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Authors	Poister Tusher, Chantal
Citation	Poister Tusher, Chantal. "Revictimization: Advancing Theory and Method." 2007. Dissertation, Georgia State University. https://doi.org/10.57709/1059906
DOI	https://doi.org/10.57709/1059906
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REVICTIMIZATION: ADVANCING THEORY AND METHOD

by

CHANTAL POISTER TUSHER

Under the Direction of Sarah L. Cook

ABSTRACT

Revictimization, defined as victimization occurring at different points in time, has been found repeatedly in college, community, and clinical samples. Attempts to understand this relation have been theoretically and methodologically limited. Theoretically, most studies have considered only individual level characteristics such as personality traits, and methodologically, the variety of definitions and measures used makes comparisons difficult. This study investigated the effect of homelessness, an exosystem factor, as a moderator of the revictimization relation in a sample of 370 underserved women (191 in prison and 179 seeking healthcare at an urban, public hospital). A series of logistic regressions were conducted to predict adult physical and adult sexual victimization using four different definitions of child sexual abuse and one definition of child physical abuse. Main effects for child abuse, regardless of the definition used, incarceration status and homelessness on both adult physical and adult sexual victimization were consistently found. However, homelessness did not moderate the revictimization relation. The high reported rate of adult physical victimization may

have prevented finding an interaction effect, as almost 82% of women reported this experience. Findings underscore the multitude of traumas experienced by this population and the need for primary prevention of child abuse and homelessness.

INDEX WORDS: Revictimization, Child abuse, Physical, Sexual, Adult victimization, Homelessness, Incarceration

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CHANTAL POISTER TUSHER

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

in the College of Arts and Sciences

Georgia State University

2007

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CHANTAL POISTER TUSHER

Major Professor:	Sarah L. Cook
Committee:	Lisa Armistead
	James G. Emshoff
	Julia Perilla

Electronic Version Approved:

Office of Graduate Studies
College of Arts and Sciences
Georgia State University
May 2007

DEDICATION

Soli Deo Gloria

ACKNOWLEDGEMENTS

I gratefully acknowledge the support, love, and encouragement that I have received from many people throughout this project. First, I thank Dr. Sarah L. Cook for her direction, insight and humor. It has been a privilege to have her as a mentor. I also appreciate the contributions from my committee members, Drs. Julia Perilla, Lisa Armistead, and Jim Emshoff.

My beloved husband and best friend Terry has supported and loved me throughout my entire graduate career. His easy going approach and understanding have made the journey joyful. I am thankful for him.

I thank my parents, Ted and Molly Poister, for their constant wisdom, love, and guidance. When I was considering going to graduate school for my PhD, my mom told me, “I think sometimes when you have a good chance, you should step up and take it” – she was right. I have been extremely fortunate to have my father here at GSU during the same time I have been here. I have often visited with him in his office just as he visited with his father at Syracuse, and I am particularly thankful that we continue to have a close relationship. Additionally, I appreciate the love and care my brothers, Jonathan and Robby, have always shown for me. I am also thankful for my “second” family, parents Don and Cynthia Tusher, and Tammie, Pat, JP, and Rachel Everly, who have all always been so good to me. I am happy to be a member of this family.

I am especially grateful to Jerris Raiford and Kim Broomfield, one already a PhD and one soon to be. Their input, advice, and helpful planning have made this dissertation happen, and I cannot imagine collaborating with two better women. I extend my heartfelt

thanks to the team members in Sarah's lab, including Anita Matthew, Doyanne Darnell, Dary Enkhtor, and Beth Anthony, for their help and feedback on drafts of this dissertation. Further, I have been so blessed by the many friends in my life, near and far, who have been supportive of this effort. Their faith and confidence in me has never wavered, and I am grateful for them all.

Finally, as I have worked on this dissertation, I have often drawn strength from thoughts and memories of my grandparents, Stanley and Maryannis Folts, and Arthur and Dorothy Poister. It is my sincere hope that I may live and work in a way of which they would be proud.

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LIST OF ABBREVIATIONS

CPA	Child Physical Abuse
CSA	Child Sexual Abuse
CCSA	Contact Child Sexual Abuse
CSA < 13	Child Sexual Abuse prior to age 13
APV	Adult Physical Victimization
ASV	Adult Sexual Victimization
TLEQ	Traumatic Life Events Questionnaire
SAEQ	Sexual Abuse Experiences Questionnaire

INTRODUCTION

Revictimization, defined as the increased likelihood of adult victimization for women following victimization as a child, exacerbates issues associated with the initial abuse in childhood (Classen, Palesh, & Aggarwal, 2005; Messman & Long, 1996). However, despite repeated findings of the existence of this revictimization relation in college, community, and clinical samples (Messman-Moore & Long, 2003), understanding of this phenomena is poor, hampered by theoretical and methodological constraints.

With the revictimization phenomenon firmly established, research has begun to try to explain why this relationship exists. Proposed theories to explain the phenomenon (e.g., traumagenic dynamics, reenactment theory) focus almost exclusively on individual level, often clinical or personality, characteristics (Grauerholz, 2000). Based on these theories, most models and proposed intervening variables (e.g., coping styles, attachment styles) have focused solely on individual level characteristics (e.g., Arata, 2000; Gold *et al.*, 1999; Irwin, 1999). However, these individual level characteristics do not fully explain revictimization and have limited support from the literature (Breitenbecher, 2001; Messman-Moore & Long, 2003).

Grauerholz (2000) suggests an ecological framework for considering factors influencing revictimization beyond the individual level based on Bronfenbrenner's initial model (modified by Belsky, 1980). Grauerholz acknowledges the limitations of prior work and emphasizes the importance of understanding factors in the microsystem, exosystem, and macrosystem. Factors in the exosystem and macrosystem have not yet

been examined in terms of their relation with revictimization (Messman-Moore & Long, 2003).

Specific exosystem factors such as unsafe neighborhoods and poverty may be important for understanding revictimization (Grauerholz, 2000). An exosystem factor encompassing an extreme lack of resources is homelessness. Homelessness has been conceptualized as a type of trauma (Goodman, Saxe, & Harvey, 1991). Moreover, beyond the trauma of being without shelter, homeless women experience more violence in their daily lives than the general population (e.g., D'Ercole & Struening, 1990) and comparable housed women (Ingram *et al.*, 1996; Shinn *et al.*, 1991). Sexual and physical victimization typify homeless women's experiences (Browne, 1993; Wenzel, Lesser, Flaskerud, & Leake, 2001). Therefore, homelessness may function as an additional risk factor for revictimization for women who have experienced child abuse.

Research on revictimization has primarily focused on the relationship between child sexual abuse (CSA) and adult sexual victimization (ASV), particularly rape. Studies reviewed by Messman & Long (1996) suggest that between 16% and 72% of women who experience child sexual abuse are revictimized as adults. Furthermore, Wyatt *et al.* (1992) found that women who had experienced sexual abuse as a child were 2.4 times more likely than women who had not experienced child sexual abuse to be victimized as adults.

Although revictimization is consistently found in a variety of samples, variability in the findings exists. Examination of different types of victimization (i.e., sexual or physical) may contribute to the variability in the rates of revictimization. Fewer studies have examined physical child abuse as a predictor of ASV (Muehlenhard *et al.*, 1998),

and most studies consider child physical abuse (CPA) only in tandem with child sexual abuse (e.g., Wind & Silvern, 1992). These studies generally find that women reporting child physical abuse and child sexual abuse are at highest risk of revictimization and that in comparison to child physical abuse, child sexual abuse is more strongly associated with adult sexual victimization. However, Arata & Lindman (2002) found that sexual revictimization was more strongly associated with child physical abuse than with child sexual abuse. Thus, CPA should not be ignored as a predictor of adult victimization.

Research has also not examined physical revictimization as often as sexual revictimization, and most work has again focused on CSA, while sometimes including CPA. Women who were victims of CSA were significantly more likely to experience physical aggression in a dating relationship than women who had not experienced CSA (Banyard *et al.*, 2000; Messman-Moore & Long, 2000), and women who reported CSA and CPA were most at risk (Wind & Silvern, 1992). Women reporting CPA were twice as likely as those not reporting CPA to also report being physically assaulted as an adult (Tjaden & Thoennes, 2000a), again confirming the importance of CPA.

In addition to the types of victimization assessed, other methodological factors, including the definition and measurement of sexual victimization and the samples used, may also influence findings. Definitions of child abuse, particularly CSA, have varied. One component of these definitions is the age used. Some researchers ask about experiences that occurred prior to either age 16 or 18, while others differentiate child abuse (prior to age 13) from adolescent abuse (14 to 18 years of age). Another component of definitions of CSA is how broadly researchers define the abuse. The broadest

definitions include both contact (e.g., vaginal penetration) and noncontact (e.g., indecent exposure) abuse; more restricted definitions include only contact abuse. Definitions of ASV range from broad definitions including many types of sexual assault to definitions including only rape and attempted rape. Studies have found stronger associations when narrow definitions were used (Roodman & Clum, 2001). Previous studies assessing CSA and ASV have measured these experiences in a number of ways: some studies ask only one question regarding CSA or ASV, and other studies ask multiple behaviorally specific questions about CSA and ASV.

Finally, the sample selection may affect the variability in rates of revictimization. Most studies on revictimization have been conducted on college samples, even though this research may underestimate the prevalence of revictimization. In contrast, clinical samples may overestimate the prevalence of revictimization. All types of samples (college, clinical, and community) tend not to represent the general population and typically lack diversity in race, age, and socio-economic status. Revictimization has rarely been studied in underserved populations.

Beyond homelessness and methodological issues, other structural risk factors that may affect revictimization include incarceration, race, and a poor, urban environment. Incarcerated women have typically experienced a multitude of traumatic events in their lives, including high levels of violence (Cook *et al.*, 2005). Research findings vary concerning the relation between race and violence, with some finding African Americans significantly more likely to report victimization (Greenfield *et al.*, 1998), while others find no difference in reported rates between racial groups (Coker *et al.*, 2002). The most

recent findings show that women in poor, urban environments report more violent victimization than other groups (Benson & Fox, 2004; Greenfield *et al.*, 1998).

The current study examines a disenfranchised sample of women from two sites: a prison and a large, urban, public hospital. Women from both sites were expected to be socio-economically similar. The goals of this study were to further theory by examining homelessness as a moderator of the revictimization relation, and to provide insight into potential methodological differences in findings on revictimization by examining varying definitions and types of child abuse. The following literature review provides extended support for these ideas by examining evidence for revictimization, factors that may contribute to variability in the strength of the revictimization relation, and the influence of homelessness on adult victimization.

LITERATURE REVIEW

One of the most severe and common outcomes of child abuse is victimization in adulthood. The accumulated evidence for this phenomenon, called revictimization, is compelling (Classen, Palesh, & Aggarwal, 2005; Messman & Long, 1996). Revictimization has been found repeatedly in college (e.g., Maker, Kimmelmeier, & Peterson, 2001), community (e.g., Cloitre *et al.*, 1997), and clinical samples (e.g., Banyard, Williams, & Siegel, 2001). However, despite the importance of revictimization, the link between childhood victimization and later victimization in adulthood is poorly understood, and hampered by theoretical and methodological issues.

Methodological and conceptual limitations of the current literature on revictimization include the types and measurement of victimization, nature of samples studied, and the lack of consideration of the larger ecological context of the victimization. Proposed theories focus almost exclusively on individual characteristics, suggesting, for example, that particular personality characteristics may solely explain the link. However, individual characteristics as causal mechanisms have limited support. Discrepant findings suggest the need to examine moderators of the revictimization relation. Importantly, the first purpose of this study moves the focus of understanding revictimization beyond the individual level by examining one contextual factor, homelessness, on the revictimization relation. This study will address other limitations by using two underserved and understudied samples and considering multiple types of victimization. The second purpose of this study is to explore differences in the relation between child and adult victimization using different definitions and measurements of child sexual abuse. Thus,

the overall goal of this study is to further understand factors that influence the strength and prevalence of the revictimization relation.

Definitions

Broadly, revictimization refers to victimization that takes place at multiple points in time. This study focuses on the phenomenon that women who were abused in childhood are more likely than women who have not been abused as a child to experience adult victimization (thus, being revictimized). However, definitions of child abuse and adult victimization vary from study to study. An encompassing definition found in federal law, codified in the Child Abuse & Treatment Act (CAPTA), defines child abuse and neglect as “any recent act or failure to act on the part of a parent or caretaker that results in death, serious physical or emotional harm, sexual abuse or exploitation; an act or failure to act that presents an imminent risk of serious harm” by parents or other caretakers (Matthews, 2004, p. 4). CAPTA further defines sexual abuse as “the employment, use, persuasion, inducement, enticement, or coercion of any child to engage in, or assist any other person to engage in, any sexually explicit conduct or simulation of such conduct for the purpose of producing a visual depiction of such conduct; the rape, and in cases of caretaker or inter-familial relationships, statutory rape, molestation, prostitution, or other form of sexual exploitation of children, or incest with children” (Matthews, 2004, p. 4). Defined broadly, adult victimization involves “actual or threatened physical or sexual violence, stalking, and psychological abuse toward women (CDC).” Intimate partners comprise the majority of perpetrators of these types of violence. Specific components of these definitions are utilized in this study.

Prevalence of Child Abuse

Estimates of the prevalence of child abuse in the United States vary widely between studies, in part due to definitions of child abuse. In telephone interview surveys with over 2000 children between two and seventeen years of age, over half (53%) reported¹ experiencing a physical assault in the past year, and 8.3% reported some type of sexual abuse (Finkelhor *et al.*, 2005). Tjaden and Thoennes (2000a) found that approximately 9% of women reported experiencing rape or an attempted rape before the age of 18, and 40% of women reported child physical abuse (CPA) by adult caretakers, excluding other relatives and family friends. Combined, 43.4% of women reported some type of child abuse. Higher percentages of women than men report child sexual abuse (CSA).

Research on child abuse has typically not utilized multi-racial samples. Discrepant findings about differences in prevalence rates for diverse racial groups exists (Kenny & McEachern, 2000a), due in part to the low statistical power of some studies. A sample of college students showed the highest prevalence of CSA for African American students (40.3%), followed by Latinos (33.3%), whites (25.5%) and Asians (21.5%)

¹ The vast majority of research on revictimization utilizes retrospective designs and questionnaires or in-person interviews as the mode of data collection (Arata, 2002; Muehlenhard *et al.*, 1998). This use of self-report measures for data collection can be challenging as there is no way to verify the experience of the participant, and it is possible that issues such as question wording and descriptions of the acts in question may lead to over or under-reporting of victimization. Therefore, when presenting the prevalence of child and adult victimization in this study, estimates are stated as the percent of women who “reported experiencing” violence rather than the percent who “experienced” violence. It is important to note that this term is meant solely to recognize the nature of self-reports, not to devalue or doubt the victim’s experience or truthfulness.

(Ullman & Filipas, 2005), while another did not show different rates of CSA between racial groups (Kenny & McEachern, 2000b). A community sample of 290 women initially showed a higher prevalence of CSA for African American women than white women; however, family structure and social class ultimately accounted for the difference (Amodeo, Griffin, Fassler, Clay & Ellis, 2006). In a community sample of female drug users, no differences in the prevalence of five types of child abuse were found for African Americans, whites, and Latinas; however, the rates of child abuse were higher for this combined group of women than for the general population (Medrano *et al.*, 1999).

Revictimization: A common and severe outcome of child abuse

Prevalence. A meta-analysis of 38 published empirical studies examining correlates of CSA that included CSA victims and a comparison group showed an effect size ($d = .67$) for revictimization (Neumann *et al.*, 1996). A review of individual studies suggest that between 16% and 72% of women who experience CSA are revictimized (Messman & Long, 1996). Urquiza & Goodlin-Jones (1994) found that rates of revictimization varied for different ethnic groups, such that 61.5% of African American who reported CSA also reported rape, while 44.2% of Whites and 40% of Latinas who reported CSA also reported rape. Merrill *et al.* (1999), however, did not find differing rates of revictimization for African American, White, and Latina women. Similarly, another community sample did not show different revictimization rates for African American and White women (Wyatt, Guthrie, & Notgrass, 1992).

Severity of consequences of abuse. Revictimization is considered a severe outcome of child abuse because it may compound the negative effects of the initial child abuse as well as create new ones in adulthood (Arias, 2004; Koverola *et al.*, 1996; Messman & Long, 1996). Child sexual abuse is associated with a host of harmful effects including anxiety, depression, psychological distress, substance abuse, suicidal behaviors, problems with interpersonal relationships, and problems with physical health (Banyard, Williams, & Siegel, 2001; Briere & Runtz, 1993; Moeller *et al.*, 1993; Polusny & Follette, 1995). Revictimization often worsens these problems (Classen, Palesh, & Aggarwal, 2005; Messman & Long, 1996). Although different criteria for CSA have been used, studies show that compared to women who have been sexually victimized only in childhood, revictimized women report higher levels of distress (Messman-Moore, Long, & Siegfried, 2000), more symptoms from the Trauma Symptom Checklist (Follette, Polusny, Bechtle, & Naugle, 1996; Gold, Milan, Mayall, & Johnson, 1994), more depressive symptoms (McGuigan & Middlemiss, 2005), and more interpersonal problems (Classen *et al.*, 2001). Women who have been revictimized are also more likely to have a lifetime diagnosis of Post Traumatic Stress Disorder (PTSD) compared to women abused only in childhood (Arata, 1999), and to have attempted suicide compared to women assaulted only as an adult (Cloitre, Scarvalone, Difede, 1997). Thus, revictimization appears to aggravate the negative effects already associated with child abuse.

Abuse as predictors of adult sexual victimization (ASV)

Child sexual abuse (CSA). Presently, incidence of CSA is the most investigated and established predictor of sexual revictimization, followed by severity of CSA. Classen

et al. (2005) reviewed 90 empirical studies on the phenomenon, and concluded that two-thirds of children who experience sexual abuse will be sexually revictimized at some point in their lives. A meta-analysis of nineteen empirical studies on sexual revictimization found a medium effect size ($d = .59$) for the relation between CSA and adult victimization (Roodman & Clum, 2001). All studies contained in the meta-analysis examined samples of revictimized women and a comparison sample of non-revictimized women.

