested for this?

1. Yes – Go to Q. 26D
2. No – Go to Q. 27A

26D. Were you ever charged for this?

1. Yes – Go to Q. 26E

2. No – Go to Q. 27A

26E. Were you convicted of this?

1. Yes – Go to Q. 26F

2. No – Go to Q. 27A

26F. How many times were you convicted of this?

of times

26G. How old were you when you were first convicted of this?

Age _____

26H. How old were you when you were last convicted of this?

Age

26I. When you were convicted of being involved in a gang fight in which someone was hurt or threatened with harm, were weapons used?

1. Yes

2. No

26J. Was anyone hurt seriously enough to see a doctor

1. Yes

2. No

26K. Was there a sentence for being involved in a gang fight in which someone was hurt or threatened with harm?

1. Yes – Go to Q. 26L

2. No – Go to 27A

26L. What was your most recent sentence for being involved in a gang fight in which someone was hurt or threatened with harm? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

26M. How many times have you been sentenced for being involved in a gang fight in which someone was hurt or threatened with harm?

of times

26N. How old were you when you were first sentenced for this?

Age

26O. How old were you the last time you were sentenced for this?

Age

27A. Have you ever tried to kiss someone against their will?

1. Yes – Go to Q. 27B
2. No – Go to Q. 28A

27B. How many times have you done this?

of times

27C. Were you ever arrested for this?

1. Yes – Go to Q. 27D
2. No – Go to Q. 28A

27D. Were you ever charged for this?

1. Yes – Go to Q. 27E
2. No – Go to Q. 28A

27E. Were you convicted of this?

1. Yes – Go to Q. 27F
2. No – Go to Q. 28A

27F. How many times were you convicted of this?

of times

27G. How old were you when you were first convicted of this?

Age _____

27H. How old were you when you were last convicted of this?

Age

27I. Was there a sentence for trying to kiss someone against their will?

1. Yes – Go to Q. 27J
2. No – Go to 28A

27J. What was your most recent sentence for trying to kiss someone against their will?
(e.g., fine, probation, community service, placement in a correctional facility)

Sentence

27K. How many times have you been sentenced for trying to kiss someone against their will?

of times

27L. How old were you when you were first sentenced for this?

Age

27M. How old were you the last time you were sentenced for this?

Age

28A. Have you ever tried to sexually touch someone against their will?

1. Yes – Go to Q. 28B
2. No – Go to Q. 29A

28B. How many times have you done this?

of times

28C. Were you ever arrested for this?

1. Yes – Go to Q. 28D
2. No – Go to Q. 29A

28D. Were you ever charged for this?

1. Yes – Go to Q. 28E
2. No – Go to Q. 29A

28E. Were you convicted of this?

1. Yes – Go to Q. 28F
2. No – Go to Q. 29A

28F. How many times were you convicted of this?

of times

28G. How old were you when you were first convicted of this?

Age _____

28H. How old were you when you were last convicted of this?

Age

28I. Was there a sentence for trying to sexually touch someone against their will?

1. Yes – Go to Q. 28J
2. No – Go to 29A

28J. What was your most recent sentence for trying to sexually touch someone against their will? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

28K. How many times have you been sentenced for trying to sexually touch someone against their will?

of times

28L. How old were you when you were first sentenced for this?

Age

28M. How old were you the last time you were sentenced for this?

Age

29A. Have you ever tried to have sexual relations with someone against their will?

1. Yes – Go to Q. 29B
2. No – Go to Q. 30A

29B. How many times have you done this?

of times

29C. Were you ever arrested for this?

1. Yes – Go to Q. 29D
2. No – Go to Q. 30A

29D. Were you ever charged for this?

1. Yes – Go to Q. 29E
2. No – Go to Q. 30A

29E. Were you convicted of this?

1. Yes – Go to Q. 29F
2. No – Go to Q. 30A

29F. How many times were you convicted of this?

of times

29G. How old were you when you were first convicted of this?

Age _____

29H. How old were you when you were last convicted of this?

Age

29I. Thinking of the last time you were convicted of this, did you know the person?

1. Yes
2. No

29J. Did you physically harm or threaten to hurt this person to get them to have sex with you?

1. Yes
2. No

29K. Was there a sentence for trying to have sexual relations with someone against their will?

1. Yes – Go to Q. 29L
2. No – Go to 30A

29L. What was your most recent sentence for trying to have sexual relations with someone against their will? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

29M. How many times have you been sentenced for trying to have sexual relations with someone against their will?

of times

29N. How old were you when you were first sentenced for this?

Age

29O. How old were you the last time you were sentenced for this?

