Childhood Victimization and Childlessness

by

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Abstract

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Motivation to have children is a complex construct, driven not only by biology, but also by expectations and social roles. With a few exceptions, the literature on demographic, psychological, and interpersonal correlates of childlessness does not include adults with a history of childhood victimization. This dissertation explores whether maltreated children are more likely to be childless in adulthood than individuals without histories of childhood victimization. Demographic and psychological differences between previously maltreated children who have children of their own and those who remain childless were explored, as well as differences between previously maltreated children who have children of their own and matched controls. Data were part of a cohort design study in which abused and neglected children (N = 676) were matched with non-abused/non-neglected children (N = 520) and followed prospectively into adulthood (mean age 28.72). The Pearson chi-square statistic was used for simple bivariate comparisons of groups. Logistic regression equations were computed with interactions for childhood maltreatment and hypothesized moderators predicting the dichotomous dependent variable of childlessness. Because most analyses will be based on logistic regression equations, the use of the phrase “increased risk” is used in a statistical way to refer to significant odds ratios. It is recognized that childlessness may be protective and the phrase “increased risk” is not meant pejoratively or to pathologize childlessness.

Analyses were performed for the overall sample as well as for specific types of abuse/neglect, for males and females, and for younger and older age groups, separately.

Overall, 27.5% (n = 329) of the sample was childless at the time of the assessment. Being female, a high school graduate, working in a professional or managerial position, and having a lifetime diagnosis of alcohol abuse were significant predictors of childlessness. Contrary to findings in the literature and current expectations, several other characteristics (i.e, religiosity, relationship fidelity, self-esteem, and having a lifetime diagnosis of depression, dysthymia, post-traumatic stress disorder, and drug abuse) did not predict childlessness. There was no main effect for child abuse and neglect or for specific types of abuse and neglect on childlessness in adulthood. That is, the abused/neglected group were not more likely to be childless than matched controls. In terms of overall moderation effects, educational attainment significantly interacted with childhood maltreatment to predict childlessness.

Moderation effects for specific types of abuse indicated that generalized anxiety disorder interacted with neglect; alcohol abuse, educational attainment, and religiosity interacted with sexual abuse; and alcohol abuse and religiosity interacted with physical abuse to predict childlessness. Several findings were gender-specific. For women, childhood sexual abuse interacted with education and alcohol abuse to decrease the risk of childlessness, and religiosity to increase the risk of childlessness. For men, childhood maltreatment in general and physical abuse each interacted with alcohol abuse to decrease the risk of childlessness. In addition, several findings were age-specific. For participants over age 30, childhood physical abuse interacted with religiosity to increase the risk of childlessness and for participants under age 30 childhood sexual and physical

abuse interacted with education and alcohol abuse, respectively, to decrease the risk of childlessness. There were no interactions between self-esteem, fidelity, or any other psychiatric diagnosis and maltreatment status on childlessness.

These findings bridge the gap between the extant literature on childlessness, which focuses mainly on non-maltreated samples, and the separate literature on child maltreatment, which focuses mainly on individuals who have children. Despite surprising findings, these results have implications for social service interventions and psychological treatment.

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Childhood Victimization and Childlessness

Introduction

This dissertation hopes to contribute to a dearth of literature on childhood victimization and childbearing. The existing literature on childlessness focuses primarily on female, middle-class samples, while the majority of the child maltreatment research focuses on victims of childhood maltreatment who become parents. This dissertation draws on different but convergent empirical bodies and theoretical backgrounds to investigate whether the absence of children for those who have suffered childhood maltreatment may be associated educational attainment, religiosity, relationship fidelity, self-esteem, and psychopathology.

Introduction to Childlessness

Defining Childlessness. Motivation to have children is a complex construct, driven not only by biology, but also expectations and social roles (Allison, 1979). When considering the construct of childlessness, three general causes should be considered. First, some individuals are childless as the result of infertility or medical problems. While reproduction is a robust biological phenomenon, 10% of couples trying to conceive in the United States have difficulty as a result of a medical problem or an unknown reason (Barrow, 1998). Second, some individuals have made a conscious decision not to have children and therefore are childless by choice. Childfree is a term

that is coming into use, indicating that the absence of having a child is in no way lacking, contrary to what the suffix '-less' seems to imply (Delyser, 2007). Third, some individuals are childless by circumstance. These individuals may be childless while pursuing a career or are simply delaying child-rearing until they acquire the financial resources. They may also want children but are single, or partnered to somebody who is of the same gender, ambivalent, or against having children. In the United States, lack of or poor childcare, public education, and healthcare add to concerns for the future of many individuals considering children, causing them to abandon initial plans of having children. In other words, those who are childless by circumstance may not have made a conscious choice against having children, nor is there anything medically preventing them from having children.