In a study of 633 female college students, 127 women reported child sexual abuse (Messman-Moore & Long, 2000). More than half of these victims of CSA reported some form of unwanted sexual contact as an adult, with about half reporting rape. An investigation of specific acts of adult sexual victimization showed that women who reported CSA were also significantly more likely to report unwanted fondling with an acquaintance due to misuse of authority, unwanted oral-genital contact with an acquaintance due to alcohol or drug use, unwanted intercourse with an acquaintance due to misuse of authority and due to the use of physical force, and unwanted intercourse with a stranger due to the misuse of authority. Koss and Dinero (1989) found that while 66% of female college students who were victims of rape reported CSA, 20% of nonvictimized women reported CSA. Similarly, in a sample of 330 incoming college women, victims of date rape were twice as likely as non-victims to have also experienced CSA (Himelein, Vogel, & Wachowiak, 1994). Maker (2001), comparing revictimization rates in a sample of 126 college students, found that 66% of those who had experienced CSA reported being sexually assaulted after age 16, while 38% of those who did not

report CSA were sexually victimized after age 16. Across a diverse sample of 243 community college women, 64.9% of the women who reported adult rape also reported CSA, while 35.1% of the women who did not report adult rape also reported CSA (Urquiza & Goodlin-Jones, 1994).

Fewer sexual revictimization studies have utilized community samples (Classen et al., 2005). Wyatt et al. (1992) used multistage stratified probability sampling with quotas based on the actual Los Angeles population to obtain a sample of African American and White women between the ages of 18 and 35. Of the 248 participants, 154 (62%) reported some type of CSA. Forty-four percent of women who reported CSA also reported some type of adult sexual victimization, defined as exposure to someone, observation of masturbation, attempted rape, or actual rape. Those who experienced CSA were 2.4 times more likely than women who did not report CSA to experience victimization in adulthood. Data from the National Violence Against Women Survey suggest that women reporting rape prior to age 18 were twice as likely as those not reporting this victimization to also report rape as an adult (Tjaden & Thoennes, 2000a).

Child physical abuse. Results of research concerning the effect of child physical abuse as a predictor of sexual revictimization are not as clear as those for CSA (Classen et al., 2005). The majority of studies examining both types of child abuse have found CPA to function as an additional risk factor to CSA, placing the child at further increased risk for revictimization; however, study results differ concerning which type of abuse is the stronger predictor of revictimization, or if it is the combination of CSA and CPA that matters. To differentiate the effects of types of child abuse, Schaaf and McCanne (1998)

divided their sample of 457 college students into four groups: CSA only, CPA only, CSA and CPA, and no child abuse. The CSA and CPA group had a higher prevalence of ASV and ASV and APV combined. Wind and Silvern (1992) found that women reporting both sexual (defined as “unwanted sexual contact before the age of 16 by someone who was at least 13 years old and five or more years older than the [child]” (p. 266) and physical child abuse reported a higher occurrence of adult sexual assault as well.

In a sample of 1887 female US Navy recruits, women who reported CSA but not CPA were 4.4 times more likely to be raped than were women reporting no child abuse, while women reporting both CSA and CPA were 6.3 times more likely to be raped than women reporting no child abuse (Merrill et al., 1999). This finding seems to be driven by the presence of CSA; when CSA and CPA were entered simultaneously as predictors into a hierarchical logistic regression model predicting rape, CSA was found to be a significant predictor, but CPA was not. The prevalence of rape did not significantly differ between women reporting CSA only and women reporting CSA and CPA; both of these groups of women reported significantly higher prevalence of rape than did women who did not experience child abuse or those who experienced only CPA. In contrast, in their study of 341 college undergraduates, Arata and Lindman (2002) found that CPA was a stronger predictor of sexual revictimization than was CSA.

Adolescent sexual victimization. Some work suggests that adolescent victimization is a stronger predictor of adult victimization than CSA. A five year longitudinal study of college women found that women who had experienced victimization both as a child and as an adolescent had the greatest risk of victimization

during college, followed by women who had experienced adolescent victimization but not CSA (Humphrey & White, 2000). When adolescent victimization was used to predict adult victimization, adding CSA to the equation did not account for any additional explained variance. In another prospective study analyzing CSA and adolescent victimization, Gidycz, Coble, Latham, and Layman (1993) also found adolescent victimization to be a stronger predictor of adult victimization than CSA. Women who reported adolescent victimization were twice as likely as others to be victimized during a nine-week period in college. Thus, victimization in adolescence may account for later victimization better than CSA. However, it is important to note that methodological factors may also account for these findings, as studies of adolescent sexual victimization were prospective in design rather than retrospective.

Abuse as predictors of adult physical victimization (APV)

Child sexual abuse. More research has focused on CSA as a predictor of adult physical victimization (APV) than on other types of child abuse. In a study of 219 college undergraduates, women who reported CSA were twice as likely as women who did not report CSA to report physical aggression in their dating relationships (Banyard et al., 2001). Similarly, Messman-Moore and Long (2000) found that women who reported CSA were more likely to also report overall physical abuse, as well as more minor and more severe physical abuse as measured by the Conflict Tactics Scale (CTS). For instance, women who did not report CSA reported a mean of .53 items on the CTS, while victims of CSA reported a mean of 1.12.

As part of a larger longitudinal study utilizing a working-class community sample, participants who reported CSA (51%) also reported physical victimization in young adulthood more often than were those who did not report CSA (32%) (Noll et al., 2003). Similarly, in a national probability sample of women, victims of physical assault in adulthood were more likely to also report rape and sexual molestation in childhood (Weaver, Kilpatrick, Resnick, Best, & Saunders, 1997). Using a telephone survey of 637 women in Tennessee, Seedat, Stein, and Forde (2005) found that women who reported physical victimization by an intimate partner were significantly more likely to also report at least one incident of CSA prior to age 18 (25%) than were women who did not report adult physical victimization (5%). In a logistic regression model predicting adult victimization for this study, CSA was a significant predictor along with emotional abuse in childhood; however, other types of child abuse did not predict adult victimization.

Child physical abuse. Ornduff, Kelsey, and O'Leary (2001) used CSA and CPA to predict physical violence in 56 college students' current dating relationships. Using continuous measures for the different types of abuse, they found that CPA was positively correlated with current relationship physical violence, but CSA was not. Similarly, rates of CSA and CPA were higher for women who reported physical abuse by an intimate partner than for women who did not report physical abuse (Pico-Alfonso, 2005). In a national sample, women reporting CPA were twice as likely to report being physically assaulted as an adult compared to those not reporting CPA (Tjaden & Thoennes, 2000a).

In a sample of individuals drawn from a large health-care management organization (HMO) database, Whitfield, Anda, Dube, and Felitti (2003) examined the

relations between CSA, CPA, and witnessing domestic violence on APV in adulthood. As the number of violent childhood experiences increased, adult victimization also increased. Child sexual abuse and the frequency of CPA were positively associated with physical APV. Wind and Silvern (1992) found results for adult physical victimization similar to those for adult sexual victimization, such that women reporting both sexual and physical child abuse were at greatest risk for APV. A summary of findings related to predictors of sexual and physical adult victimization is presented in Table 1.

Table 1. Summary of Revictimization Findings from Literature

<u>Outcome</u>	<u>Findings</u>
Adult Sexual Victimization	<ul style="list-style-type: none"> - Consistently predicted by CSA - Some studies find AdolSV a better predictor than CSA - Effect of CPA by itself unclear (typically examined in addition to CSA) - Highest risk of ASV for samples reporting CSA and CPA
Adult Physical Victimization	<ul style="list-style-type: none"> - Consistently predicted by CSA - AdolSV not examined as predictor - Usually, but not always, predicted by CPA - Highest risk of APV for samples reporting CSA and CPA

Methodological considerations of revictimization research

For ease and clarity of understanding, methodological considerations of research on revictimization are presented prior to theoretical considerations. Although support for revictimization is generally consistent, variability in the findings does exist. This variability may be due to a number of methodological factors, including the specific types

of victimization examined (i.e., sexual, physical, psychological), the definition and measurement of sexual victimization, and the samples used (Arata, 2002).

Types of victimization. As the previous review illustrates, revictimization research often considers only the relation between child sexual abuse (CSA) and adult sexual victimization (ASV; Muehlenhard et al., 1998), although some work has considered adult physical victimization (APV) as an outcome as well (Messman-Moore & Long, 2000). Child physical abuse (CPA) has largely been considered in conjunction with CSA, as the two often co-occur (e.g., Coid *et al.*, 2001; Merrill et al., 1999). Psychological victimization in adulthood is typically not examined.

Definition of child abuse. Researchers have not used the same definition of revictimization; hence, the measurement of revictimization has also varied from study to study (Messman-Moore & Long, 2003; Muehlenhard et al., 1998). One important feature of the definitions of child abuse is the age range used. Some researchers ask about experiences that occurred prior to 18 or 16 years of age, while others differentiate child abuse (prior to 13 years of age) from adolescent abuse (14 to 18 years of age).

Definitions of CPA and APV have been more consistent across studies than have definitions of CSA and ASV. Elliott, Mok, and Briere (2004) classified participants as experiencing CPA if they answered yes to the question “As a child (before age 18) did anyone intentionally hit you with a hand, fist, or object causing marks, bruises, bleeding, burns, or broken bones, or otherwise cause you serious injury?” To be considered CPA, the perpetrator of the violence had to be a primary adult caretaker. The inclusion of

intentional violence by a primary caretaker that results in some type of injury is similar across studies.

However, researchers have examined CSA and ASV in many different ways. Some studies define CSA broadly, including both contact (e.g., vaginal penetration) and noncontact abuse (e.g., indecent exposure), whereas some studies define CSA more narrowly, considering only contact abuse (e.g., Elliott et al., 2004). Some studies include all types of sexual assault as part of the definition of ASV while those with more narrow definitions include rape and attempted rape (e.g., Tjaden & Thoennes, 2000a). Studies have found risk of revictimization to be greater when restrictive definitions have been used (Classen et al., 2005; Roodman & Clum, 2001). Mayall and Gold (1995) compared revictimization rates using three different definitions of CSA and three definitions of adult sexual victimization. The three definitions of CSA included: 1) all experiences of CSA including noncontact CSA, 2) all physical contact CSA, and 3) genital contact and intercourse experiences only. The three definitions of adult sexual abuse included: 1) all types of sexual assault, 2) all contact sexual assault, and 3) only sexual intercourse resulting from physical force or threat with a weapon. Revictimization was not predicted using the broadest definitions. Significant associations were found between the second definition of CSA and the second and third definitions of adult sexual victimization, and between the third CSA definition and the third adult sexual victimization definition. Thus, definitions make a difference in findings.

Fergusson and colleagues (1997) divided 520 New Zealanders into four groups based on their experiences before age 14: 1) those who did not experience CSA, 2) those

who experienced noncontact CSA, 3) those who experienced sexual fondling, genital touching, or someone attempting to undress them, and 4) those who experienced attempted or completed intercourse as a child. Comparing rates of revictimization for participants, those who experienced attempted or completed intercourse as a child had the worst outcomes, including the highest rates of sexual victimization as an adolescent. Those who experienced no CSA or noncontact CSA had similar outcomes and rates of sexual victimization and the lowest rates of sexual revictimization. Those who experienced CSA other than attempted or completed intercourse had outcomes between these other groups. Fleming, Mullen, Sibthorpe, and Bammer (1999) found that the chances of reporting APV were 2 times greater for women who reported CSA than for those women who did not report experiencing CSA; however, for women who experienced CSA that involved intercourse, the chances of also reporting APV were 4.1 times greater than women who had not reported CSA. Similarly, women who reported CSA were 2.9 times more likely than women who did not report CSA to also report ASV. Women who reported experiencing intercourse as part of CSA were 3.9 times more likely than those who did not report CSA to experience ASV.

Measurement. Additionally, some studies use only one question to ask about an event such as CSA, while others ask a series of behaviorally specific questions and then classify participants as experiencing the event if they gave an affirmative response to one of the items. Definitions of victimization are important to consider as individuals may interpret them in different ways (Hamby & Koss, 2003). Measuring behaviorally specific acts is preferable to asking only one broad question that requires individuals to correctly

label their experiences as fitting into the question (Koss, 1993). Measurement of victimization also affects findings.

Samples. Similarly, sample selection affects the prevalence and strength of the revictimization relation. Sample selection drives the type and extent of violence found between intimate partners (Johnson, 1995, 2005). Specifically, in samples taken from shelters, hospitals, and police records, results largely shows intimate terrorism (perpetrated by males), while in general samples, situational couple violence was found (gender-symmetric). Considering sample selection is also important for understanding revictimization, as different samples may have different rates of revictimization and different relations between child and adult victimization.

Roodman and Clum (2001) found a higher effect size for revictimization for studies using community samples ($d = .64$) compared to college samples ($d = .47$). Most studies on revictimization have utilized college student samples, even though these studies may underestimate the prevalence of revictimization due to the young age of participants (Messman & Long, 1996; Muehlenhard et al., 1998; Siegel & Williams, 2003). Additionally, college samples tend to consist primarily of White, middle-to-upper class students (Messman-Moore & Long, 2003), limiting the generalizability of the findings. Banyard et al. (2000) note that college student samples may overrepresent those individuals who are thriving, as they have more access to resources to help them deal with the effects of child abuse. Clinical samples, on the other hand, may overrepresent the prevalence of revictimization (Siegel & Williams, 2003). These samples tend to be small and are not representative of the general population because many individuals who

are victimized do not ever report or seek treatment for victimization (Messman & Long, 1996; Muehlenhard et al., 1998). Community samples also tend to be smaller and not to represent the larger population, as they typically include primarily young White females. However, efforts to consider revictimization in different populations has begun (e.g., West, Williams, & Siegel, 2000)

Theoretical limitations of revictimization research

Individual explanations of revictimization. As the prevalence and effects of revictimization have become more established in the literature, research efforts have turned toward understanding why revictimization occurs by examining the role of potential mediating factors in the revictimization relation (Arata, 2002). However, the theories used to support these proposed mediating variables focus largely on individual, often clinical or personality, characteristics of the victim (Muehlenhard et al., 1998). For example, Finkelhor and Brown (1985) propose the traumagenic dynamics model, which suggests that traumatic sexualization, betrayal, powerlessness, and stigmatization mediate the relation between CSA and further victimization. Based on Freud's ideas (1928), reenactment theory states that individuals are inclined to repeat their earlier victimization. Other explanations suggested for understanding revictimization include processes related to social learning theory, relationship choices, and learned helplessness (Messman & Long, 1996), and mediators such as posttraumatic symptoms (Sandberg, Matorin, & Lynn, 1999), dissociation (Irwin, 1999; Kessler & Bieschke, 1999), alcohol use (Gidycz et al., 1995), sexual behavior (Arata, 2000), personality characteristics (Arata & Lindman, 2002; Banyard et al., 2000), coping and attachment styles (Gold et al., 1999;

Irwin, 1999), and failure of the victim to correctly recognize risk (Marx *et al.*, 2005; Messman-Moore & Long, 2003). These models typically fail to examine the larger context in which revictimization occurs.

Empirical investigations into the proposed mediators of revictimization have been limited (Arata, 2002), and none of the suggested theories has been empirically validated or furthers a clear understanding of why revictimization occurs (Breitenbecher, 2001; Grauerholz, 2000; Messman-Moore & Long, 2003). Furthermore, these theories can be considered victim-blaming as they limit consideration of factors beyond the individual by directly or indirectly implying that revictimization results solely from an attribute of the victim (Grauerholz, 2000; Smith, 2000). Individual characteristics have not been found to differentiate rape victims from non-victims (Koss & Dinero, 1989) and a sole focus on individual characteristics will not yield a complete or helpful understanding of revictimization. Therefore, explanatory models should include other environmental, higher-level factors. Although individual characteristics are important to consider, the broader context is as well. Without a clear understanding of when or why revictimization occurs, prevention efforts are limited. A broader, more encompassing model for understanding revictimization is needed (Grauerholz, 2000; Messman-Moore & Long, 2003).

An ecological model for understanding revictimization. Grauerholz (2000) proposed using an ecological framework for considering revictimization. The ecological model, proposed by Bronfenbrenner (1977), is a nested, connected set of systems for understanding phenomenon that are affected by factors from multiple levels. At the core

of this model is the individual. Surrounding the individual is the microsystem, consisting of those people with whom the individual is familiar and personally interacts with regularly. This ecological model suggests that revictimization occurs in the context of a relationship or interaction on the microsystem level. The next level is the exosystem, comprised of the larger community and environment. Factors of the exosystem may affect the types of relationships and support an individual experiences at the microsystem level, potentially placing this individual at increased risk for revictimization. Finally, the macrosystem, the broadest system, consists of policies, cultural practices and norms that shape the larger environment. All of these systems interact to affect the individual and may increase the likelihood of child abuse and later revictimization in adulthood.

On the microsystem level, some work has begun to explore characteristics of perpetrators and their interactions with victims (Grauerholz, 2000). Prior victims may have more contact with perpetrators (Himelein, 1995), or when they are in the presence of perpetrators, perpetrators may be more likely to act aggressively, possibly because victims are less quick to recognize an existing threat of victimization (Messman-Moore & Brown, 2006; Wilson *et al.*, 1999). No research has specifically examined factors from the exosystem or macrosystem to understand revictimization, even though researchers speculate that factors from these levels, such as social isolation and blaming the victim attitudes of larger society, are important (Grauerholz, 2000; Messman-Moore & Long, 2003).

Homelessness: An important exosystem factor

Grauerholz (2000) notes that to understand exosystem factors on revictimization, consideration must be given to social power, and to how that social power (or lack thereof) affects the vulnerability or protection of victims when they interact with potential perpetrators (microsystem level). Social power can be thought of as existing on a continuum. While poor, disenfranchised women may have an obvious lack of social power, Messman-Moore and Long's (2000) findings with regard to adult victimization perpetrated through the misuse of authority in a college sample suggest that issues of social power are not limited to disadvantaged samples. However, exosystem factors such as unsafe neighborhoods and poverty may also contribute to revictimization. One specific exosystem factor that may affect revictimization for some women is homelessness.

Although definitions of homelessness vary, in all definitions, homelessness encompasses an extreme lack of resources and little or no social power. Structural factors such as poverty and the rising cost of stable housing are primary reasons homelessness occurs (Koegel *et al.*, 1996; Shinn & Gillespie, 1994; Shinn & Weitzman, 1994; Shinn *et al.*, 1998). The search for affordable housing has been likened to a game of musical chairs, in which there are not enough chairs (permanent living spaces) for everyone who needs one; the need for low-income housing units far exceeds the available supply (McChesney, 1990; Sclar, 1990). Coupled with these factors, violence experienced by women and an increase in single female-headed households, which are often poor and include children, place women at increased risk for becoming homeless, either initially or

subsequent to other episodes of homelessness (Metraux & Culhane, 1999; Rollins *et al.*, 2001).