Age

30A. Have you ever paid someone to have sexual relations with you?

1. Yes – Go to Q. 30B
2. No – Go to Qu. 31A

30B. How many times have you done this?

of times

30C. Were you ever arrested for this?

1. Yes – Go to Q. 30D
2. No – Go to Q. 31A

30D. Were you ever charged for this?

1. Yes – Go to Q. 30E
2. No – Go to Q. 31A

30E. Were you convicted of this?

1. Yes – Go to Q. 30F
2. No – Go to Q. 31A

30F. How many times were you convicted of this?

of times

30G. How old were you when you were first convicted of this?

Age

30H. How old were you when you were last convicted of this?

Age

30I. Was there a sentence for paying someone to have sexual relations with you?

1. Yes – Go to Q. 30J
2. No – Go to 31A

30J. What was your most recent sentence for paying someone to have sexual relations with you (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

30K. How many times have you been sentenced for using a false name or alias to try to obtain something you were not entitled to?

of times

30L. How old were you when you were first sentenced for this?

Age

30M. How old were you the last time you were sentenced for this?

Age

31A. Have you ever been paid by someone for having sexual relations with them?

1. Yes – Go to Q. 31B
2. No – Go to Q. 32A

31B. How many times have you done this?

of times

31C. Were you ever arrested for this?

1. Yes – Go to Q. 31D
2. No – Go to Q. 32A

31D. Were you ever charged for this?

1. Yes – Go to Q. 31E
2. No – Go to Q. 32A

31E. Were you convicted of this?

1. Yes – Go to Q. 31F
2. No – Go to Q. 32A

31F. How many times were you convicted of this?

of times

31G. How old were you when you were first convicted of this?

Age _____

31H. How old were you when you were last convicted of this?

Age

31I. Was there a sentence for being paid by someone for having sexual relations with them?

1. Yes – Go to Q. 31J
2. No – Go to 32A

31J. What was your most recent sentence for being paid by someone for having sexual relations with them? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

31K. How many times have you been sentenced for being paid by someone for having sexual relations with them?

of times

31L. How old were you when you were first sentenced for this?

Age

31M. How old were you the last time you were sentenced for this?

Age

32A. Have you ever used a false name or alias to try to obtain something you were not entitled to, such as a job or bank loan?

1. Yes – Go to Q. 32B
2. No – Go to Q. 33A

32B. How many times have you done this?

of times

32C. Were you ever arrested for this?

3. Yes – Go to Q. 32D
4. No – Go to Q. 33A

32D. Were you ever charged for this?

1. Yes – Go to Q. 32E
2. No – Go to Q. 33A

32E. Were you convicted of this?

1. Yes – Go to Q. 32F
2. No – Go to Q. 33A

32F. How many times were you convicted of this?

of times

32G. How old were you when you were first convicted of this?

Age _____

32H. How old were you when you were last convicted of this?

Age

32I. Was there a sentence for using a false name or alias to try to obtain something you were not entitled to?

1. Yes – Go to Q. 32J
2. No – Go to 33A

32J. What was your most recent sentence for using a false name or alias to try to obtain something you were not entitled to? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

32K. How many times have you been sentenced for using a false name or alias to try to obtain something you were not entitled to?

of times

32L. How old were you when you were first sentenced for this?

Age

32M. How old were you the last time you were sentenced for this?

Age

33A. Have you ever given false information (other than a false name) on an application for a job, a tax form, or an application for a loan or bank account?

1. Yes – Go to Q. 33B
2. No – Go to Q. 34A

33B. How many times have you done this?

of times

33C. Were you ever arrested for this?

1. Yes – Go to Q. 33D
2. No – Go to Q. 34A

33D. Were you ever charged for this?

1. Yes – Go to Q. 33E
2. No – Go to Q. 34A

33E. Were you convicted of this?

1. Yes – Go to Q. 33F
2. No – Go to Q. 34A

33F. How many times were you convicted of this?

of times

33G. How old were you when you were first convicted of this?

Age _____

33H. How old were you when you were last convicted of this?

Age

33I. Was there a sentence for giving false information on an application for a job, a tax form, or an application for a loan or bank account?

1. Yes – Go to Q. 33J
2. No – Go to 34A

33J. What was your most recent sentence for giving false information? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

33K. How many times have you been sentenced for giving false information?

of times

33L. How old were you when you were first sentenced for this?

Age

33M. How old were you the last time you were sentenced for this?

Age

34A. Have you ever obtained welfare benefits or unemployment checks that you were not entitled to?