It is worth noting that voluntary and involuntary childlessness are not always distinct statuses. The literature highlights the distinction between "early articulators," individuals who have the intention early in life to remain childless, and "postponers," those who become childless after delaying childbearing in the course of their lives (Houseknecht, 1987). However, this distinction may represent two ends of a spectrum which is likely filled with other types of people who experience ambivalence about their decision and who at any given time may have identified their choice to rear children or be childless as 'voluntary.'

In considering correlates of childlessness for the purposes of this study, individuals defined as childless include those who are biologically unable to have children, those who are temporarily childless, and those who are intentionally and permanently childless (Park, 2005). To date, the majority of research on childlessness is

based primarily on samples of middle-class women. In addition, the child maltreatment literature does not directly address the question of childlessness. This study, therefore, will help to illuminate whether the rates of childlessness differ between those who have suffered childhood maltreatment and those who have not. It should be noted that the terms 'maltreatment' and 'victimization' will be used interchangeably throughout this dissertation. These terms are meant to encapsulate all forms of the term 'abuse' (physical, sexual, and psychological) and all forms of the term 'neglect' (physical and psychological).

Prevalence of Childlessness and Trends in Childbearing. Historically and in many under-developed countries, bearing children was and is essential to a family's survival, economic security, and religious duty. Shifts in attitudes about childbearing cannot be disentangled from social movements that have afforded opportunities to women (such as increased educational attainment, job placements, and greater contraceptive availability) and subsequently brought evolving beliefs about women's roles and the structure of what constitutes a family. In the past century, the number of women who are childless by choice has gradually increased (Earle and Letherby, 2007; Meyers, 2001; Morell, 2000). For example, since the feminist social movement in the United States during the sixties, increasing numbers of women have turned away from the notion that motherhood is the primary way to fulfill the role of woman or to be feminine (Gillespie, 2003). Indeed, research suggests that a high level of commitment to work and less stereotypic notions of sex-roles is correlated with low fertility in women (Allison, 1979). Abma, Chandra, Mosher, Peterson, and Piccinino's (1997) findings reflect these contextual influences – compared to 12.4% in 1970, the percentage of

women who were childless by choice increased to 25% in 1990. Similarly, Downs (2003) reported that the percent of women aged 40 to 44 that were childless increased from 10% in 1976 to 18% in 2002.

In the general female population, estimates of rates of childlessness are: 93.3% in ages 15-19, 68.9% in ages 20-24, 44.2% in ages 24-29, 27.6% in ages 30-34, 19.6% in ages 35-39, and 19.3% in ages 40-44 (U.S. Census Bureau, 2005). It should be noted, however, that the rates for individual age groups also differ as a function of race, nativity status, marital status, educational attainment, labor force status, annual family income, and geographic region of residence in the United States. For example, women who were not in the labor force and those with lower family incomes had higher rates of childbearing than women in higher income groups (U.S. Census Bureau, 2005).

While there is a substantial group of women in the United States who remain childless, it is clear from the census data that most women become mothers at some point in their lives (Heaton, Jacobson, and Holland, 1999; Somers, 1993). Much less is known about men's fertility behavior. Given that notions of masculinity may not be embodied in childbearing/rearing and there may be less societal pressure on men to parent, men may find the decision to remain childless easier, with less conflict, and therefore they may make this decision earlier in their lives and come to the conclusion more expediently. As it is likely that fertility rates and rates of childlessness in men and women differ, contemporary rates of childlessness may be even higher if men's self-reported behavior were instead measured and considered in census data (McAllister and Clarke, 1998).