The National Coalition for the Homeless (2006) estimates that single women comprise 17% of the homeless. While 98% of homeless males do not have any children with them, about 50% of women have at least one child with them (Burt & Cohen, 1989). Compared to homeless single women and men who are homeless, homeless women with children are the poorest (Roll *et al.*, 1999), while homeless single women report experiencing more stressful events in their lifetimes than the other two groups (Zugazaga, 2004). Minority groups are overrepresented in the homeless population. Although African Americans comprise around 13% of the general population (U.S. Census Bureau, 2005), equal percentages of the homeless are White (41%) and African American (40%; Burt *et al.*, 1999). Bassuk, Buckner, Weinreb, Browne, Bassuk *et al.* (1997) found that African American families were 3.52 times more likely to become homeless than were white families.

Goodman, Saxe, and Harvey (1991) have conceptualized homelessness as a type of trauma. Being homeless can increase one's vulnerability or potential exposure to other potential traumas, through realities such as being restricted to public transportation, working late hours, and spending time or living in high crime areas (Bassuk, 1993; Grauerholz, 2000; Milburn & D'Ercole, 1991). To illustrate, in a probability sample of 394 homeless women, victimization in the last 30 days was predicted by sleeping outside (Wenzel, Koegel, & Gelberg, 2000).

Homelessness is associated with several traumatic life events including physical and sexual violence (Browne, 1993; Fisher *et al.*, 1995; Lee & Schreck, 2005; North *et al.*, 1994; North *et al.*, 1996; Nyamathi *et al.*, 2001; Wenzel *et al.*, 2001; Zugazaga, 2004). Of 961 homeless women, just over a third (34%) reported experiencing major physical violence in the past year, and half of those women reported experiencing more than one assault during that time (Wenzel *et al.*, 2001). D'Ercole and Struening (1990) found that women in a sample of 141 homeless women in New York City had experienced various types of violence (21 had been raped, 62 had experienced physical abuse, and 42 had experienced rape and physical abuse). These rates are higher than for women in the general population.

Ingram, Corning, and Schmidt (1996) compared levels of sexual victimization between 113 homeless women in shelters and a comparable sample of 116 non-homeless women receiving government assistance. Significantly more homeless women (45%) reported sexual victimization than did the non-homeless women (33%). Homeless women were also more likely to report adult physical victimization as well. Shinn, Knickman and Weitzman (1991) compared 677 homeless mothers with 495 housed mothers. The homeless women were more likely to report physical and sexual child abuse, and that they had been physically abused or threatened with violence as an adult. These findings match comparisons between homeless women residing in shelters and low-income housed women in Los Angeles County showing that homeless women reported more CSA, CPA, APV, and ASV than the housed women (Wenzel *et al.*, 2004).

Homeless women living on the street or in a shelter were 3.4 times more likely to report experiencing a sexual assault in the past twelve months than were women residing with friends or in temporary hotels (Kushel et al., 2003). Nyamathi, Leake, and Gelberg (2000) used a sample of 1051 homeless women to compare victimization between women who resided in shelters (82%) and those who lived on the streets (18%). Women living on the streets were 2.74 times more likely to report physical victimization; however, the groups were equally likely to report experiencing sexual assault. Thus, it appears that as living situations become less stable and involve more exposure, violence increases. Primarily living on the street appears to place women at greatest risk, followed by residing in a shelter, being marginally housed through a temporary hotel or with friends, and low-income permanent housing.

One of only a few studies to examine revictimization in a homeless sample was conducted by Nyamathi and colleagues (2001). In the sample of 507 homeless women, thirty-one percent of the sample reported adult physical victimization and 26% reported rape as an adult. Significantly more women victimized as adults reported experiencing CSA (50%) and CPA (42%) than did nonvictims (23% and 22%, respectively). The odds for experiencing adult victimization were 2.14 times higher for those who had experienced CSA, and 1.63 times higher for those who had experienced CPA. Similarly, homeless women who had been assaulted in the past year were twice as likely as those who had not been assaulted in the past year to have experienced CPA (Wenzel, Leake, & Gelberg, 2001). Wenzel, Koegel, and Gelberg (2000) also found that homeless women

who reported CPA were approximately 3 times more likely to have been assaulted in the past twelve months than homeless women who did not report CPA.

Homelessness may be conceptualized as a mediator or moderator of the revictimization relation. The correlational nature of the majority of studies on revictimization prohibits examining the timing of events. Adolescents may intentionally leave home to escape the abuse they have experienced there, thus becoming homeless (Terrell, 1997; Tyler *et al.*, 2001; Widom, 1995). These homeless individuals may have a heightened risk for experiencing further abuse. This path of events suggests that homelessness may mediate the revictimization relation. However, as a mediator, homelessness could not fully account for the association between child abuse and adult victimization because revictimization clearly happens to women who have experienced child abuse but have not been homeless. Consideration of homelessness as a moderator of the revictimization relation conceptualizes homelessness as an additional risk factor to child abuse for adult victimization in some groups. Following this model, women who have experienced both child abuse and homelessness would be most likely to be revictimized. However, no studies directly compare rates of revictimization for women who have been homeless and those who have not, nor do any explore homelessness as a potential moderator of the relation between child abuse and later adult victimization.

Women at risk for less social power

In addition to rarely considering the context of homelessness when examining revictimization, few studies have considered whether some women might be at increased

risk for revictimization based on other contextual factors. Two such samples are incarcerated women and comparable poor women who are not currently incarcerated.

Incarcerated women. As a group, incarcerated women are a severely disenfranchised population with special needs (Martin & Hesselbrock, 2001). Women comprise a smaller segment (about 6%) of the prison population than men; however, the percentage increase of women in prison has been higher than that for men (Greenfeld & Snell, 1999). African Americans are more likely to serve time in prison than are Whites (Bonczar & Beck, 1997); about half (48%) of women in state prison are African American (Greenfeld & Snell, 1999). Compared to men, women are more likely to be incarcerated for crimes related to drugs and alcohol or to property, and less likely to have committed a violent crime (Snell & Morton, 1994). The “war on drugs,” which targeted primarily low-level drug users and dealers, largely accounts for the rise in numbers of incarcerated African American women (Bush-Baskette, 1998). Also, a pattern of “gender entrapment” often exists, in which women become involved in a crime that results in incarceration because of violence directed at them from their partners (Richie, 1996).

Issues with substance abuse, damaged family relationships, economic hardships, and sexual and physical victimization in childhood and adulthood characterize incarcerated women’s lives (Cook et al., 2005; Henriques & Manatu-Rupert, 2001; Jones et al., 2002). Incarcerated women have higher rates of substance abuse and higher levels of anxiety and depression than the general population (Jordan et al., 1996; Keaveny & Zauszniewski, 1999). Some incarcerated women report that being in prison is safer for them than being outside of prison (Bradley & Davino, 2002; Richie, 1996). However,

incarceration may also further traumatize victims of abuse through prison procedures that trigger memories of abuse (Honey & Kristiansen, 1998) or through sexual coercion that occurs while women are in prison (Struckman-Jones & Struckman-Jones, 2002). Similar to homelessness, incarceration may disrupt social networks and lead to isolation (Cook et al., 2005).

Participants in a cross-section of 150 incarcerated women reported high levels of victimization in all categories (Browne, Miller, & Maguin, 1999). Seventy percent reported CPA and 59% reported some form of CSA. Seventy-five percent reported physical abuse and 35% reported sexual violence by partners. Calculation of revictimization rates showed that 80% of those who reported CPA also reported adult physical violence from a partner, compared with 62% of those who did not report CPA but did report adult physical violence. For sexual victimization, 40% of those who reported CSA also reported adult sexual violence from someone other than their partner, compared with 23% who did not report CSA but did report adult sexual victimization from a stranger or acquaintance.

Women living in poor urban environments. Interpersonal and community violence is a prominent feature in poor, urban settings (Jenkins, 2002; West, 2002). Rennison (2000) found that women who were poor, African American and living in an urban environment reported more ASV than other groups. A sample of 98 urban low-income women in a public outpatient clinic that serves the poor in New York City reported significantly higher rates of child sexual and physical abuse, adult sexual and physical violence, and other traumas (e.g., homelessness) than national estimates (Hien &

Bukszpan, 1999). Similarly, Greenfield et al. (1998) found that low-income, urban women reported more violent victimization than other groups, and Elliott, Mok, and Briere (2004) found that ASV was more common for women in lower income groups than those in higher income groups. African American women are found disproportionately in these environments.

African American women. Research findings vary concerning the relation between race and violence. The National Crime Victimization Survey showed that approximately 12% of African American women reported experiencing violent victimization, while about 8% of white women did (Greenfield et al., 1998). The National Survey of Families and Households also found that higher percentages of African Americans reported physical victimization than Whites and Latinas (Zlotnick, Kohn, Peterson, & Pearlstein, 1998). Neff, Holamon, and Schluter (1995) found that African American women had the highest prevalence of APV by a spouse or partner. The National Violence Against Women Survey, however, found that comparable percentages of White (51.3%) and African American (52.1%) women reported physical assault (Coker *et al.*, 2002; Tjaden & Thoennes, 2000a), rape (17.7% of White women and 18.8% of African-American women), and lifetime victimization (Coker et al., 2002). A logistic regression predicting victimization by a partner found that being African American was a significant risk factor (Tjaden & Thoennes, 2000b). McLaughlin, Leonard, and Senchak (1992) also found race to be significantly associated with APV such that African Americans reported more violence than Whites in a community sample. Similarly, using the CTS to measure physical violence on a national sample, Hampton and Gelles (1994) found that African

American women were 1.23 times more likely than White women to report minor violence and 2.36 times more likely to report severe violence.

African American, White, and Latina women reporting CSA were significantly more likely to report adult rape; however, this relation was not found for Asian American women (Urquiza & Goodlin-Jones, 1994). Merrill et al. (1999) also found that CSA predicted rape for African American, white, and Latina women; however, CPA predicted rape only for African American women. Ramos et al. (2004) found that African American and white women showed similarities in the relations between child abuse and adult victimization. Given that the association between child abuse and adult victimization appears similar for different ethnic groups, but that there are different rates of adult victimization for different racial groups, it makes sense to consider race as a covariate in the revictimization relation rather than as a moderator. This placement privileges race in regression equations by allowing it to account for a maximum amount of variance prior to the entry of other variables.

Study hypotheses

The revictimization relation has been firmly established (Classen et al., 2005; Messman-Moore & Long, 2003); however, prevalence rates vary. The literature is limited by the samples studied and measures used, and the lack of consideration of higher level factors for understanding and explaining the relation. Therefore, this study will address these limitations by using an underserved sample, comparing the relation of child and adult victimization based on broader and more restrictive measurement of sexual victimization, considering different types of child, adolescent, and adult victimization,

and investigating the effect of an exosystem factor, homelessness, on the revictimization relation.

The proposed study predicts that:

- 1) When controlling for covariates, women who report child physical and sexual abuse will be more likely to report adult physical and sexual victimization.
- 2) Homelessness will moderate the revictimization relation. Women who have experienced both child abuse and homelessness will be more likely to experience adult victimization than women who have experienced only child abuse.

Finally, based on the findings of the existing literature, an exploratory portion of this study will examine the effect of different conceptualizations and thus definitions of CSA and adolescent SA on the revictimization relation.

METHODS

Source

The study involves secondary data analysis of information collected from a larger study entitled the Women's Life Experiences Project (WLEP). Funded by the National Institute of Justice (NIJ), the WLEP includes data on the physical and mental health, context and responses to victimization, and traumatic life events experienced by incarcerated and non-incarcerated women in Georgia. For clarity, the two sites utilized for data collection are described separately, as different procedures were necessary for each site.

Prison site

Metro State Women's Prison (MSWP), a maximum security facility in Atlanta, Georgia, run by the Georgia Department of Corrections (DOC), served as the data collection site for incarcerated women. Incarcerated women in Georgia spend their first two weeks of imprisonment in the diagnostic unit at MSWP, and then either remain at MSWP or are transferred to another prison in Georgia. Women with severe mental illness or special healthcare needs also reside at MSWP.

Procedures. On a weekly basis, researchers used a random number table to select twenty women from a list of those entering the diagnostic unit. These women were then invited to attend an informational meeting to learn more about the study. These meetings provided inmates with basic information about the study and the provisions of *Cason v. Seckinger (1994)*, which mandates the Georgia DOC to report sexual relations between inmates or between an inmate and correctional staff. Women who chose to participate in

the study signed informed consent agreements and were given the opportunity to request a summary of the research findings at the conclusion of the study.

Women who agreed to participate were assigned an interview date. Extensively trained graduate research assistants and upper level undergraduate and post-baccalaureate research assistants conducted the interviews. Researchers conducted oral interviews with participants individually in small, private, windowed, soundproof rooms located close to a security station. Each interview lasted approximately one and one-half to two hours. At the conclusion of each interview, researchers debriefed participants and thanked them for participating. Interviewers encouraged participants who reported feeling upset or anxious after the interview to meet with their assigned mental health counselor. When given an opportunity to ask questions about the study, many inmates briefly reflected on the process. After each interview, the participant received a thank-you note along with information about community resources related to domestic violence through institutional mail.

Participants. Women entering MSWP over a one year period (June 2000-June 2001) were eligible to participate in the WLEP. Researchers invited 817 women to one of 41 informational meetings held throughout the course of the study. Eighty-seven percent of all women invited to a meeting attended ($n = 708$), and 68% of those attending consented to participate ($n = 482$). Of the women who consented to participate, 84% presented for an interview ($n = 403$). The majority of women who consented but who did not present for the interview ($n=79$) had been transferred to another institution ($n=51$), declined on the day of the interview ($n=11$), could not be located ($n=13$), had other

appointments ($n=2$), or terminated the interview early ($n=2$). The final participation rate was 57%, based on the number of women invited to participate and the final number of women who completed an interview.

A refined question about homelessness was introduced for the second half of this study. Therefore, this study will only utilize data from the second portion of the incarcerated sample ($n = 197$). The majority of women identified as either African American (55.8%) or White (42.6%). The women ranged in age from 19 years old to 58 years old ($m = 34.1$; $sd = 8.3$). Marital status varied: 46.2% were single, 15.2% married, 12.2% separated, 8.3% divorced, 4.6% widowed, and 1.5% in a common law marriage. The majority of women (83.2%) reported having at least one child; of those women with children, most (78.7%) had between one and three children. The education achievement of the women was low; 43.1% did not complete highschool. Almost all of the women (97.9%) endorsed some type of religion, with Baptist (65.5%) as the most typical response.

For 43.1% of the women, this stay was their first in prison. About an equal number (44.2%) were in prison due to a probation violation, and another 12.2% were serving time due to parole revocation. Most of the original offenses for which women were serving time (they may have been serving their sentence for multiple offenses) were related to drugs (e.g., 13.2% for possession of cocaine), financial crimes (e.g., 14.7% for forgery), or theft (e.g., 9.6% for shoplifting). The average sentence length was 7.15 years ($sd = 7.5$ years).

Non-prison healthcare site

Grady Memorial Hospital, a large, inner-city, public hospital located in Atlanta, Georgia, served as recruitment site for the comparison sample of non-incarcerated women. Data was collected from patients waiting to receive medical care in one of three primary care clinics: the Urgent Care Center, the Obstetric-Gynecological (OB-GYN) clinic, or the Family Planning and Prenatal clinic.

Procedures. The same research assistants who interviewed inmates also interviewed non-incarcerated participants. As patients could not be randomly selected from a pre-existing waiting list, researchers were randomly assigned to a particular clinic for that day's interviews. Interviewers randomly chose a particular seat in each waiting room and moved in one direction around the room, as necessary, until a woman agreed to participate. Once a woman agreed to participate, the researcher briefly explained the study, confidentiality, and compensation (\$20 per participant). If a woman declined to participate, the researcher thanked the woman for her time and proceeded to provide this same information to the next woman in the waiting room until a woman agreed to participate.

Once confidentiality and consent were discussed, researchers interviewed women in unused exam rooms or private areas of the waiting room or hallway. Interviews lasted approximately one and one-half to two hours. In some cases, women were called for their medical appointments during the interview. In these cases, researchers stopped the interview for the medical appointment and resumed interviewing after the appointment

was finished. At the conclusion of the interview, researchers debriefed participants, thanked them, and compensated them for their time.

Participants. Of the 280 women approached to participate, 70% ($n=197$) completed an interview. The majority of women ($n=180$; 91.4%) identified themselves as African American; 4.1% ($n=8$) identified as multi-ethnic, and 2.5% ($n=5$) identified themselves as White. The women ranged in age from 18 to 68 years old ($m=34.1$; $sd=11.6$). The majority of the women reported currently being involved in a romantic relationship ($n=136$; 69%). One hundred forty (71.1%) of the women reported having at least one child; the majority (59%) had one or two children. Educational achievement for participants was low; 34.5% ($n=68$) had not completed high school, and 37% ($n=73$) had completed high school or earned a GED. The majority (87.2%) endorsed some form of religion, with Baptist (56.3%) as the most common choice. Fifty-three women (26.9%) reported that they had previously been in jail, and five women (2.5%) reported that they had served time in prison.

Constructs and Measures

Demographic measures. Demographic information for the incarcerated sample came from self-reports and from the inmates' diagnostic files. From the diagnostic files, information regarding the offense that lead to inmates' incarceration and their sentence was obtained. During the interviews, interviewers asked participants basic information including their date of birth, race/ethnicity, education level, religion, whether they had children and how many they had, and other questions not related to this study.

Demographic data for the non-incarcerated sample came solely from self-reports. In

addition to the other questions, interviewers asked the non-incarcerated sample participants if they had been in jail and prison before.

Incarceration status. Incarceration status was measured in three ways. First, each case was coded for what site the respondent was from (current incarceration). All women not currently incarcerated were asked if they had ever been in prison and if they had ever been in jail. Each of these categories (ever being in prison, ever being in jail) included all women from the MSWP site plus those women who answered that they had ever been in prison or in jail, respectively.

Government assistance. Participants were asked to provide the amount of total monthly income she received. Participants from the incarcerated site responded in terms of income prior to incarceration; participants at the non-incarcerated site provided current monthly income. Participants were then asked the sources of this income. Women who reported receiving any money from Aid for Families with Dependent Children (AFDC), Temporary Aid for Needy Families (TANF), welfare, foodstamps, Social Security Income (SSI) or Social Security Disability Income (SSDI) programs were categorized as receiving government assistance. Responses were coded 0 for no and 1 for yes. This variable was used as a proxy for economic status.