1. Yes – Go to Q. 34B
2. No – Go to Q. 35A

34B. How many times have you done this?

of times

34C. Were you ever arrested for this?

1. Yes – Go to Q. 34D
2. No – Go to Q. 35A

34D. Were you ever charged for this?

1. Yes – Go to Q. 34E
2. No – Go to Q. 35A

34E. Were you convicted of this?

1. Yes – Go to Q. 34F
2. No – Go to Q. 35A

34F. How many times were you convicted of this?

of times

34G. How old were you when you were first convicted of this?

Age _____

34H. How old were you when you were last convicted of this?

Age

34I. Was there a sentence for obtaining welfare benefits or unemployment checks that you were not entitled to?

1. Yes – Go to Q. 34J
2. No – Go to 35A

34J. What was your most recent sentence for obtaining welfare benefits or unemployment checks that you were not entitled to? (e.g., fine, pay them back, probation, community service, placement in a correctional facility)

Sentence

34K. How many times have you been sentenced for obtaining welfare benefits or unemployment checks that you were not entitled to?

of times

34L. How old were you when you were first sentenced for this?

Age

34M. How old were you the last time you were sentenced for this?

Age

35A. Have you ever been given a ticket for a driving offense?

1. Yes – Go to Q. 35B
2. No – Go to Q. 36A

35B. How many times have you done this?

of times

35C. Did any of these driving offenses involve alcohol?

1. Yes
2. No

35D. Were you ever charged for this?

1. Yes – Go to Q. 35E
2. No – Go to Q. 36A

35E. Were you convicted of this?

1. Yes – Go to Q. 35F
2. No – Go to Q. 36A

35F. How many times were you convicted of this?

of times

35G. How old were you when you were first convicted of this?

Age _____

35H. How old were you when you were last convicted of this?

Age

35I. Was there a sentence for the driving offense?

1. Yes – Go to Q. 35J
2. No – Go to 36A

35J. What was your most recent sentence for a driving offense? (e.g., license revoked, license suspended, fine, probation, community service, placement in a correctional facility)

Sentence

35K. How many times have you been sentenced for a driving offense?

of times

35L. How old were you when you were first sentenced for this?

Age

35M. How old were you the last time you were sentenced for this?

Age

36A. Have you ever driven a motor vehicle when you did not have a driver's license or after your driver's license had been suspended?

1. Yes – Go to Q. 36B
2. No – Go to Q. 37A

36B. How many times have you done this?

of times

36C. Were you ever arrested for this?

1. Yes
2. No

36D. Were you ever charged for this?

1. Yes – Go to Q. 36E
2. No – Go to Q. 37A

36E. Were you convicted of this?

1. Yes – Go to Q. 36F
2. No – Go to Q. 37A

36F. How many times were you convicted of this?

 # of times

36G. How old were you when you were first convicted of this?

Age _____

36H. How old were you when you were last convicted of this?

 Age

36I. Was there a sentence for driving a motor vehicle without a driver's license or after your driver's license had been suspended?

1. Yes – Go to Q. 36J
2. No – Go to 37A

36J. What was your most recent sentence for driving a motor vehicle without a driver's license or after your driver's license had been suspended? (e.g., fine, probation, community service, placement in a correctional facility)

Sentence

36K. How many times have you been sentenced for driving a motor vehicle without a driver's license or after your driver's license had been suspended?

of times

36L. How old were you when you were first sentenced for this?

Age

36M. How old were you the last time you were sentenced for this?

Age

Section II.

37. How old were you the first time in your whole life that you were in trouble with the police: (Circle Never or record age)

1. Never – You are finished the survey.

Age

38. How many times have you lived in an adolescent correctional center?

1. Never – Go to 38
2. Only once
3. More than once

39. How many times have you lived in an adult correctional centre?

4. Never – Go to 38
5. Only once
6. More than once

40. What correctional centres (adolescent of adult) have you lived in? (Indicate no if you have never lived in a correctional centre)

1. _____
2. _____
3. _____
4. _____

41. Of the contacts you have had with the police, on how many occasions were you arrested or charged with an offense?

of times

42. For each time you were arrested or charged, please record the following: (if you were never arrested or charged indicate “never arrested or charged” in the answers below)

42A. What offense did you commit? (e.g., violent offense, property offense, drug offense, public disorder, status offense – drinking under the legal age limit, etc.) (List all the offenses you have been arrested or charged for).

42B. When did this happen? (provide month and year for each offense listed)

42C. Did you go to court? Indicate whether you went to court for each offense previously listed and what type of court you attended (e.g., adolescent, adult, traffic, family, etc.)

42D. Indicate which offense you were convicted for?