Characteristics of those who are Childless. Although family planning certainly predicts aspects of one's life circumstance, the opposite is also true in that one's life

experience may determine aspects of family planning and childbearing. While one may argue a theory of innate-drives to explain reproduction, other motives exist for becoming a parent that change over time and differ as a function of culture. As Max Weber, political economist and sociologist described motivation, "We shall speak of 'action' insofar as the acting individual attaches a subjective meaning to his behavior—be it overt or covert, omission or acquiescence. Action is 'social' insofar as its subjective meaning takes account of the behavior of others and is thereby oriented in its course" (Weber, 1978, p. 4). Weber (1978) highlights how the decision to have children, while a seemingly private choice, is not made without the influences of one's culture or immediate environment.

Compared to individuals who have children, the voluntarily childless are more likely to be educated (Abma et al., 1997); be employed in professional and managerial occupations; be in a relationship where both partners earn relatively high incomes (Bachu, 1999); live in urban areas (DeOllos and Kapinus 2002); be less religious (Broneck, 2002); and be less conventional overall and less traditional in gender-role orientations (Burman and de Anda, 1986). In regard to how those with children and the childless perceive their intimate relationships, most studies demonstrate higher self-reported relationship satisfaction and dyadic cohesion among childless couples than among couples with children (Burman and de Anda, 1986; Callan, 1984; Somers, 1993). This finding may reflect positive psychological attributions about one's state of childlessness as well as reduced strain on marriages in the absence of children. Interestingly, however, higher levels of marital satisfaction do not seem to translate directly into lower divorce rates. Bartlett (1995) showed divorce rates for the childless

fall in the middle range, between couples with children under age 16 (highest) and couples with children over 16 (lowest).

Mawson's (2006) study of a sample of married couples, who are voluntarily childless, highlighted themes of autonomy, choice in daily life, and living responsibly as primary rationales for their decision. Women who were childless by choice viewed child-rearing as being less important to society than did mothers. It is interesting to note, however, that both groups of women held congruous perceptions about the negative aspects of having children (DeVellis, Wallston, and Acker, 1984). In a review of the literature, Park (2005) revealed that 79% of all relevant studies indicate that the most frequently cited motives to remain childless for both men and women were freedom from child-care responsibilities, greater opportunity for self-fulfillment, and spontaneous mobility. The second (62% of studies) most frequently cited motive was greater marital satisfaction. It is possible that childless couples find mastery and control in their lives by not having children in the same way that parents find meaning in their lives through having children. The third (55% of studies) most frequently cited motives were female career considerations and monetary advantages, while the fourth (38% of studies) most frequently cited motives were concerns about population growth and general dislike of children. Sex differences were apparent for these last motives, women reporting the former of each set more frequently then men.

While the literature on demographic, psychological, and interpersonal correlates of childlessness does not include adults with a history of childhood victimization, it is noteworthy that in Park's (2005) review of the literature on motives for childlessness, only the women mentioned early socialization experiences and doubts about parenting

abilities (31% of studies, mentioned by 37% of women and 0% of men), and concern for children given global conditions (21% of studies, mentioned by 21% of women and 0% of men). These expressed motives, however, may be salient for men as well as women who suffered childhood victimization. It is possible that men and women with a history of childhood maltreatment express less individualistic motives (financial benefits) and more motives surrounding self-doubt about parenting abilities and concern for a future child, given that they may not have a model for a maternal or paternal figure who appropriately valued them as children. In addition, childless adults who have suffered victimization in childhood may have a different associated meaning with parenthood and/or different ways of finding meaning in their own life than through parenthood.

Childlessness in the Abused and Neglected. While most adults with a history of child maltreatment (i.e., physical, sexual, and/or psychological abuse and/or neglect) are likely to have biological children, little is known about the extent of childlessness in this population and its characteristics. It is possible that childless individuals who have suffered childhood maltreatment perceive the world and conduct their lives in distinctly different ways than abused and neglected individuals who have children.

While economic cost–benefit models have shown that children in the West cost more than they benefit their parents (Balen and Bos, 2004), children in Western society are valued in and of themselves, as symbols of the future or hope. Ascription of such value to children, however, may not be shared by someone who was devalued, abused or neglected in childhood. Alternatively, given the high value that society places on having children, many women may not recognize the possibility of not having children. Many women in American society may prefer to remain childless, but may have children

because of social pressures and a lack or perceived choice. The importance of perceived choice on mental health is noteworthy. In a small sample of women aged 45-83 years, Jeffries and Konnert (2002) compared those who were mothers, voluntarily childless, and involuntarily childless. Results of this study demonstrate that the voluntarily childless women showed higher levels of overall well-being, autonomy, and environmental mastery compared to the involuntarily childless. Women who reported being childless by choice indicated that this was "an active decision to accept the childless lifestyle and focus on the future, in essence exerting control over their situations" (p.89). Those who *choose* children and those who *choose* childlessness may be equally fulfilled; it may be the lack of choice which is problematic.