Child physical abuse (CPA). The Child Abuse Questionnaire (CAQ; Goodman, 2000) contained four questions developed by researchers on the WLEP that asked about childhood physical abuse experiences that were perpetrated by a caretaker before the participant was 16 years of age. Questions asked if participants had been 1) hit with an object, 2) knocked down, 3) burned/scalded, and 4) threatened with a gun or knife. Each

item was scored as happening or not happening (1 = yes, 0 = no). Participants who indicated that they had experienced at least one of these events were then coded as experiencing child physical abuse (1), while those who did not report experiencing any of these events were coded as not experiencing child physical abuse (0).

Child sexual abuse (CSA). Child sexual abuse was measured in three ways. The first two measures were taken from the Sexual Abuse Exposure Questionnaire (*SAEQ*; *Rodriguez et al., 1996; Rowan et al., 1994*). The *SAEQ* consisted of ten items asking about childhood sexual abuse prior to age 16. The questions become increasingly invasive, beginning with being flashed to receiving or performing oral sex. Binary coding (1=yes, 0=no) was used for all items. For the broad definition of CSA, participants who reported experiencing any of the ten items will be categorized as experiencing CSA. To measure contact child sexual abuse (*CCSA*; i.e., the narrow definition), six of the ten items from *SAEQ* will be used. These items asked whether the participant experienced 1) forced intercourse, 2) forced anal sex, 3) forced giving of oral sex, 4) forced reception of oral sex, 5) forced touching of the child, and 6) forcing the child to touch someone else. Contact child sexual abuse will be measured by assessing those participants who reported experiencing any of these six events. According to this definition, all other participants will be categorized as “no *CCSA*.”

Third, one item from the Traumatic Life Events Questionnaire (*TLEQ*; *Kubany et al., 1995*) was used to measure CSA occurring before 13 years of age ($CSA < 13$). This question asked, “Before your 13th birthday, did anyone who was at least five years older than you, touch or fondle your body in a sexual way or make you touch or fondle their

body in a sexual way?” This dichotomy was scored such that 1 indicated yes, and 0 indicated no.

Adolescent Sexual Abuse. One item from the TLEQ was used to assess adolescent sexual abuse. Participants were asked, “After your 13th birthday and before your 18th birthday, did anyone touch sexual parts of your body or make you touch sexual parts of their body, against your will or without your consent?” This item was scored “1” for yes and “0” for no, indicating those who reported experiencing adolescent sexual abuse and those who did not.

Adult Sexual Victimization (ASV). A version of the Sexual Experiences Scale (SES; Koss & Gidycz, 1985; SES; Koss & Oros, 1982) modified for the Women’s Life Experience Project measured adult sexual victimization (ASV). The measure included five questions asking about nonconsensual sexual contact, attempted intercourse, intercourse, oral sex, and anal sex. Each set of questions was precipitated by a specific strategy used by the partner to attain the behavior. The five strategies were arguments and pressure, the partner indicating that he or she was in charge, being given drugs or alcohol, and the threat or actual use of physical force. Participants were asked first if their most recent partner had ever done the behavior, and then if any other partner had used this behavior. Each response was coded dichotomously (1=yes, 0 = no). To ascertain whether participants had experienced ASV in their lifetime, participants who reported experiencing any of these nonconsensual sexual events from their most recent partner or any other partner were coded as experiencing adult sexual victimization (coded as “1”). Participants who did not report experiencing any of these events were coded as “0”.

Adult physical victimization (APV). Adult physical victimization (APV) was measured using the physical victimization section of the Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). The thirteen physical abuse items ranged from “twist or pull your arm” to “beat you up,” “choke you,” “and “burn or scald you on purpose.” Participants were asked first if their most recent partner had ever done the behavior toward them, and then if any other partner had used this behavior. Each response was coded dichotomously (1=yes, 0 = no). To attain whether participants had experienced APV in their lifetime, participants who reported experiencing any physical victimization from their most recent partner or any other partner were coded as experiencing adult physical victimization (coded as “1”). Participants who did not report experiencing any of these events were coded as “0”.

Homelessness. Homelessness was measured by one question asking “Have you ever been homeless or without a place to live for at least seven days?” Responses to this question were coded dichotomously (1=yes, 0=no).

Plan of Analyses

Prior to testing the central hypotheses of this study, the two samples were examined and combined based on similarity in demographic information. To test the hypotheses, a series of hierarchical logistic regression analyses were conducted to test for moderation following steps prescribed by Baron and Kenny (1986). Significant covariates were entered on the first step, child abuse was entered on the second step, homelessness was entered on the third step, and the interaction of homelessness and child abuse was entered on the final step. This same set of steps was followed to predict adult

physical victimization (APV) and adult sexual victimization (ASV). One of five different measures of child abuse was included in each analysis. Bonferroni's correction (dividing a traditional alpha level by the number of planned tests) was used to restrict the significance level to correct for experimentwise error (Miller, 1991).

RESULTS

Prior to data analysis, all cases were examined for missing data. As all variables in this study were dichotomous, missing values cannot be replaced. From the original 394 cases, six cases missing values for both outcome variables were deleted. A small group of women ($n = 15$) identified their race as other than African American or White. This group was not large enough to include as a separate racial group, so these cases were removed from the sample. Considering independent variables, an additional three cases missing the homelessness variable were excluded from analyses. Participants who responded to some but not all of the key study items (e.g., responding to 4 of the 5 measures of child abuse along with all other measures) for this study were included ($n=4$). Thus, a total of 24 participants, 18 respondents from Grady Memorial Hospital (Grady) and 6 respondents from Metro State Women's Prison (MSWP) were excluded from these analyses. The final sample included 370 cases.

Chi-squared tests were used to conduct a descriptive comparison of the original two samples (see Table 2). Women from the two sites have similar demographic characteristics, with a few notable exceptions. The race of women from MSWP was fairly evenly split between African American and White (57.1% and 42.9%, respectively), while the vast majority (97.2%) of women from Grady were African American ($\chi^2(1) = 82.8, p < .001$). Also, women from Grady were more likely to be married (55.4% compared to 17.4%) and women from MSWP were more likely to be separated or divorced (33.7% compared to 4%; $\chi^2(2) = 78.1, p < .001$). More women from MSWP had children (82.7%) than did those from Grady (72.1%; $\chi^2(1) = 6.0, p <$

.05). The women were of comparable age and education level. Women from the different sites had similar characteristics overall, and the original sample was considered as a possible covariate.

The distribution of variables of the complete sample is shown in Table 3. Only five women not currently in prison reported having ever been in prison. More women ($n=50$) not currently in prison reported having ever been in jail, such that about two-thirds of women in the sample had spent time in jail. About one-third of the sample (31.9%) reported receiving some type of government assistance. Rates of child abuse reported varied by definition and were generally high, with the highest rates found for child physical abuse (40.8%) and child sexual abuse (51.1%) measured with multiple behavioral questions. For the outcome variables, a majority of women reported experiencing ASV (52.7%) and APV (81.4%). Table 4 shows the phi coefficients for the bivariate correlations between all variables. As expected, measures of child abuse are positively associated with ASV and APV. Incarceration status is also positively associated with ASV and APV, as well as with child sexual abuse. Similarly, homelessness is positively associated with ASV, APV, and different measures of child abuse.

To determine which covariates to include when testing hypotheses, chi-squared analyses were conducted between the three incarceration variables, race, and government assistance, and the two outcome variables (see Table 5). The three measures of incarceration status were significantly associated with APV. When these three measurements were entered simultaneously as predictors into a logistic regression with

APV as the outcome, only having been in jail was significant. Thus, having been in jail was the measure of incarceration used as a covariate in the analyses predicting APV. For ASV, the three measures of incarceration and race were significantly associated. When the three measures of incarceration were entered simultaneously into a logistic regression predicting ASV, none were significant. Therefore, pairs of the predictors were entered into regressions to predict ASV. Having ever been in jail was not significant when included with currently being in prison or having ever been in prison. Neither currently being in prison nor ever having been in prison were significant when entered as predictors simultaneously due to multicollinearity (the difference between the number of women in these categories was only 5). Therefore, analyses were done twice: first controlling for currently being in prison and race, and second for ever being in prison and race. Due to the additional number of analyses, the Bonferroni correction was recalculated (.05 divided by 15); therefore, the alpha level was set at .003. To be able to examine patterns of results across analyses, findings are denoted as being significant at the .003 level or the more traditional .05 level. For ease in understanding, results are grouped by the two dependent variables rather than by hypotheses.

Adult Sexual Victimization (ASV)

Two series of logistic regression analyses were conducted for ASV, one set using currently being in prison and another set using having ever been in prison as covariates. Both sets included race as a covariate as well. In both sets, the incarceration variable significantly increased the odds of ASV, although race did not influence the odds of the outcome. Currently being in prison and having ever been in prison both increased the

odds of ASV by approximately 2.8 (range was 2.76 to 2.79 for currently in prison and 2.79 to 2.83 for having ever been in prison).

On the second step of the analyses, women who reported child abuse, regardless of the definition and measure of child abuse used, were more likely to report ASV, supporting hypothesis 1 (see Table 6). Differences between the odds ratios for current incarceration and having ever been in prison were slight. Odds ratios for the different types of child abuse ranged from a low of 3.89 (child sexual abuse prior to age 13) to a high of 6.62 (contact child sexual abuse).

On the third step of analyses, homelessness significantly increased the odds of reporting ASV for all analyses (range of odds ratios was 2.44 to 3.38). However, homelessness did not moderate the relation between child abuse and ASV regardless of the child abuse definition used, failing to confirm hypothesis 2. Homelessness remained a significant predictor in the final models for ASV, except for the model including the broad definition of child sexual abuse (CSA).

All of the final models significantly predicted the outcome (see Tables 7 and 8). A comparison of the predicted results found using the beta weights and the actual data are shown in Appendices A – J. The predicted outcomes closely matched the actual data. For instance, the model including CPA predicted that 68% of women who were incarcerated would report ASV, and 39.8% of women who were not incarcerated would report ASV. In actuality, 65.8% of women currently in prison reported ASV and 39.1% not currently incarcerated reported ASV. Similarly, while the model predicted that 73.2% of women who reported having been homeless would also report ASV, 72.9% of women reporting

homelessness also reported ASV. The model predicted that 46.6% of women who did not report being homeless would report ASV, and 44.7% of women who did not report homelessness did report ASV.

Without any predictors, about 53% of the respondents were correctly categorized as having experienced ASV. Each main effect increased this percentage, with the final models correctly categorizing between 68.6% and 71.7% of the respondents. Analyses using contact CSA resulted in the highest correctly categorized percentage (71.7%).

Adult Physical Victimization (APV)

Having ever been in jail was significantly related to APV such that the odds of reporting APV increased approximately 3.7 times ($p \leq .001$). On the second step, regardless of how it was measured, child abuse also increased the odds of APV, further confirming hypothesis 1 that victims of child abuse would more likely to also report APV than women who did not report child abuse (see Table 9). Considering the range of increased odds, child physical abuse (CPA) increased the odds the most, 6.42 times; child sexual abuse by an older person before the age of 13 increased the odds least, 2.12 times. On the third step, regardless of definition of child abuse used, homelessness significantly predicted APV as well. The odds ratios ranged from 3.27 when entered after CSA to 4.60 when entered after adolescent sexual abuse. Child sexual abuse occurring before the age of 13 did not remain a significant predictor of APV after homelessness was entered into the equation, but all other measurements of child abuse continued to be significant (adolescent sexual abuse was significant at the .05 level while the other three definitions of child abuse were significant at the .003 level). The interaction between homelessness

and child abuse, regardless of definition used, was not significant, failing to confirm the predicted moderation (hypothesis 2).

All of the final models significantly predicted APV (see Table 10). Using the beta weights as coefficients to determine the probability of APV for each main effect yielded results similar to the actual occurrence of APV for groups (see Appendices K - O). For instance, the model using CPA predicted that 92% of women who had been in jail would have APV while 76.3% of women who had not been in jail would report APV. In actuality, 88.8% of women who reported having been in jail also reported APV, and 68% of women who reported not having been in jail reported APV. Similarly, the model predicted that 94.6% of women who reported being homeless would also report APV (in actuality 94.4% of women reporting being homeless reported APV), and that 83.9% of women who did not report homelessness would report APV (in actuality, 76% of women who did not report homelessness reported APV).

Without any predictors, 81.4% of participants were correctly categorized as having experienced APV. This percentage represents the majority of participants and explains why a large percentage of women who did not report being in jail, child abuse, or homelessness still reported APV. Additional predictors in the model, although significant, do not increase the percentage of respondents correctly categorized.

Table 2. Percentage Comparisons of Demographic Information for Two Recruitment Sites

Variable	Metro State Women's Prison (<i>n</i> = 191)	Grady Memorial Hospital (<i>n</i> = 179)
Race		
African American	57.1	97.2
White	42.9	2.8
Marital Status		
Single	48.9	40.7
Married/Common Law	17.4	55.4
Separated/Divorced	33.7	4.0
Children		
Yes	82.7	72.1
No	17.3	27.9
Education Level		
Did not complete High School	42.9	35.2
GED or High School Degree	31.9	35.8
Technical School or Some College	25.1	29.1
Age (Mean)	34.0 (<i>sd</i> = 8.4)	33.3 (<i>sd</i> = 12.6)

Table 3. Frequency Distribution of Study Variables in Sample ($N = 370$) *

Variable	Percentage of Respondents indicating Yes	Percentage of Respondents indicating No
Currently incarcerated	51.6	48.4
Ever in prison	53.0	46.8
Ever in jail	65.4	34.6
Receiving government assistance	31.9	59.7
Child Abuse		
CPA	40.8	59.2
CSA (SAEQ)	51.1	48.6
CCSA (SAEQ)	42.7	57.0
CSA < 13 (TLEQ)	33.5	66.2
Adolescent sexual abuse (TLEQ)	21.6	78.4
Ever experiencing homelessness	28.9	71.1
Adult Victimization		
APV	81.4	18.6
ASV	52.7	47.0
Race		
African American	76.5	
White	23.5	

* Percentages may not sum to 100% due to missing values

CPA: Child physical abuse

CSA: Child sexual abuse

CCSA: Contact child sexual abuse

CSA < 13: Child sexual abuse before age 13 by a person at least 5 years older

APV: Adult physical victimization

ASV: Adult sexual victimization

SAEQ: Sexual Abuse Experiences Questionnaire

TLEQ: Traumatic Life Events Questionnaire

Table 4. Correlations Between Study Variables ($N=370$)

	1.	2	3	4	5	6	7	8	9	10	11	12	13
1. Currently in prison	---												
2. Ever in prison	.97*	---											
3. Ever in jail	.76*	.78*	---										
4. Government assistance	-.15*	-.15*	-.09	---									
5. Race ¹	-.47*	-.47*	-.35*	.17*	---								
6. Homelessness	-.03	-.01	.09	.09	-.01	---							
7. CPA ²	.09	.09	.11*	-.01	-.07	.25*	---						
8. CSA (SAEQ) ³	.13*	.12*	.12*	.01	-.08	.29*	.36*	---					
9. CCSA (SAEQ) ⁴	.12*	.12*	.10	.03	-.10	.30*	.34*	.84*	---				
10. CSA < 13 (TLEQ) ⁵	.17*	.17*	.15*	.02	-.25*	.30*	.28*	.64*	.72*	---			
11. Adoles SA (TLEQ) ⁶	.04	.03	.12*	-.04	-.03	.19*	.22*	.44*	.49*	.29*	---		
12. APV ⁷	.16*	.17*	.26*	-.02	-.04	.21*	.29*	.29*	.24*	.15*	.15*	---	
13. ASV ⁸	.27*	.27*	.25*	-.05	-.15*	.26*	.33*	.40*	.43*	.32*	.31*	.42*	---

¹ Race coded as 0 for White, 1 for African American

² Child Physical Abuse

³ Child Sexual Abuse measured by the Sexual Abuse Experiences Questionnaire

⁴ Child Sexual Abuse measured by items on the Sexual Abuse Experiences Questionnaire that involved direct physical contact between the perpetrator and victim

⁵ Child Sexual Abuse question on the Traumatic Life Events Questionnaire asking if the participant experienced sexual abuse before the age of 13 by a person at least 5 years older than herself

⁶ Adolescent Sexual Abuse question on the Traumatic Life Events Questionnaire ⁷

⁷ Adult Physical Victimization

⁸ Adult Sexual Victimization

* $p \leq .05$

Table 5. Odds Ratios and Confidence Intervals of Covariates for Outcome Variables

Covariates	<u>Adult Sexual Victimization</u>		<u>Adult Physical Victimization</u>	
	<u>OR</u>	<u>95% CI</u>	<u>OR</u>	<u>95% CI</u>
Incarceration Status				
Currently in Prison	3.00*	1.96, 4.58	2.34*	1.36, 4.03
Ever in Prison	3.02*	1.98, 4.63	2.44*	1.41, 4.23
Ever in Jail	2.92*	1.87, 4.56	3.74*	2.16, 6.45
Race ¹	.47**	.29, .78	.80	.42, 1.51
Receiving Government Assistance	.81	.52, 1.27	.92	.53, 1.61

¹ Race coded 0 for White; 1 for African American

* $p \leq .01$, ** $p \leq .003$

Table 6. Associations between Child Abuse and Adult Sexual Victimization

Child Abuse	<i>AOR</i> ¹	95% <i>CI</i>	<i>AOR</i> ²	95% <i>CI</i>
Child Physical Abuse	4.11**	(2.58, 6.56)	4.10**	2.57, 6.54
Child Sexual Abuse (SAEQ)	5.19**	(3.27, 8.22)	5.20**	3.28, 8.25
Contact CSA (SAEQ)	6.62**	(4.07, 10.77)	6.61**	4.06, 10.76
CSA by older person prior to age 13 (TLEQ)	3.89**	(2.36, 6.41)	3.90**	2.36, 6.44
Adolescent SA (TLEQ)	6.32**	(3.32, 12.03)	6.32**	3.32, 12.04

AOR: Adjusted odds ratio

CI: Confidence Interval

¹ Controlling for currently being in prison and race

² Controlling for having ever been in prison and race

** $p \leq .003$

Table 7. Final Models Predicting Adult Sexual Victimization controlling for Current Incarceration

	<i>B (SE)</i>	<i>AOR</i>	<i>95% CI</i>	<i>Wald</i>	<i>Model χ^2</i>
Child Physical Abuse (<i>n</i> = 369)					84.12**
Constant	-1.22(.38)	.30		10.34**	
Currently in prison	1.17(.27)	3.23	1.90, 5.50	18.78**	
Race	-.16(.32)	.86	.46, 1.60	.24	
CPA	1.46(.29)	4.29	2.41, 7.63	24.55**	
Homelessness	1.46(.38)	4.32	2.07, 9.00	15.20**	
CPA x Homelessness	-.78(.55)	.46	.16, 1.35	2.01	
Child Sexual Abuse (<i>n</i> = 368)					93.00**
Constant	-1.26(.38)	.28		11.00**	
Currently in prison	1.08(.27)	2.96	1.74, 5.03	16.04**	
Race	-.14(.32)	.87	.47, 1.64	.08	
CSA	1.32(.28)	3.73	2.17, 6.41	22.80**	
Homelessness	.65(.44)	1.92	.81, 4.53	2.20	
CSA x Homelessness	.55 (.58)	1.73	.56, 5.33	.90	
Contact Child Sexual Abuse (<i>n</i> = 368)					102.95**
Constant	-1.32(.39)	.27		11.74**	
Currently in prison	1.12(.28)	3.07	1.78, 5.28	16.36**	
Race	-.10(.33)	.90	.48, 1.71	.10	
CCSA	1.75(.30)	5.75	3.19, 10.39	33.63**	
Homelessness	1.02(.39)	2.76	1.28, 5.93	6.76*	
CCSA x Homelessness	-.19(.57)	.83	.27, 2.53	.11	
Child Sexual Abuse prior to age of 13 by older person (<i>n</i> = 368)					73.09**
Constant	-1.13(.38)	.32		9.03**	
Currently in prison	1.11(.26)	3.04	1.81, 5.09	17.74**	
Race	.07(.32)	1.08	.58, 2.01	.05	
CSA < 13	1.02(.32)	2.78	1.49, 5.17	10.41**	
Homelessness	.99(.35)	2.69	1.37, 5.29	8.23*	
CSA < 13 x Homelessness	.24(.57)	1.27	.41, 3.88	.17	

Table continues on next page

Table 7. Final Models Predicting Adult Sexual Victimization controlling for Current Incarceration Cont.