42E. Was there a sentence? If so indicate whether there was a sentence for each offense previously listed and what that sentence was (e.g., fine, probation, community service, correctional facility, intense supervision, etc.)

Appendix E

Personality Assessment Inventory (Morey, 1991)

Not included due to copyright laws.

Borderline Evaluation of Severity over Time (Version 1.7) []

Circle the time period you have been asked to rate:	Last 7 days	Last 30 days	Other:
---	-------------	--------------	--------

For the first 12 items, the highest rating (5) means that the item caused extreme distress, severe difficulties with relationships, and/or kept you from getting things done. The lowest rating (1) means it caused little or no problems. Rate items 13-15 (positive behaviors) according to frequency.

Circle the number which indicates how much the item in each row has caused distress, relationship problems, or difficulty with getting things done

A. THOUGHTS AND FEELINGS: []

	None/Slight	Mild	Moderate	Severe	Extreme
1. Worrying that someone important in your life is tired of you or is planning to leave you.	1	2	3	4	5
2. Major shifts in your opinions about others such as switching from believing someone is a loyal friend or partner to believing the person is untrustworthy and hurtful.	1	2	3	4	5
3. Extreme changes in how you see yourself. Shifting from feeling confident about who you are to feeling like you are evil, or that you don't even exist.	1	2	3	4	5
4. Severe mood swings several times a day. Minor events cause major shifts in mood.	1	2	3	4	5
5. Feeling paranoid or like you are losing touch with reality.	1	2	3	4	5
6. Feeling angry.	1	2	3	4	5
7. Feelings of emptiness.	1	2	3	4	5
8. Feeling suicidal.	1	2	3	4	5

*The BEST is copyrighted 1997 by Bruce Pfohl, M.D. & Nancee Blum, M.S.W.
University of Iowa, Department of Psychiatry, 200 Hawkins Drive, Iowa City, IA 52242.

Name: _____ Date: _____ IC

B. BEHAVIORS (Negative): []

	None/Slight	Mild	Moderate	Severe	Extreme
9. Going to extremes to try to keep someone from leaving you.	1	2	3	4	5
10. Purposely doing something to injure yourself or making a suicide attempt.	1	2	3	4	5
11. Problems with impulsive behavior (<u>not</u> counting suicide attempts or injuring yourself on purpose). Examples include: over-spending, risky sexual behavior, substance abuse, reckless driving, binge eating, other _____ (circle those that apply)	1	2	3	4	5
12. Temper outbursts or problems with anger leading to relationship problems, physical fights, or destruction of property.	1	2	3	4	5

Circle the number below which indicates how often you used the following positive behaviors:

C. BEHAVIORS (Positive): []

	Almost always	Most of the time	Half of the time	Sometimes	Almost never
13. Choosing to use a positive activity in circumstances where you felt tempted to do something destructive or self-defeating.	5	4	3	2	1
14. Noticing ahead of time that something could cause you emotional difficulties and taking reasonable steps to avoid/prevent the problem.	5	4	3	2	1
15. Following through with therapy plans to which you agreed (e.g., talk therapy, "homework" assignments, coming to appointments, medications, etc.)	5	4	3	2	1

To the clinician: The total for each section (A, B, & C) should be recorded in the brackets next to the section titles above. At top of page record Composite Score = 15 + A + B + C

Appendix G

Beck Scale For Suicide Ideation (Beck, Steer, & Ranieri, 1988)

Not included due to copyright laws.

Appendix H

Barratt Impulsiveness Scale-11 (Patton, Stanford, & Barratt, 1995)

DIRECTIONS: People differ in the ways they act and think in different situations. This is a test to measure some of the ways in which you act and think. Read each statement and put an X on the appropriate circle on the right side of this page. Do not spend too much time on any statement. Answer quickly and honestly.