To this point, one must be careful to assume, especially among individuals with a history of childhood victimization, that having children is a choice. In fact, given the increased risk-taking behaviors, discussed further below, victimized children who go on to reproduce may not have done so out of choice. Kellog, Burge, and Taylor (2000) spoke further to this point in their research about the relationship between family dysfunction and sexual experience. In this study, people who were patients at a variety of medical clinics anonymously completed a survey about childhood sexual experiences, physical violence, family substance abuse, violence toward others, and family quality. Participants who reported having suffered unwanted sexual experience (defined as "any kind of sexual touching or action that made you feel uncomfortable, bad, uneasy, or regretful," p.59) before the age of 18 obtained the highest family dysfunction scores (measured by indicators of family substance abuse, family violence, and perceived family

quality), while those who never had an unwanted sexual experience obtained the lowest family dysfunction scores.

Investigating the potential for disruptions in childbearing as a result of childhood trauma has theoretical, research, and clinical implications. With regard to theory, because current notions of childlessness are not informed by data from lower socioeconomic or male populations, it is of theoretical importance to more fully understand the construct of childlessness and its predictors in various populations. With regard to research, it is of great interest to uncover whether childhood abuse-specific factors may lead to reproductive disruption to a greater degree than other factors. With regard to clinical practice, the present discussion has relevance for social service interventions and the course of both medical and psychological treatment. For example, research suggests that breaking the cycle of violence in maltreating families may depend on having few children; however, the role and potential protective nature of childlessness has not been studied (Hunter and Kilstrom, 1979; Werner and Smith, 1992). In an effort to fill the gaps in existing literature, this dissertation explores predictors of childlessness in those who have been victims of childhood maltreatment, and investigates whether childlessness is a consequence of childhood abuse and/or neglect, or perhaps whether child maltreatment interacts with certain characteristics or factors which together (or in combination) increase a person's likelihood of being childless.

Consequences of Childhood Victimization on Mental Health and Coping

Mental Health. From music to asbestos, environmental variables affect people psychologically and physiologically. The environmental stressor of child maltreatment

has been found to negatively affect neuroendocrine functioning (Cicchetti and Rogosch, 2001; De Bellis et al., 1999; Hart, Gunnar, and Cicchetti, 1996; Kaufman and Cicchetti, 1989) and different forms of maltreatment may result in different patterns of neuroendrocrine dysregulation (Cicchetti and Rogosch, 2001). While this dissertation does not speak directly to the potential biological differences between victimized children who reproduce versus those who do not, it is possible that for victimized children who are childless in adulthood this characteristic may be the biological result of maturing in a hostile environment. It may be naïve to assume that the mental health effects of maltreatment are somehow distinctly different than the physical health effects, and it may be more likely that both effects are related and, in some cases, even causally linked.

Research shows that mental illness is over-represented in families that are abusive to children (Bosanac, Buist, and Burrows, 2003) and the mental health consequences of childhood victimization are both long- and short-term and are as varied as the abuse itself (Cohen, Brown, and Smailes, 2001; Famularo, Kinscherff, and Fenton, 1992; Kashani, Shekim, Burk, and Beck, 1987; Risman, 2000; Sedlak et al., 2006; Widom, DuMont, and Czaja, 2007; Widom, 2000; Widom, Weiler, and Cottler, 1999).

Neuroendocrine changes may predispose maltreated children to a greater likelihood of mental illness (Cicchetti and Rogosch, 2001). There is evidence that maltreated children are more likely to experience the following psychiatric problems: post-traumatic stress disorder (De Bellis and Putnam, 1994; Widom, 1999); depression and anxiety disorders (Allen and Tarnowski, 1989; Widom et al., 2007); conduct disorder and delinquency (Kaufman and Cicchetti, 1989; Kazdin, Moser, Colbus, and Bell, 1985; Shields and Cicchetti, 1998; Widom, 1989); suicidal behaviors (Dube et al., 2001); and

substance-use disorders (Horowitz, Widom, McLaughlin, and White, 2001; Widom, Ireland, and Glynn, 1995).