	<i>B (SE)</i>	<i>AOR</i>	<i>95% CI</i>	Wald	Model χ^2
Adolescent Sexual Abuse (<i>n</i> = 369)					86.99**
Constant	-1.02(.37)	.36		7.72*	
Currently in prison	1.22(.27)	3.38	1.99, 5.73	20.46**	
Race	-.17(.31)	.84	.45, 1.56	.31	
Adolescent SA	1.69(.39)	5.41	2.50, 11.69	18.40**	
Homelessness	1.19(.30)	3.30	1.83, 5.95	15.71**	
Adol SA x Home	.15(.77)	1.17	.26, 5.28	.04	

AOR: Adjusted Odds Ratio

CI: Confidence Interval

* $p \leq .05$, ** $p \leq .003$

Table 8. Final Models Predicting Adult Sexual Victimization Controlling for having Ever been in Prison

	<i>B (SE)</i>	<i>AOR</i>	<i>95% CI</i>	<i>Wald</i>	<i>Model χ^2</i>
Child Physical Abuse (<i>n</i> =368)					
Constant	-1.21(.38)	.30		10.10**	82.83**
Ever in prison	1.16(.27)	3.18	1.87, 5.39	18.37**	
Race	-.16(.32)	.85	.46, 1.60	.24	
CPA	1.44(.29)	4.23	2.38, 7.52	24.09**	
Homelessness	1.40(.37)	4.07	1.96, 8.46	14.11**	
CPA x Homelessness	-.72(.55)	.49	.17, 1.42	1.75	
Child Sexual Abuse (<i>n</i> =367)					
Constant	-1.29(.38)	.28		11.27**	92.67**
Ever in prison	1.10(.27)	3.02	1.77, 5.14	16.52**	
Race	-.12(.32)	.89	.47, 1.67	.13	
CSA	1.31(.28)	3.70	2.15, 6.35	22.39**	
Homelessness	.57(.44)	1.77	.75, 4.17	1.68	
CSA x Homelessness	.63(.58)	1.88	.60, 5.82	1.18	
Contact Child Sexual Abuse (<i>n</i> = 367)					
Constant	-1.33(.39)	.27		11.66**	102.04**
Ever in prison	1.12(.28)	3.05	1.78, 5.25	16.32**	
Race	-.10(.33)	.91	.48, 1.71	.09	
Contact CSA	1.74(.30)	5.68	3.14, 10.26	33.14**	
Homelessness	.95(.39)	2.59	1.21, 5.55	5.95*	
Contact x Homelessness	-.13(.57)	.88	.29, 2.69	.05	
Child Sexual Abuse prior to age of 13 by older person (<i>n</i> = 367)					
Constant	-1.14(.38)	.32		9.09**	72.61**
Ever in prison	1.11(.26)	3.04	1.82, 5.09	17.88**	
Race	.08(.32)	1.09	.58, 2.02	.07	
CSA < 13	1.00(.32)	2.73	1.47, 5.07	10.07**	
Homelessness	.92(.34)	2.50	1.28, 4.91	7.11*	
CSA < 13 x Homelessness	.33(.57)	1.39	.45, 4.25	.33	

Table continues on next page

Table 8. Final Models Predicting Adult Sexual Victimization Controlling for having Ever been in Prison Cont.

	<i>B (SE)</i>	<i>AOR</i>	<i>95% CI</i>	Wald	Model χ^2
Adolescent Sexual Abuse (<i>n</i> = 368)					
Constant	-1.02(.37)	.36		7.77*	86.11**
Ever in prison	1.21(.27)	3.36	1.98, 5.70	20.30**	
Race	-.17(.31)	.85	.46, 1.56	.29	
Adolescent SA	1.69(.39)	5.44	2.51, 11.76	18.50**	
Homelessness	1.16(.30)	3.20	1.78, 5.76	14.98**	
Adol SA x Homelessness	.15(.77)	1.16	.26, 5.26	.04	

AOR: Adjusted Odds Ratio

CI: Confidence Interval

* $p \leq .05$; ** $p \leq .003$

Table 9. Associations between Child Abuse and Adult Physical Victimization

Child Abuse	<i>AOR</i> ²	95% <i>CI</i>
Child Physical Abuse	6.42**	2.94, 14.06
Child Sexual Abuse (SAEQ)	4.93**	2.59, 9.40
Contact CSA (SAEQ)	4.08**	2.08, 8.04
CSA by older person prior to age 13 (TLEQ)	2.12*	1.09, 4.12
Adolescent SA (TLEQ)	2.92*	1.19, 7.13

AOR: Adjusted odds ratio

CI: Confidence Interval

¹ Controlling for having ever been in jail

** $p \leq .003$

Table 10. Final Models Predicting Adult Physical Victimization¹

	<i>B (SE)</i>	<i>AOR</i>	<i>95% CI</i>	<i>Wald</i>	<i>Model χ^2</i>
Child Physical Abuse (<i>n</i> = 369)					64.23**
Constant	.05(.23)	1.05		.04	
Ever in jail	1.28(.30)	3.58	2.00, 6.42	18.44**	
CPA	1.87(.46)	6.50	2.63, 16.08	16.39**	
Homelessness	1.59(.56)	4.90	1.63, 14.74	8.01*	
CPA x Homelessness	-.92(1.01)	.40	.06, 2.92	.82	
Child Sexual Abuse (<i>n</i> = 368)					57.70**
Constant	.08(.23)	1.08		.12	
Ever in jail	1.18(.30)	3.25	1.82, 5.80	15.97**	
CSA	1.42(.37)	4.13	2.00, 8.52	14.70**	
Homelessness	1.32(.65)	3.74	1.05, 13.29	4.15**	
CSA x Home	-.29(.94)	.75	.12, 4.68	.10	
Contact Child Sexual Abuse (<i>n</i> = 368)					51.31**
Constant	.20(.22)	1.22		.77	
Ever in jail	1.21(.29)	3.36	1.90, 5.96	17.27**	
Contact CSA	1.26(.40)	3.52	1.62, 7.68	10.02**	
Homelessness	1.50(.64)	4.48	1.29, 15.57	5.56*	
Cont CSA x Home	-.57(.94)	.56	.09, 3.57	.37	
Child Sexual Abuse prior to age of 13 by older person (<i>n</i> = 368)					41.73**
Constant	.40(.21)	1.49		3.54	
Ever in jail	1.22(.29)	3.39	1.93, 5.95	18.05**	
CSA < 13	.47(.39)	1.61	.74, 3.47	1.45	
Homelessness	1.61(.63)	5.00	1.46, 17.07	6.59*	
CSA < 13 x Homelessness	-.31(.94)	.74	.12, 4.60	.11	

Table continues on next page

Table 10. Final Models Predicting Adult Physical Victimization¹ Cont.

	<i>B (SE)</i>	<i>AOR</i>	95% CI	Wald	Model χ^2
Adolescent Sexual Abuse (<i>n</i> = 369)					45.04**
Constant	.36(.21)	1.43		2.86	
Ever in jail	1.25(.29)	3.48	1.98, 6.12	18.82**	
Adolescent SA	.98(.51)	2.67	.98, 7.28	3.71*	
Homelessness	1.58(.50)	4.83	1.82, 12.80	10.04**	
Adol SA x Homelessness	-.32(1.24)	.72	.06, 8.17	.07	

AOR: Adjusted Odds Ratio

CI: Confidence Interval

¹ Controlling for having ever been in jail

* $p \leq .05$, ** $p \leq .003$

DISCUSSION

This study sought to improve understanding of revictimization both theoretically and methodologically. Theoretically, the effect of an ecological factor, homelessness, on the relation between child abuse and adult victimization was examined.

Methodologically, relations were tested for the strength of their association between multiple measurements of child abuse and adult physical victimization (APV) and adult sexual victimization (ASV). The sample of underserved women included those currently in prison and those seeking healthcare at a major public hospital. The primary hypothesis of this study, that homelessness would moderate the relation between child abuse and adult victimization, was not supported. Direct main effects of all measurements of child abuse, homelessness, and incarceration status were found for APV and ASV.

Evidence for revictimization

This study provided further evidence for the undeniable role of child abuse in predicting adult victimization. Consistent with previous research (see Classen et al. for review), this study demonstrated the revictimization relation in an underserved and understudied sample. Adult victimization is a common experience for the women in this study, as over half (52.7%) the women reported ASV, and four of every five women (81.4%) reported APV. When controlling for incarceration status, women who reported that they had been abused as children were significantly more likely than those who did not report child abuse to also report adult victimization. This relation held for all measurements of child abuse for both APV and ASV, suggesting that child abuse is a robust predictor of adult victimization.

Adult sexual victimization. All measures of child abuse significantly predicted adult sexual victimization (ASV), with only slight differences depending on whether controlling for currently being in prison or having ever been in prison. Contact child sexual abuse (CCSA), the narrow definition based on behaviorally specific questions, was the strongest predictor of ASV, supporting previous work suggesting that women who have experienced CCSA are at greatest risk of revictimization (Classen et al., 2005; Roodman & Clum, 2001). Controlling only for incarceration status, CCSA increased the odds of ASV 6.6 times, while CSA increased odds 5.2 times. Similar differences are seen in the final models, in which CCSA increases odds of ASV approximately 5.7 times and CSA increases odds of ASV by 3.7 times.

Although the relation between CSA and ASV was not as strong as that between CCSA and ASV, CSA still predicted revictimization. In the present study, measurement of child sexual abuse did not seem to matter for predicting adult victimization. This finding contrasts Mayall and Gold's (1995) work that found that a broad definition of CSA did not predict sexual revictimization. This difference in findings may be due to the samples used or the age used to define child abuse. Mayall and Gold's study utilized a college student sample and defined child abuse as occurring before age 15. This study utilized a poorly educated, disenfranchised sample of women, and defined child abuse as occurring before age 18. Women in this sample are older than those in a college sample and so may have had more time to experience victimization as an adult, making it easier to detect a relation. Also, defining child sexual abuse as occurring before age 15 limits those who will be categorized as having experienced it, also potentially affecting the

ability to predict revictimization. The definition used in this study includes three more years of adolescence than does Mayall and Gold's study, and it may be this inclusion that affects prediction of revictimization.

The rate of women reporting ASV was highest for those reporting adolescent sexual abuse. Four of every five women reporting adolescent sexual abuse also reported ASV (82.5%, compared to approximately 44.6% of women who did not report adolescent sexual abuse but did report ASV). Following contact child sexual abuse (CCSA), adolescent sexual abuse had the strongest association with ASV. The importance of adolescent sexual abuse in this study supports previous prospective work (Humphrey & White, 2000, Gidycz et al., 1993) that found adolescent sexual abuse to be a stronger predictor of ASV than CSA. Compared to child sexual abuse prior to age 13 (CSA < 13), adolescent sexual abuse is more strongly associated with ASV. If researchers are limited in time or space to assess predictors of adult victimization, the current study suggests that asking about adolescent sexual abuse would be more helpful than asking about child abuse prior to age 13. Practitioners should inquire about both child abuse and adolescent abuse.

This study found higher reported rates of revictimization than in other samples. In their community sample, Wyatt et al. (1992) found that 44% of women reporting CSA reported ASV, while this study found that 72.3% of women reporting CSA also reported ASV (the rates of ASV for those who did not report CSA were similar across the studies). Again, this difference in findings may be due to the nature of the sample used in this study, as women in this sample have typically experienced much more trauma than

women in the general population (Cook et al., 2005). Although child abuse is a risk factor for further adult victimization in both samples, women in the current study likely face many additional risk factors that create a higher likelihood of revictimization than women in the community sample.

Adult physical victimization (APV). While the reported rate of APV was high for all women in the sample, all measures of child abuse were significant predictors of APV. Child physical abuse is most strongly associated with APV ($AOR=6.43$) and the prevalence of women reporting APV was highest for CPA (95% of women who reported CPA also reported APV). Child sexual abuse (CSA) and contact child sexual abuse (CCSA) had adjusted odds ratios of 4.9 and 4.1, respectively, for APV. In this sample, for women reporting child abuse, APV appears almost unavoidable as approximately 93% of women who reported CSA, CCSA, or adolescent sexual abuse also reported APV. Previous work has demonstrated that CSA and CPA were related to APV (Whitfield et al., 2003, Wind & Silvern, 1992).

Reported rates of child abuse and adult victimization

Descriptively, this sample differs from samples taken from the general population regarding the prevalence of child abuse and adult victimization. Approximately 41% of participants in this study reported CPA, comparable to national estimates (Finkelhor et al., 2005; Tjaden & Thoennes, 2000a). However, over half (51.1%) of the women in this study reported some form of CSA, a far greater percentage than national estimates suggesting that around 10% of girls experience CSA (Finkelhor et al., 2005; Tjaden & Thoennes, 2000a). Child sexual abuse is a far more typical experience for participants in

this sample than for women in the general population; however, the rate is lower than that found for a community sample of intravenous drug using women (60.2%; Medrano et al., 1999). Rates of adult victimization are also markedly higher in this sample than in the general population. National estimates suggest that approximately 8% of women have experienced rape by intimate partners and 22% have experienced a physical assault (Tjaden & Thoennes, 2000a); 52.7% of women in this sample reported ASV and 81.4% reported APV.

When incarceration status, child abuse, and homelessness were added to the models predicting adult sexual victimization (ASV) and adult physical victimization (APV), each was a significant predictor and added to the goodness of fit of the models. With the baseline model (including only the constant) predicting ASV, slightly over half of respondents were correctly categorized as having experienced ASV, with 50% being the lowest possible categorization for dichotomous outcomes. The inclusion of additional variables increased this categorization to approximately 70% correct (range is 66.8% for CSA < 13 and 71.7% for CCSA). For APV, the initial model including only a constant correctly categorized around 82% of participants. The addition of the study variables, although significantly associated with the outcome, did not increase this percentage. Therefore, this set of predictors (incarceration status, child abuse, and homelessness) may be more useful for understanding ASV than APV. The prevalence of APV in this sample was so high that simply knowing a woman is included in this sample means that she has likely experienced APV, while membership in the sample does not automatically indicate ASV. Although child abuse and homelessness were associated with APV, the rate of

APV was high even for women who did not report experiencing these risk factors. The rate of adult physical victimization may be so high for the sample as a whole that it prevents being able to discriminate individual factors that account for the outcome.

This study compared definitions and measurement of child sexual abuse on age of the child and number of questions asked to indicate if child sexual abuse occurred. For APV, CPA had the strongest association, followed by CSA (measured by multiple questions asking about experiences before age 16), then CCSA, and lastly adolescent sexual abuse. In the final model, child sexual abuse prior to age 13 (CSA < 13 measured by one question) was not a significant predictor. For ASV, CCSA was most strongly associated, followed by adolescent sexual abuse, CSA, CPA, and lastly CSA < 13. Therefore, overall, CSA < 13 appears not to be as helpful as the other measures of child abuse in predicting adult victimization. The finding that adolescent sexual abuse was a significant predictor of revictimization supports other research (Gidycz et al., 1993; Humphrey & White, 2000) and highlights the need to consider victimization and revictimization by developmental stages. There is some evidence for a pattern of females first experiencing abuse as a child, then being revictimized in adolescence and then in adulthood (Gidycz et al., 1993; Siegel & Williams, 2003).

Effects of covariates: Incarceration status, race, and government assistance

The finding that incarceration status had a direct main effect on both types of adult victimization such that more women who are or who have been incarcerated report APV and ASV supports previous research (Browne, Miller, & Maguin, 1999; Cook et al., 2005). This effect existed regardless of how incarceration status was measured (i.e.,

currently being in prison, having ever been in prison, and most broadly, having ever been in jail). In this study, race and incarceration are associated in an unusual way due to the sites of sample selection. While the race of the women currently in prison is fairly evenly split between African American and White, almost all of the women from Grady Hospital were African American. In this sample, the association between race and incarceration status is significant, but in the opposite direction than expected when examining only the general prison population separately (Bonczar & Beck, 1997, Greenfeld & Snell, 1999). That is, in this study, being White was associated with being in prison, while those who were African American were more likely not to be in prison. Almost all of the women from the non-incarcerated site were African American. Due to this unique construction of a sample of disenfranchised women, these findings on race are not generalizable. Receiving government assistance, a proxy for economic status, was not associated with adult victimization. This lack of association may be because all of the women in this sample are similarly economically disadvantaged, regardless of if they were receiving government assistance or not, or because this measure was not a valid proxy for economic well-being. It is not clear if those who reported receiving assistance were in better or worse economic conditions than those who did not receive assistance.