	O	O	O	O
Rarely/Never		Occasionally	Often	Almost
Always/Always				
1 I plan tasks carefully.	☐	☐	☐	☐
2 I do things without thinking.	☐	☐	☐	☐
3 I make-up my mind quickly.	☐	☐	☐	☐
4 I am happy-go-lucky.	☐	☐	☐	☐
5 I don't "pay attention."	☐	☐	☐	☐
6 I have "racing" thoughts.	☐	☐	☐	☐
7 I plan trips well ahead of time.	☐	☐	☐	☐
8 I am self controlled.	☐	☐	☐	☐
9 I concentrate easily.	☐	☐	☐	☐
10 I save regularly.	☐	☐	☐	☐
11 I "squirm" at plays or lectures.	☐	☐	☐	☐
12 I am a careful thinker.	☐	☐	☐	☐
13 I plan for job security.	☐	☐	☐	☐
14 I say things without thinking.	☐	☐	☐	☐
15 I like to think about complex problems.	☐	☐	☐	☐
16 I change jobs.	☐	☐	☐	☐
17 I act "on impulse."	☐	☐	☐	☐
18 I get easily bored when solving thought problems.	☐	☐	☐	☐
19 I act on the spur of the moment.	☐	☐	☐	☐
20 I am a steady thinker.	☐	☐	☐	☐
21 I change residences.	☐	☐	☐	☐
22 I buy things on impulse.	☐	☐	☐	☐
23 I can only think about one thing at a time.	☐	☐	☐	☐
24 I change hobbies.	☐	☐	☐	☐
25 I spend or charge more than I earn.	☐	☐	☐	☐
26 I often have extraneous thoughts when thinking.	☐	☐	☐	☐
27 I am more interested in the present than the future.	☐	☐	☐	☐
28 I am restless at the theater or lectures.	☐	☐	☐	☐
29 I like puzzles.	☐	☐	☐	☐
30 I am future oriented.	☐	☐	☐	☐

Appendix I

Center for Epidemiologic Studies Depression Scale (CES-D), NIMH

Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

During the Past Week				
	Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)
1. I was bothered by things that usually don't bother me.				
2. I did not feel like eating; my appetite was poor.				
3. I felt that I could not shake off the blues even with help from my family or friends.				
4. I felt I was just as good as other people.				
5. I had trouble keeping my mind on what I was doing.				
6. I felt depressed.				
7. I felt that everything I did was an effort.				
8. I felt hopeful about the future.				
9. I thought my life had been a failure.				
10. I felt fearful.				
11. My sleep was restless.				
12. I was happy.				
13. I talked less than usual.				
14. I felt lonely.				
15. People were unfriendly.				
16. I enjoyed life.				
17. I had crying spells.				
18. I felt sad.				
19. I felt that people dislike me.				
20. I could not get "going."				

SCORING: zero for answers in the first column, 1 for answers in the second column, 2 for answers in the third column, 3 for answers in the fourth column. The scoring of positive items is reversed. Possible range of scores is zero to 60, with the higher scores indicating the presence of more symptomatology.

Appendix J

State Trait Anxiety Inventory for Adults – Form Y (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983)

Not included due to copyright laws.

Appendix K

Debriefing form

Project Title: Exploring Borderline Personality Disorder Features Dimensionally
Among Young Adults with a History of Offending

Thank you for taking the time to participate in this study on personality in relation to criminal behaviour. This study constitutes the Master's thesis of Chelsea Delparte and your contribution is appreciated.

A specific cause for emerging adult offending has yet to be established; however, the empirical literature has highlighted certain personality characteristics that appear to be present in both adolescent and adult offenders. Specifically, personality features symptomatic of borderline personality disorder (BPD) repeatedly appear throughout adolescent/young adult and adult offender populations (e.g., difficulty regulating emotions, suicidal thoughts, self-harming behaviours, impulsivity). To date, the best study to assess specifically for BPD features within an adolescent/young adult incarcerated offender sample was conducted by Taylor, James, Reeves and Kistner (2008). Taylor et al. examined the association between BPD features and increased clinical and social problems among male adolescent/young adult offenders. Results demonstrated that male adolescent/young adult offenders with high BPD features displayed an increased amount of psychopathology, worse social relations, and a greater history of trauma than adolescent/young adult male offenders without BPD in the same facility. Although this is an important study, there are some methodological limitations (e.g., assessment of BPD features with a single measure, using only male serious offenders, comparison to only other offenders). Our research seeks to improve on these methodological limitations examining BPD features among male and female young adults with and without a history of offending.

The researchers are seeking to determine the relationship between BPD features and criminal behaviour. To our knowledge no studies have examined BPD in relation to young adult criminal offending among an undergraduate university sample. Specifically, we aim to explore BPD features in relation to number of offenses and types of offenses among a heterogeneous young adult undergraduate sample with a history of offending.

If young adults with a history of offending demonstrate significantly more BPD features than those without then this may facilitate improved assessment of BPD symptoms within criminal populations. Improved assessment will lead to the development and implementation of appropriate treatment programs which it is anticipated will aid in decreasing recidivism rates.

Thank you for your participation. If you are interested in the results of this study please contact the primary investigator, Chelsea Delparte (delpartc@uregina.ca), who will arrange for the information to be sent to you once the study is complete. Questions are welcomed, and any concerns that you may have are important and should be addressed.