Research based on the same abused and neglected and control samples as the present investigation demonstrates that the relationship between childhood victimization and psychopathology is complex. For example, adults who suffered childhood abuse and neglect are at increased risk for lifetime and current post-traumatic stress disorder (Widom, 1999): 37.5% of childhood victims of sexual abuse met diagnostic criteria for lifetime post-traumatic stress disorder, while 32.7% of those physically abused and 30.6% of those neglected met criteria. Although increased risk for psychopathology results from the impact of childhood victimization, it should be noted that childhood victimization is not sufficient in predicting psychopathology. In fact, family (parental arrest, parental substance use, welfare support during childhood, family over 5 children), individual (early behavior problems, low education), and lifestyle (marital disruption in adulthood, substance abuse in adulthood) problems were more likely to occur in the abused and neglected sample and also were independently associated with increased risk for post-traumatic stress disorder .

In the same abused and neglected and control samples as the present investigation, increased lifetime risk for major depressive disorder was associated with suffering childhood physical abuse and multiple types of abuse (Widom et al., 2007). Interestingly, those who suffered childhood neglect were at increased risk for major depressive disorder within the past year, while victims of childhood sexual abuse were at no elevated risk for major depressive disorder compared to the control group. In addition, those who had suffered childhood victimization were more likely to experience

a major depressive episode earlier in their lives compared to the control group. Abused and neglected individuals with a lifetime diagnosis of major depressive disorder were significantly more likely than controls to suffer from another lifetime psychiatric diagnosis.

Widom et al. (1995) found a significant relationship between childhood victimization and alcohol abuse and/or dependence in women who suffered childhood neglect, but not in men. This sex difference is consistent with previous literature demonstrating an increased arrest record for alcohol or drug offenses in women with a history of childhood victimization, but not in men with a history of childhood victimization (Widom and Ireland, 1995). Inconsistent findings are noted in literature measuring psychiatric symptoms, as opposed to diagnosis, such that Horowitz et al. (2001) found that men who suffered childhood victimization are more likely to have symptoms of alcohol abuse or dependence and antisocial personality disorder.

While some findings of sex differences are consistent with a large literature on sex-specific mental health outcomes in the general population, other findings are more atypical for both sexes. For example, Horowitz et al. (2001) found that in sex-specific comparisons of abused and neglected men with male controls that abused and neglected men are more likely to experience dysthymic symptoms than male controls. Similarly, when comparing abused and neglected women with female controls, the data show that abused and neglected women are more likely to have alcohol problems as adults than female controls. Because of the anomalous mental health outcomes in previous literature and the dearth of literature on childlessness in abused and neglected samples, this dissertation investigates whether various psychiatric diagnoses moderate the relationship

between childhood victimization and childlessness, for the overall sample as well as for the abuse and neglect and control groups, and for the male and female participants separately.

Some differences in the literature addressing the relationship between childhood victimization and psychopathology may be accounted for by the design of the research. For example, results may differ based on whether the history of childhood maltreatment is retrospectively self-reported or officially documented and outcomes prospectively measured. While much of the clinical literature is based on retrospective accounts of childhood events, results from prospective analyses seem to differ. In Widom et al.'s (1999) investigation, retrospective self-reports of childhood victimization were associated with increased risk for drug abuse in adulthood (replicating previous literature); however, prospective analyses demonstrated that those who suffered victimization in childhood were not at increased risk for drug abuse compared to controls. This disparity might reflect differences in adults whose sense of self is that of a "victim" compared to an official definition of it.

Overall, the presence of particular diagnoses and the severity and extent of psychiatric symptoms in those who have suffered childhood maltreatment may depend on individual child factors, such as the child's gender and ethnicity (Widom, 2000); abuse factors, such as age at victimization, duration of abuse suffered, severity of the abuse, the child's relationship to the perpetrator, and treatment received, if any; as well as community and neighborhood factors, e.g., involvement in antisocial or criminal sub-cultures (Widom, 2000). The majority of adults with mental illness (not controlling for history of childhood maltreatment), however, have children. Furthermore, in their review

of the literature on childbearing in people with severe mental illness Mowbray, Oyserman, and Bybee (2001) report that women with mental illness show average fertility rates and have average to above average numbers of children. In addition, women with mental illness are more likely to marry and to have children than men with similar mental illness (Mowbray et al., 2001).