Effect of homelessness

Similarly, this study also found a direct main effect of homelessness on adult victimization. This finding matches previous research (e.g., Wenzel et al., 2004) and remained significant when controlling for incarceration status and child abuse. While this study found direct main effects for child abuse and homelessness, the hypothesized

interaction between child abuse and homelessness was not found. Although rates of APV and ASV were higher for women who had been homeless, the revictimization relation did not differ according to whether a woman had been homeless or not. One possible explanation for this finding is that although this study measured two types of traumas known to be associated with adult victimization, the women in this sample have likely experienced many more traumas than those considered in this study. The revictimization relation held for all groups of women: those who had been homeless and those who had not, those in prison and those not in prison. It may be that child abuse is such a robust predictor of adult victimization that the effect is not easily moderated, and thus lessened for particular groups of women. It may also be that other variables not included in this study moderate the relation.

Measurement of homelessness in this sample was limited to one question asking, “Have you ever been homeless or without a place to live for at least seven days?” More than one definition of homelessness exists, and this question does not provide the context or definition of homelessness used by participants. Qualitative research demonstrates that women define and experience homelessness differently (Wesley & Wright, 2005). Researchers often consider the “literally homeless” to be people who sleep or spend the night on the street, in other public places or in a shelter (Hopper & Baumohl, 1996). The “hidden homeless” or those considered to be “marginally housed,” are people who do not have a permanent living place of their own and are currently residing in an institution, in short term low cost hotels, or with friends or family (a practice referred to as “doubling up”) (Bassuk, 1990; Hopper & Baumohl, 1996; Kushel *et al.*, 2003; Marin & Vacha,

1994; Vacha & Marin, 1993). Participants who had experienced either of these situations may have responded yes to the question of homelessness in this study. Rossi and colleagues (1987) estimated that for every three people on the street or in a shelter, fifty were “doubled up” with family or friends. However, women living in a shelter reported that they did not think of themselves as homeless because they were not living on the streets (Ingram et al., 1996), suggesting that women who responded affirmatively to the homelessness question may be those who have actually spent time on the streets. Browne (1993) notes that research must carefully define homelessness to be able to determine what factors, such as victimization, differentiate homeless and non-homeless women.

Had this study included multiple, specific measurements of homelessness, it is possible that the more severe (i.e., literally homeless) definitions of homelessness would have moderated the relation. It is also possible that prior abuse is such a strong predictor of adult victimization that homelessness under any definition would not moderate the relation. However, multiple definitions of homelessness would have allowed for a comparison of the effects of different definitions (i.e., do all definitions predict adult victimization equally well or is one better than the other?).

Understanding what specific experiences of homelessness are related to adult victimization has implications for studying and preventing both homelessness and adult victimization. For instance, it may be that women who are actually on the streets are in the most jeopardy of revictimization, followed by women in shelters and then those who are doubled up. Individuals staying at a shelter typically go there as a last resort after already staying with friends and family (Shinn *et al.*, 1991), and individuals and families

who share their space with those who would otherwise be on the street or in a shelter (sometimes referred to as “informal shelter providers”) are typically poor and often on the brink of literal homelessness themselves (Vacha & Martin, 1993). In this case, support should be given to these informal shelter providers to keep themselves and the person who is doubled up off of the street, to prevent literal homelessness. On the other hand, if women are at as much or more risk from doubling up with someone as they are on the streets, efforts should be made to provide more, safe, and available space for women to seek shelter when they lose their previous home.

Strengths and Limitations

This study examined the effect of a contextual exosystem factor, homelessness on the revictimization relation. Although homelessness was not found to moderate the relation in this sample, the study contributes toward an important conceptual step for understanding revictimization. Prior to this study, researchers have focused solely on individual level variables for explaining revictimization. These explanations have not fully accounted for revictimization findings. Although homelessness did not moderate the relation, other ecological variables may help understand why revictimization occurs. Additionally, this study’s focus on an underserved population highlights the vast amount of trauma suffered by this group. Few studies of revictimization have included minority women (Merrill et al., 1999; Siegel & Williams, 2003). However, due to the specific characteristics of this sample, findings may not generalize to the general population. For instance, homelessness may not be an important risk factor to consider for the general

population. Although an episode of homelessness can happen to anyone, the poor are more likely to experience it than are more economically stable and advantaged women.

Another strength of this study was the inclusion of multiple types (physical and sexual) of child abuse and adult victimization, and multiple measurements of child abuse. The four measurements of child sexual abuse allow for comparing differences between measures that include only one question versus several, different age ranges, and the degree of contact included in the questions. The strength of the association between different measurements of child sexual abuse and adult victimization, although all significant, did vary.

The self-report nature of this study may be problematic in a number of ways. Numerous researchers (e.g., (Messman-Moore & Long, 2000) have noted that self-reports may be particularly problematic for studies on revictimization, as arguments have been made that women reporting adult victimization will be more (Harney & Muehlenhard, 1991) and will be less (Williams, 1994) likely to remember and report child abuse. Similarly, experiencing child abuse may influence how women interpret violence in their adult relationships. Therefore, self-reports of child abuse and adult victimization may not be accurate. However, gaining this information any other way than self-report is difficult. The use of multiple behaviorally-specific questions to determine if child abuse and adult victimization has occurred is considered a more accurate way of measuring violence than asking victims to correctly label their experiences.

Another limitation of this study is the retrospective and cross sectional design of this study. The order of events that women reported is not known. For instance, episodes

of homelessness may have occurred during childhood or during adulthood, or both. The relationships between homelessness and violence are not the same for all women (Wesley & Wright, 2005), and it is not possible to know if adult victimization preceded, co-occurred with, or followed homelessness. Knowing the sequence of events would help understand the life course of traumatic events women experienced.

Future Directions

Many previous researchers have stated the need for prospective, longitudinal studies on revictimization (Noll, 2005; Roodman & Clum, 2001). These types of studies would allow researchers to more clearly determine the temporal order and effects of ecological variables, including those in this study, on adult victimization. For instance, adult victimization can lead to homelessness, or homelessness can lead to adult victimization. All revictimization research needs to consider the context in which child abuse and adult victimization occurs. An understanding of the influences and interactions of factors on higher ecological levels on revictimization rather than only the characteristics of the victim is important.

Prevention and Policy Implications

To prevent violence against children and women, structural solutions are required. Child abuse itself should be prevented; however, after it has occurred, it is critical to intervene to prevent further negative outcomes such as adult victimization. Understanding why revictimization occurs is important for developing interventions (Messman-Moore & Long, 2003). The search for moderators, such as the one tested in

this study, could lead to understanding under what contextual circumstances revictimization is most likely, and provide points of intervention.

Research on primary prevention and on risk reduction strategies is needed, particularly in diverse populations other than college samples, as this study has underscored. Prevention efforts for revictimization have been done primarily with college students and have shown quite limited effectiveness (Breitenbecher & Gidycz, 1998; Marx *et al.*, 2001). This work is more accurately referred to as risk reduction. True prevention of child abuse and of adult victimization can only be accomplished by stopping perpetration, thus, working with perpetrators. As discussed in the literature (Merrill *et al.*, 1999; Messman-Moore & Long, 2000), the established link between child abuse and adult victimization in no way implicates the victim as responsible for repeated violence. However, until all violence against women and children has stopped, researchers and practitioners must be aware of risk factors that indicate heightened chances of violence in the future.

Although markedly different than traditional college samples, the relation between child abuse and adult victimization in this sample appears similar to the relation in other samples. Although important, ecological factors do not appear to moderate the finding that women who have experienced child abuse are more likely to report adult victimization as well. It appears that individuals who experience child abuse are on a common trajectory that heightens their risk of revictimization regardless of other environmental factors. It may be that the indicators of this trajectory are different for individuals depending on their specific context. Victims of child abuse may internalize

negative beliefs about themselves which affect their decision making regarding risky behaviors or situations associated with subsequent partner violence. Class may differentiate what these risky behaviors are. For example, the trajectory for a victim of child abuse from a higher income might include hard drug use, whereas among low income victims, it might involve early initiation of sexual activity and multiple partners.

The context in which revictimization happens is still important to consider, however, as it may affect the support the victim receives and possible avenues of intervention. Prison systems, homeless shelters, and indigent care centers must be aware of the tremendous amounts of trauma the women they house have likely experienced. Mental health needs cannot be overlooked in the attempt to provide services to these women. D'Ercole and Struening (1990) note that beyond providing housing, ending homelessness requires that the mental health needs of women who have endured homelessness be addressed. Additionally, the structure of how these systems work should be designed in such a way that does not harm women further (D'Ercole & Struening, 1990; Ingram et al., 1996). Special attention needs to be given to promoting women's feelings of security and physical safety. In addition to the barriers typically faced by all homeless women (e.g., lack of transportation, lack of child care), homeless women who have been victims of violence may be further impeded by the ongoing effects of the violence.

Finally, the cost to society of victimization of women and children is high, and it can be assumed that the costs for women who have been revictimized are even greater (Gold et al., 1999). Prevention of both child abuse and homelessness is critical. Funding

should be allotted to programs and other organization that work with children and adolescents who have been abused to prevent them from experiencing further negative outcomes. Additionally, the supply of affordable public housing must be increased, as this shortage is the primary cause of homelessness (Shinn & Weitzman, 1994).

Conclusion

In summary, direct main effects of the two primary independent variables, child abuse and homelessness, on adult victimization were found, as well as a direct main effect of incarceration status on adult victimization. This study has implications for research, policy, and practice. Innovative research design and methodology must be used to understand the causal order of child abuse, homelessness and victimization. The constellation of types and of trauma experienced by women in this sample showcase the undeniable need for comprehensive services for poor, disenfranchised women. Finally, this study underscores the need for primary prevention of child abuse and homelessness.

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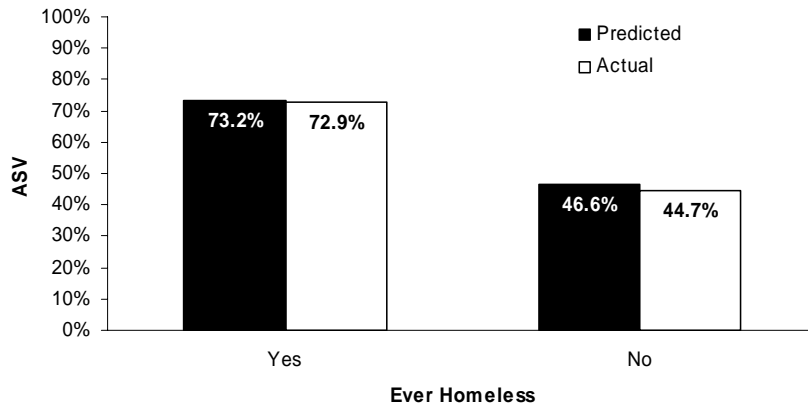
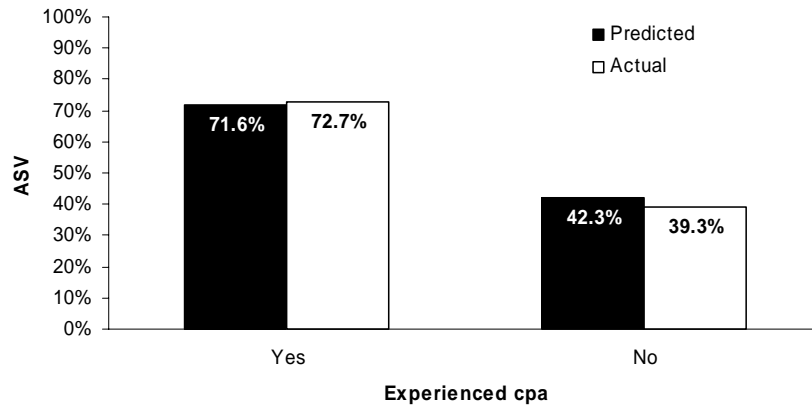
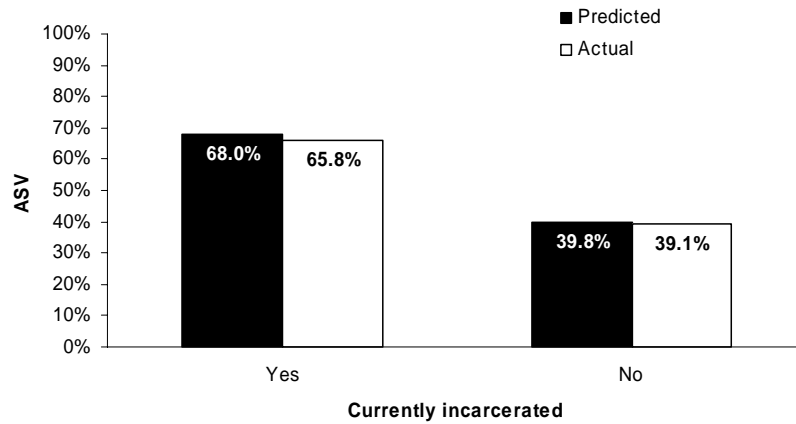
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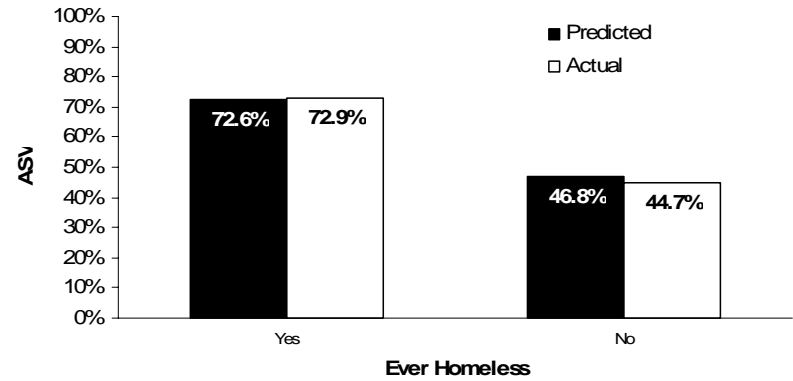
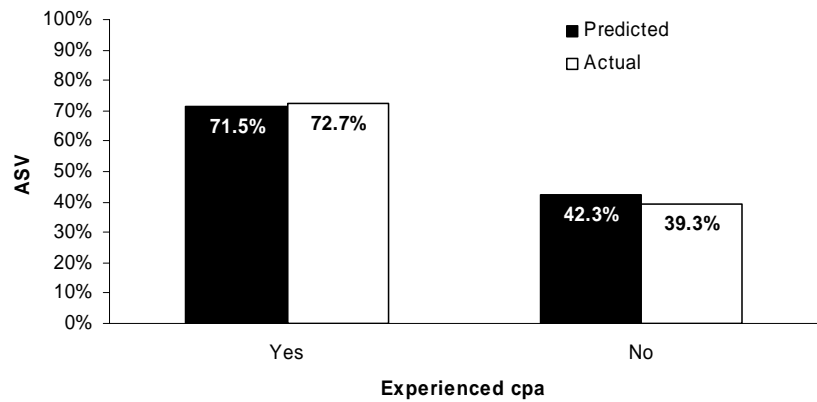
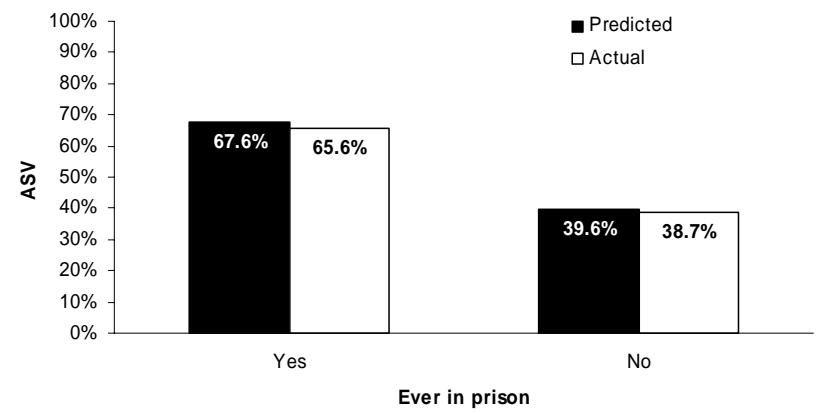
Appendix A

Predicted and Actual Main Effects for Models predicting Adult Sexual Victimization (ASV) using Child Physical Abuse (CPA), controlling for Current Incarceration ($n = 369$)



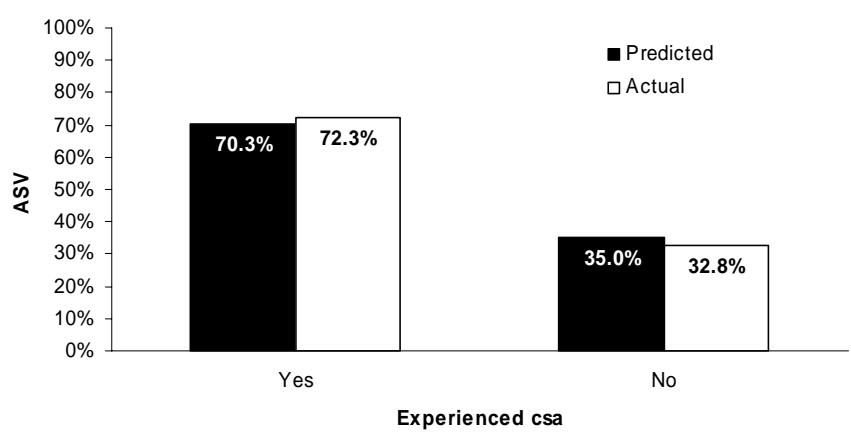
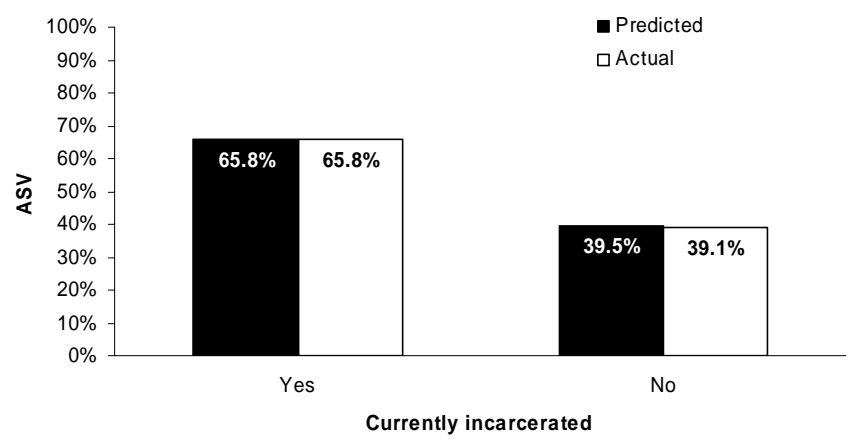
Appendix B

Predicted and Actual Main Effects for Models predicting Adult Sexual Victimization (ASV) using Child Physical Abuse (CPA), controlling for Ever being in Prison (n = 368)



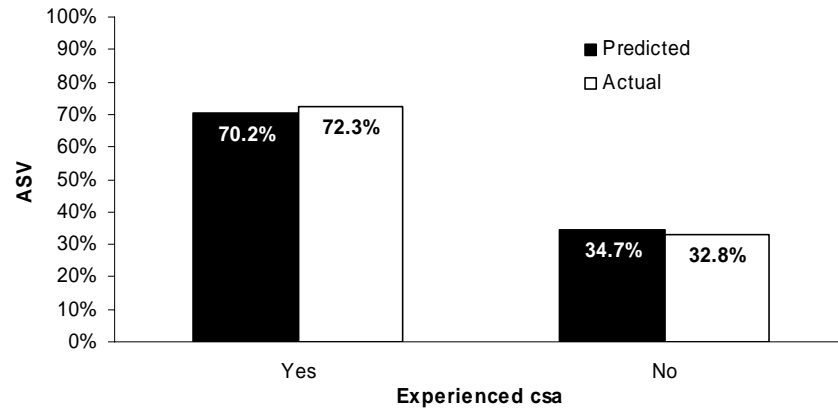
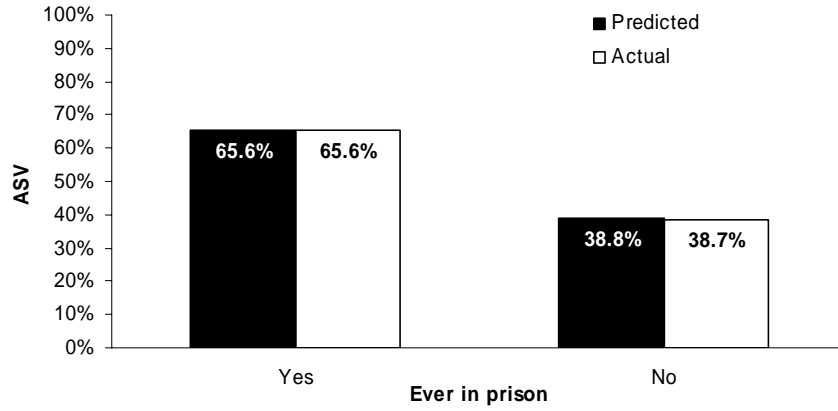
Appendix C

Predicted and Actual Main Effects for Models predicting Adult Sexual Victimization (ASV) using Child Sexual Abuse (CSA), controlling for Current Incarceration (n = 368)



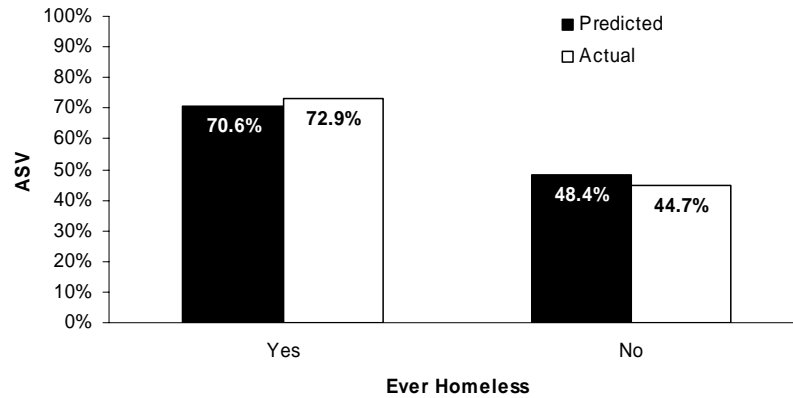
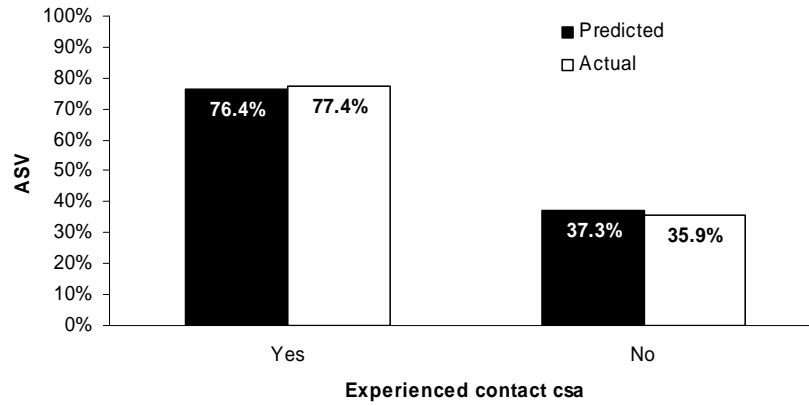
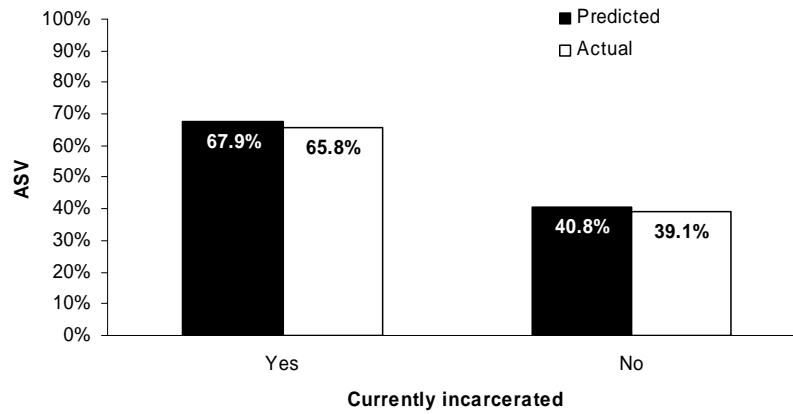
Appendix D

Predicted and Actual Main Effects for Models predicting Adult Sexual Victimization (ASV) using Child Sexual Abuse (CSA), controlling for ever being in prison (n = 367)



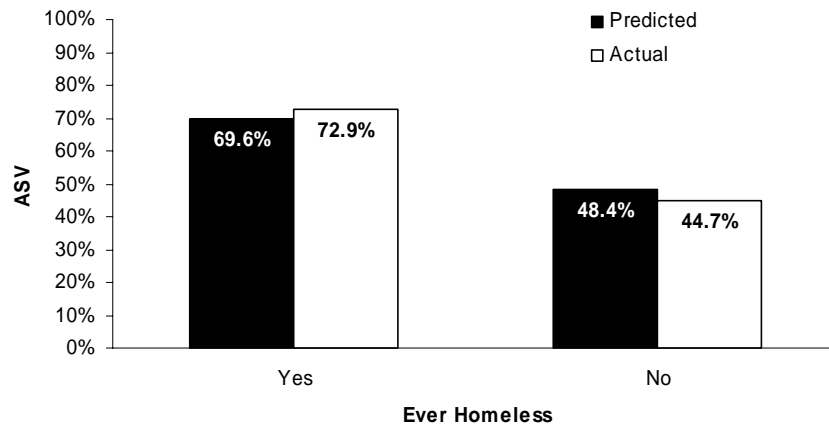
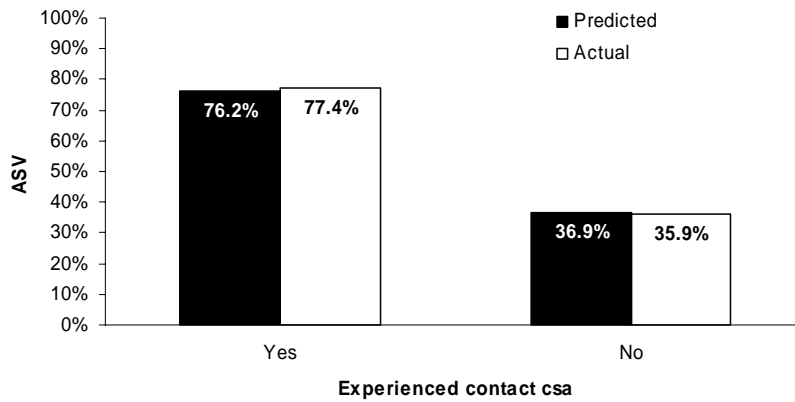
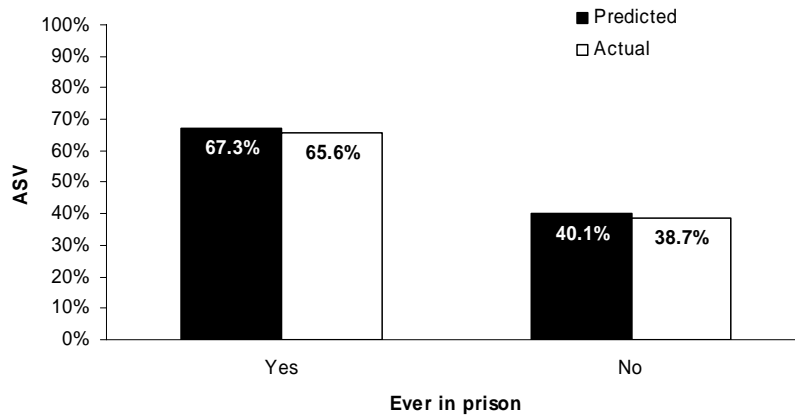
Appendix E

Predicted and Actual Main Effects for Models predicting Adult Sexual Victimization (ASV) using Contact Child Sexual Abuse (CCSA), controlling for current incarceration (*n* = 368)



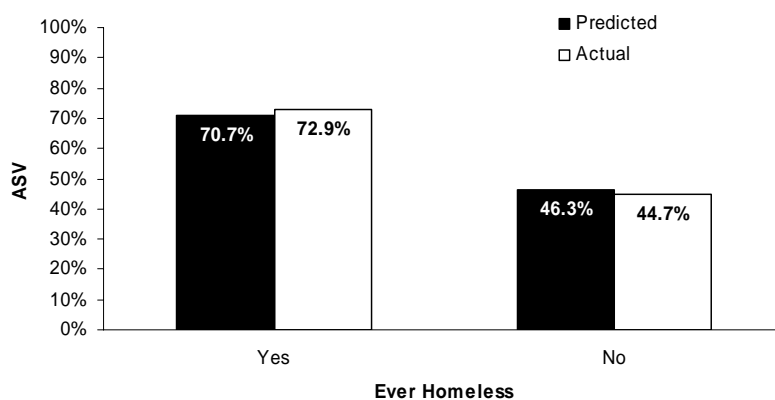
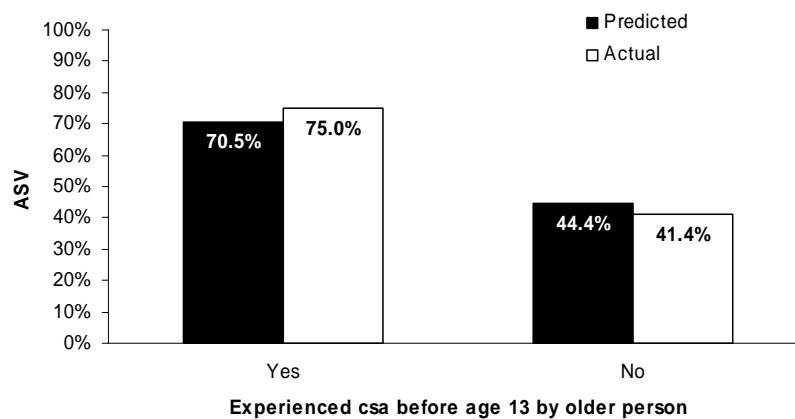
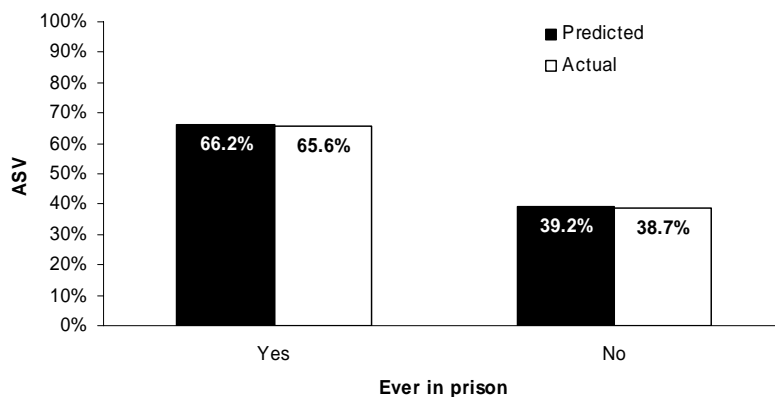
Appendix F

Predicted and Actual Main Effects for Models predicting Adult Sexual Victimization (ASV) using Contact Child Sexual Abuse (CCSA), controlling for ever being in prison (*n* = 367)



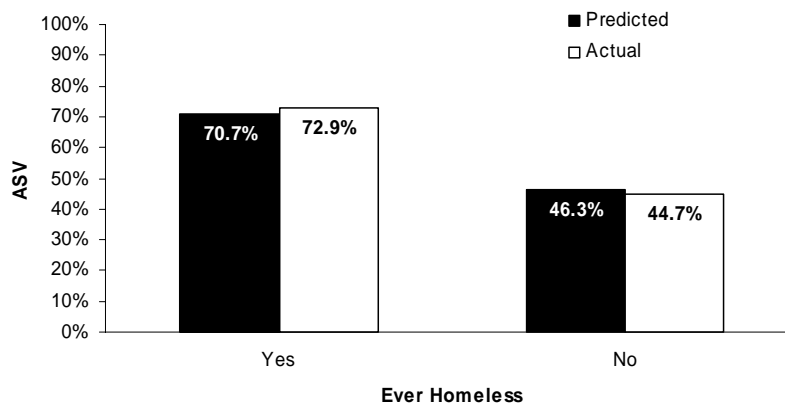
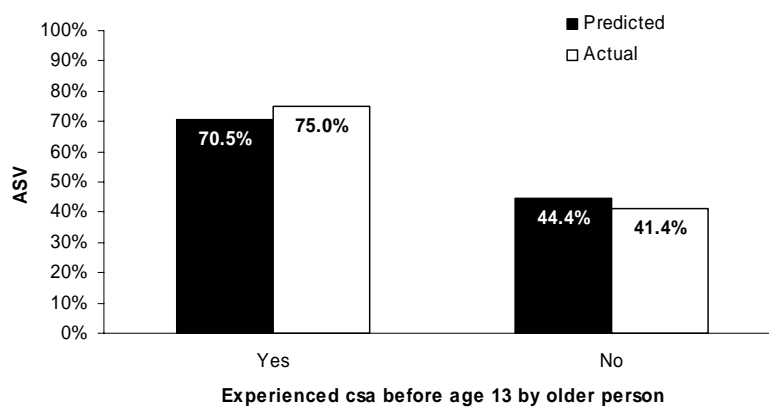
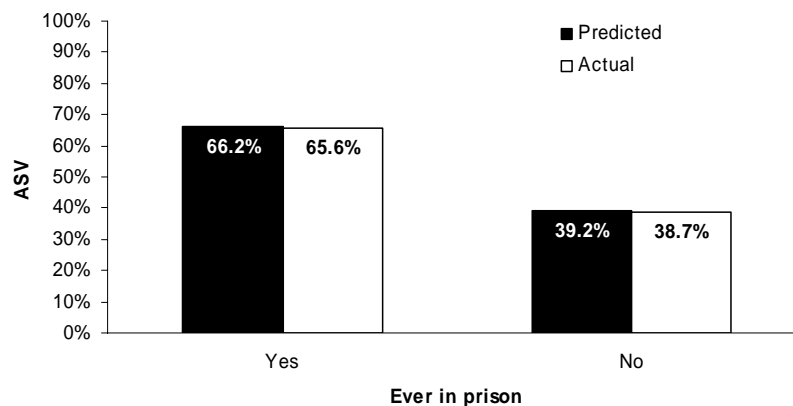
Appendix G

Predicted and Actual Main Effects for Models predicting Adult Sexual Victimization (ASV) using Child Sexual Abuse prior to age 13 by an older person, controlling for current incarceration ($n = 368$)



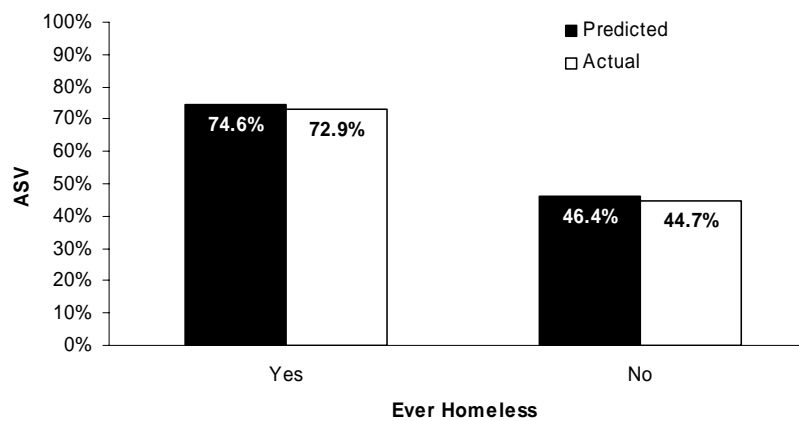
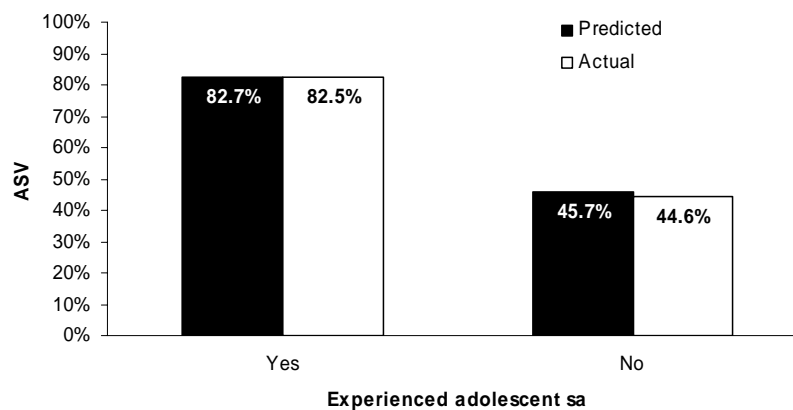
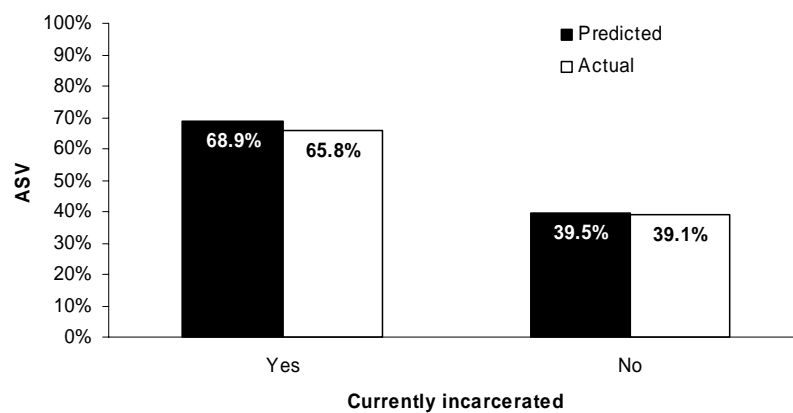
Appendix H