In fact, "for some persons with mental illness, parenthood can potentially overcome the major problems of isolation, identity confusion, and stigma that are associated with long-term mental illness… one can travel from outcast to a valued and honored status" (Apfel and Handel, 1993, p. 93). Research has not yet established, however, the extent to which individuals with mental illness are actually functioning in a parenting role. It is also unknown how past and/or present mental illness affects the relationship between childhood victimization and childlessness or the decision to have children. It may be, for example, that the difference between victimized children who have children and those that remain childless is in the degree and quality of their mental health.

Compared to healthy controls, some research suggests that women with psychotic disorders have decreased rates of marriage, fertility, and marital fertility (Howard, Kumar, Leese, and Thornicroft, 2002; Hutchinson et al., 2003). These findings also may be accounted for by difficulty finding a sexual partner, sustaining relationships (i.e., a social consequence of the illness), or a result of the neuroleptic medication dosage (i.e., a consequence of having the illness) (Howard et al., 2002). It is possible that the psychological consequences of childhood victimization for some adults, especially those with severe or long-standing psychopathology, may be not having children.

Infertility presumably caused by psychological factors rather than medical factors (Benedek, 1970; Noyes and Chapnick, 1964) is referred to in the psychoanalytic literature as "psychogenic" infertility. An example of psychological factors that can hinder the desire to reproduce is provided by Friedman (1996) who published three case vignettes of adult female patients who experienced incest in early adolescence. These patients had no awareness of their sexual abuse prior to treatment, but through the process of treatment their victimization was revealed and corroborated. While three is an especially small sample size, it is interesting to note that all the victims felt conflicted about reproduction and described fear that "the abuser's sperm were still viable within… any pregnancy would have these sperm as the fertilizing agent, and that the abuser would be the biological father" (p.383). While this example suggests that such unconscious fear can hamper the desire to reproduce, it is also possible that adults with a history of childhood victimization may consciously decide to end the cycle of violence in their families by not having children. Alternatively, taking a more cognitive behavioral approach and invoking operant conditioning, children or ideas of child-rearing may elicit anxiety from an adult with a history of childhood maltreatment (Beck, 1972). That is, the idea of raising a child (or associated ideas, like marriage and starting a family) may be anxiety inducing, thus negatively reinforcing, i.e., strengthening the avoidance of reproduction. In an effort to integrate psychophysiology, it is possible that the stress and anxiety sustained during childhood victimization, followed by anxious avoidance of parenting in adulthood may have biological correlates that cause or hinder reproduction.

Coping with 'Choices.' Illustrating the complex interaction between a person and his or her social context, Allison (1970) described psychologically driven infertility as

possibly being behaviorally adaptive in certain environments. For example, Samoan culture expects women to be sexually active before marriage, but does not view these women as ready for motherhood, and in fact, during their years of promiscuity, Samoan girls rarely become impregnated before marriage. This example highlights an adaptive, 'temporary infertility' that occurs perhaps as a result of, but surely within a social context. Research suggests that victims of childhood sexual abuse are more likely to have increased numbers of sexual partners and increased rates of sexually transmitted disease (Felitti et al., 1998). In the case of individuals who experienced childhood maltreatment, a psychological aversion to reproduction (e.g., not being ready for parenthood) may be adaptive both for a potential offspring and for the adult who has suffered years of maltreatment in childhood. Indeed, research suggests that the number of unplanned pregnancies conceived by a very low-income woman is predictive of her abuse and neglect of her children independent of other demographic characteristics (Zuravin, 1987). It is possible that differences in maltreatment (e.g., in the nature and duration of abuse and in the perpetrator) may result in various physiological, psychological, and behavioral consequences that effect fertility patterns, and for some increases the likelihood of being childless, i.e., a 'temporary infertility.'