Predicted and Actual Main Effects for Models predicting Adult Sexual Victimization (ASV) using Child Sexual Abuse prior to age 13 by an older person, controlling for ever being in prison
($n = 369$)



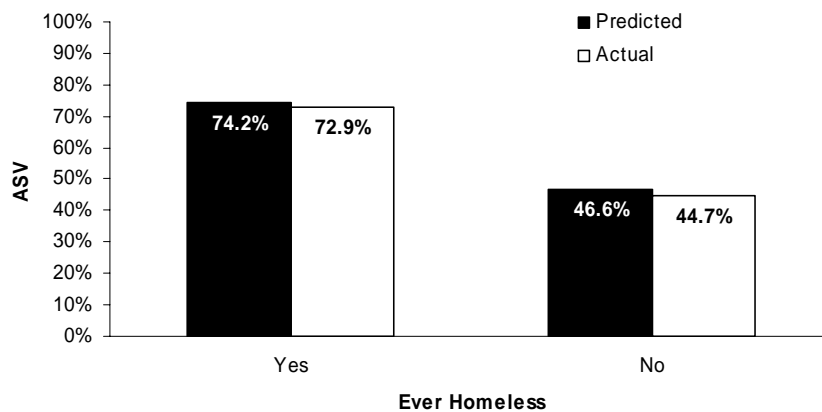
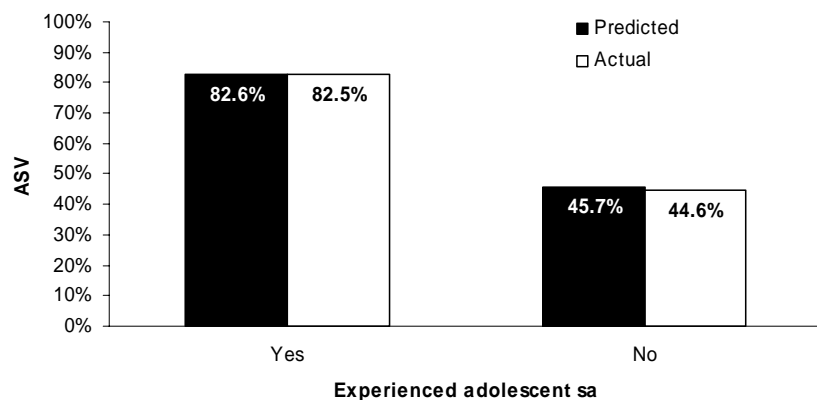
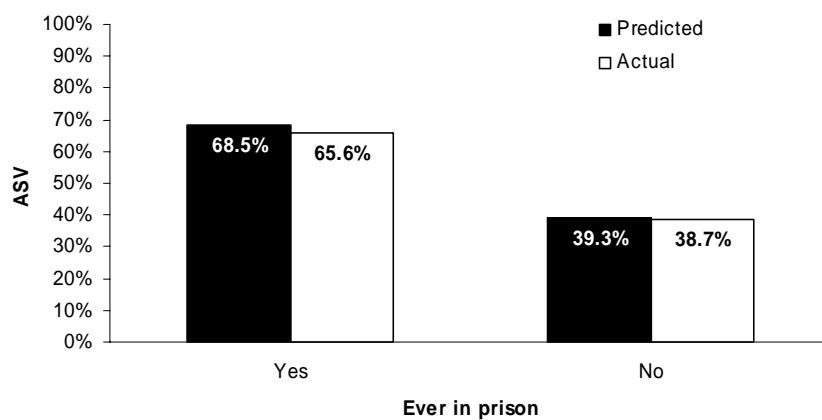
Appendix I

Predicted and Actual Main Effects for Models predicting Adult Sexual Victimization (ASV) using Adolescent Sexual Abuse, controlling for current incarceration ($n = 369$)



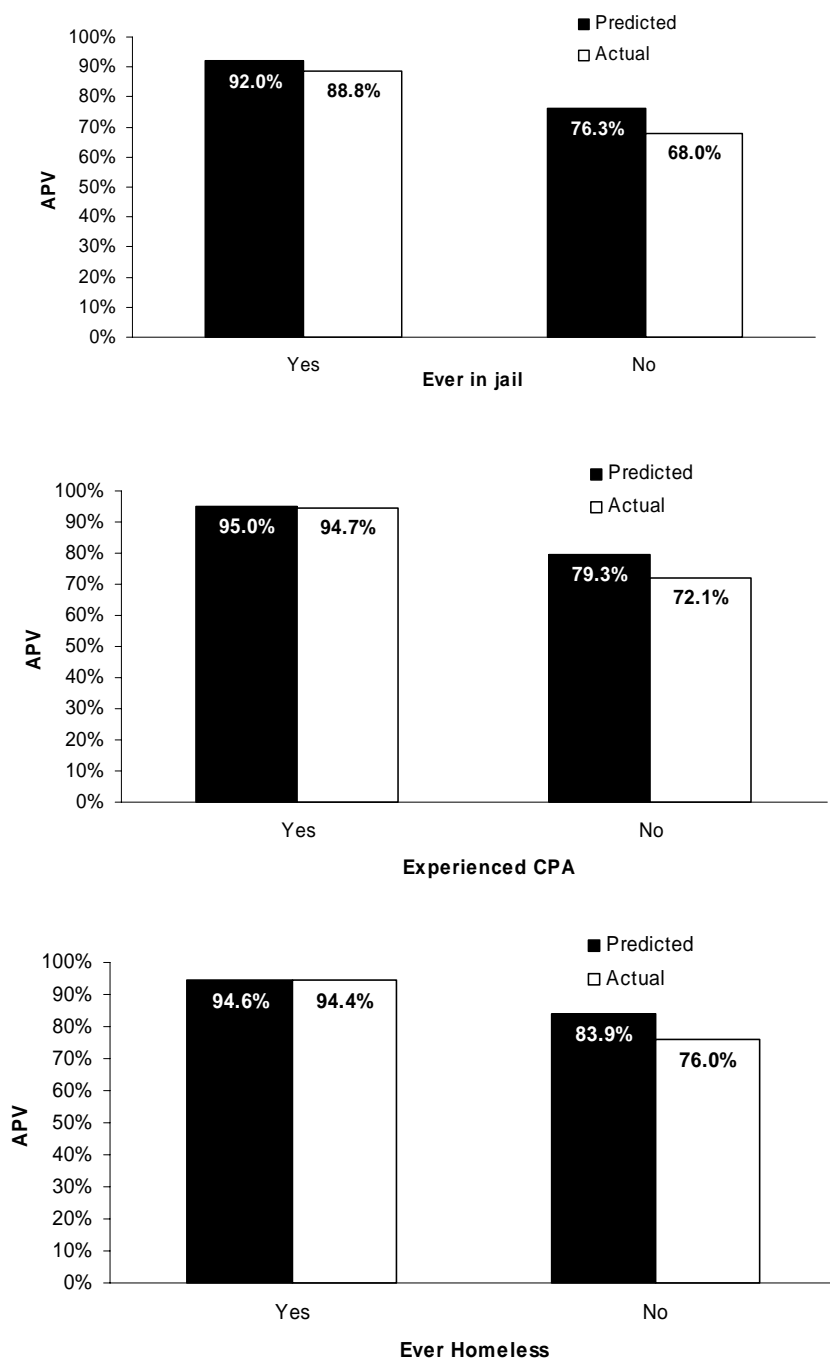
Appendix J

Predicted and Actual Main Effects for Models predicting Adult Sexual Victimization (ASV) using Adolescent Sexual Abuse, controlling for ever being in prison ($n = 369$)



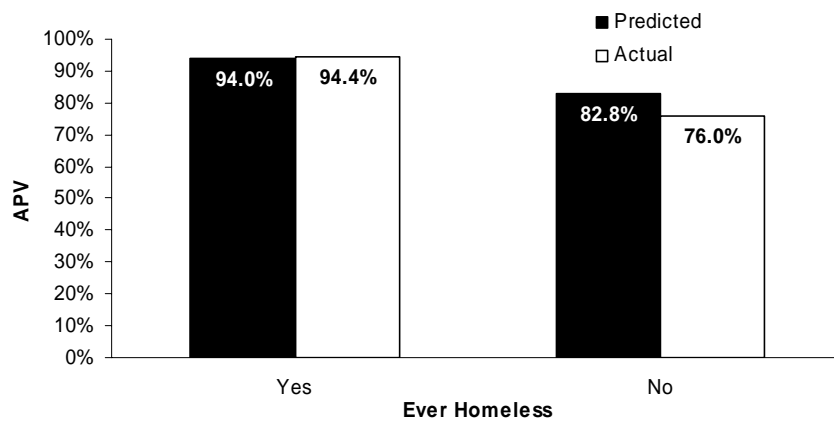
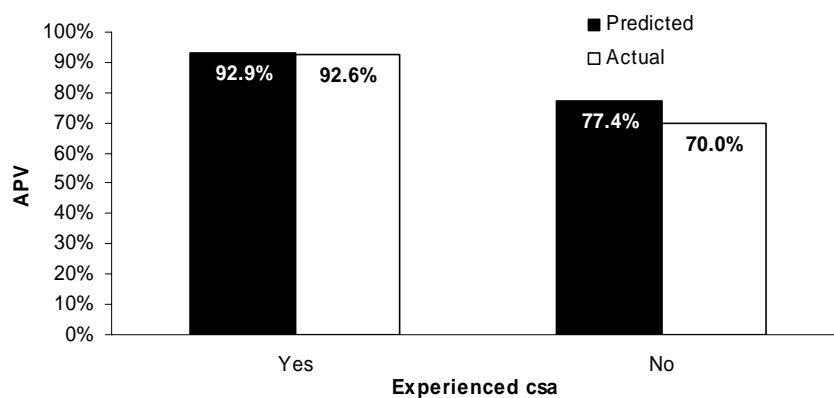
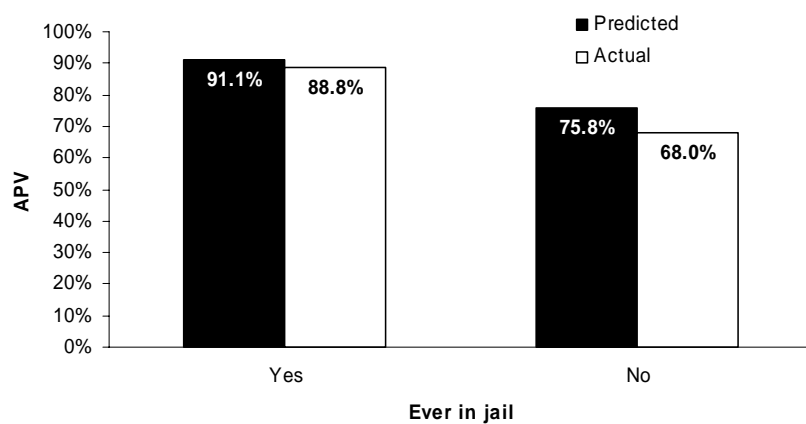
Appendix K

Predicted and Actual Main Effects for Models predicting
Adult Physical Victimization (APV) using Child Physical Abuse (CPA)
($n = 369$)



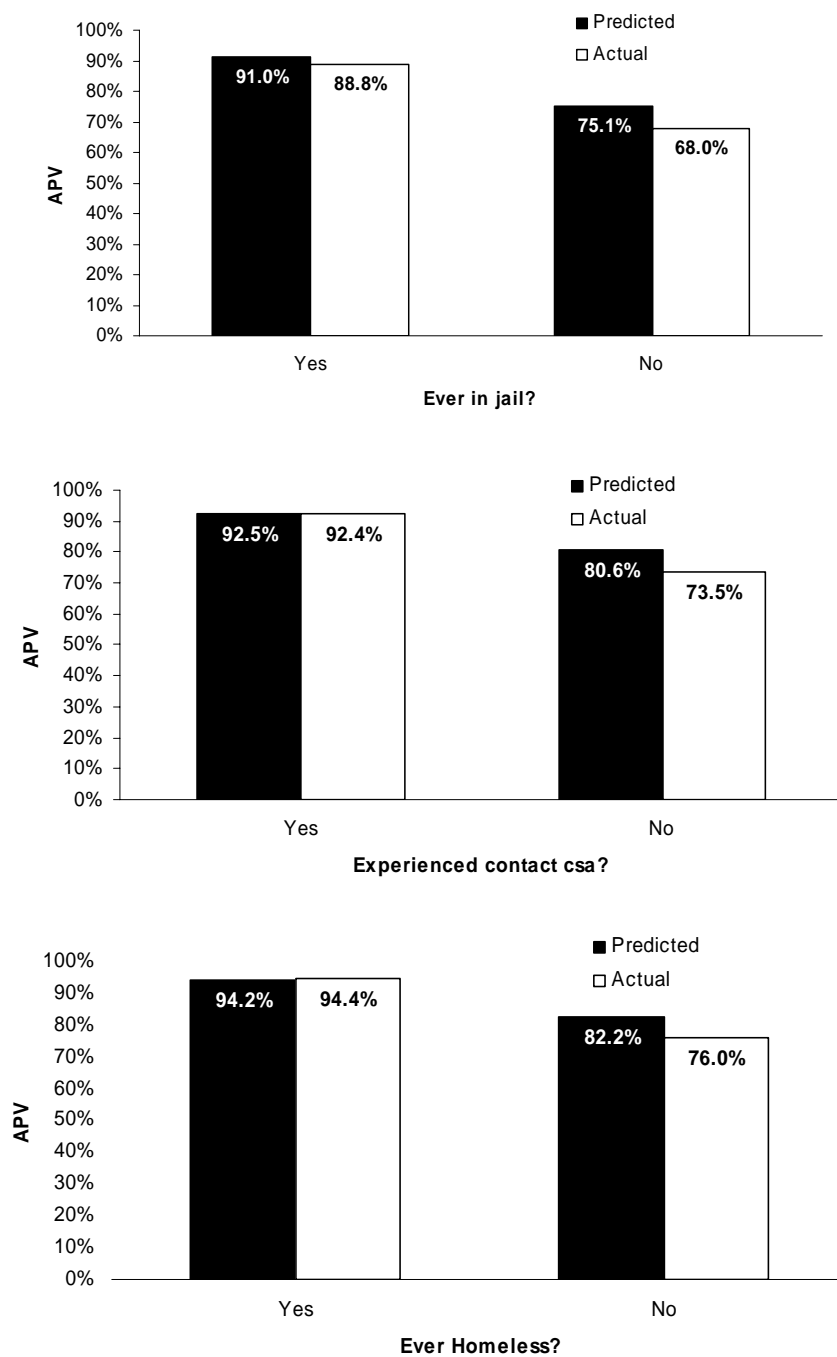
Appendix L

Predicted and Actual Main Effects for Models predicting
Adult Physical Victimization (APV) using Child Sexual Abuse (CSA)
($n = 368$)



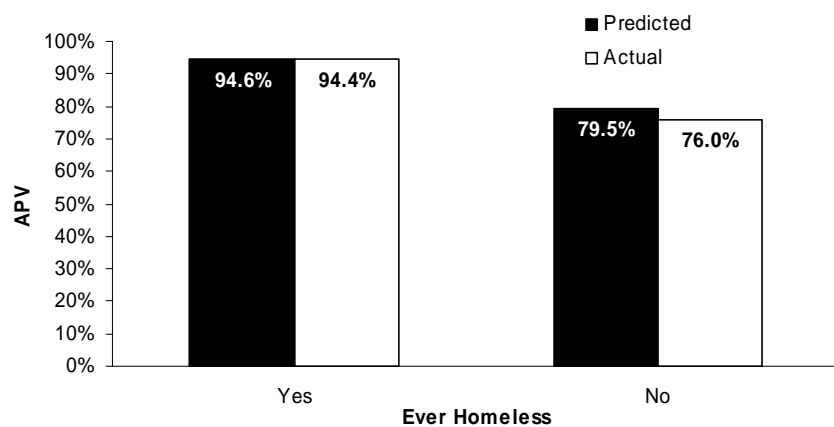
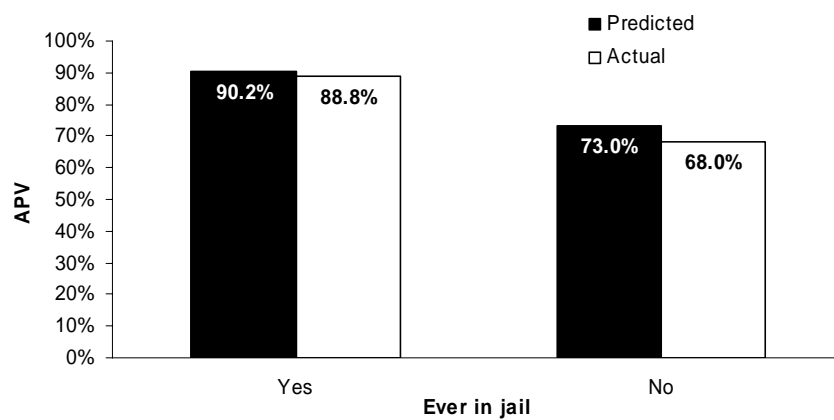
Appendix M

Predicted and Actual Main Effects for Models predicting
Adult Physical Victimization (APV) using Contact Child Sexual Abuse (CCSA)
($n = 368$)



Appendix N

Predicted and Actual Main Effects for Models predicting Adult Physical Victimization (APV) using Child Sexual Abuse prior to age 13 by an older person ($n = 368$)



Appendix O

Predicted and Actual Main Effects for Models predicting Adult Physical Victimization (APV) using Adolescent Sexual Abuse
($n = 369$)