On a more cognitive level, it is possible that individuals who have experienced victimization in childhood view childlessness as a way to minimize or reduce distressing life experiences. Some evidence suggests that women with a history of childhood victimization have more stressful childbearing experiences: compared to women without histories of childhood victimization, women who experienced childhood abuse and/or neglect were more likely to engage in risky sexual behaviors (Browne and Finkelhor,

1986), experience unwanted pregnancy (Dietz et al., 1999) and become pregnant out of wedlock (Romito, Crisma, and Saurel-Cubizolles, 2003). In addition, these women seem to have more violent and disruptive intimate relationships: women who experienced childhood maltreatment are more likely to experience adult sexual violence (Jewkes, Levin, and Penn-Kekana, 2002), be victimized by an intimate partner, or get divorced (Romito et al., 2003).

Not only do early childhood events affect later life experiences, but these later experiences also affect how consequential these earlier events will be for subsequent childbearing. Consequences such as those listed above may encourage, on a conscious or unconscious level, some women to remain childless in order to reduce the stress and violence in their lives and for the well-being of a potential child. Unlike in the Samoan cultural context, in the context of childhood maltreatment, the adaptive response of childlessness, or 'temporary infertility,' may only occur for a minority, but may be nonetheless adaptive for mental and physical health outcomes. Thus, early childhood events, such as victimization, may not only affect later life experiences, such as having children, but such experiences also may have consequences for subsequent well-being.

Given the mental health consequences associated with childhood victimization and that life stress can exacerbate psychiatric symptoms (Bosanac et al., 2003), one can see how, for adults who have suffered childhood victimization, their psychology and life events can create a dangerous feedback loop that may come to express itself in "the cycle of violence" (Widom, 1989a). For victimized children who do not go on to have children, their physiology and life experiences may serve as a deterrent from additional

strain (e.g., emotional, financial, etc.) and/or subjecting a future child to possible maltreatment and, therefore, a deterrent from reproduction.

Existing Research on Childhood Victimization and Childbearing

The literature on childhood victimization and childbearing contains many mixed results and is generally limited, with few studies specifically addressing childlessness in those who have suffered childhood maltreatment. Romito et al. (2003) found that Italian adult women who reported being physically, sexually, or psychologically abused by their biological parent(s) in childhood were significantly more likely to be childless than those who did not report abuse from their parents. Moeller, Bachmann, and Moeller (1993), however, found no association between a history of family violence and the number of children born or childlessness.

Adjacent literatures address the relationship between childhood maltreatment and factors that may ultimately influence childbearing. A New Zealand study of the long-term impact of self-reported physical, sexual, and emotional abuse found an association between self-reported childhood emotional abuse and sexual abuse and early pregnancy (Mullen, Martin, Anderson, Romans, and Herbison, 1996). Along a similar vein, Sickel (2002) found that females aged 13 to 28 with a history of childhood sexual abuse demonstrated less frequent contraceptive use and decreased contraceptive efficacy compared to controls. Young women with a history of sexual abuse also expressed greater desire to be pregnant than comparison women, which in turn predicted decreased contraceptive frequency, while controlling for the effects of age, socioeconomic level, marital status, religious involvement, and pregnancy history. This study also suggested

that women who experience childhood sexual abuse may express attitudes about sexual engagement discrepant from their behavior. For example, while Sickel (2002) demonstrated that female victims of childhood sexual abuse expressed less intention and desire to engage in sexual intercourse, previous literature has shown that female victims of childhood sexual abuse have an earlier age of onset for sexual intercourse (Trickett, Noll, and Putnam, 1998; Stock, Bell, Boyer, and Connell, 1997).

Interestingly, for women with a history of childhood sexual abuse, increased pregnancy desire was associated with decreased levels of self-reported anxiety and depression, and with increased self-esteem and maternal attachment (Sickel, 2002). The relationship between anxiety, depression, self-esteem, and maternal attachment (as measured by an inventory of parent and peer attachment) and pregnancy desire and contraceptive use was directionally different and weaker for the women without a history of maltreatment. Sickel's (2002) findings about the relationship between maternal attachment and reproductive behavior contradicts the results of Quinn (1986), who found that in women with a history of childhood sexual abuse, increased mother-daughter communication, perhaps a marker of attachment, was associated with delayed onset of sexual activity and increased contraceptive use. These discrepant findings, however, may be the result of different assessment tools used to capture the construct of attachment.

Other factors in the family of origin may influence the decision to have children. For example, a lack of parental nurturance and affection, perhaps a proxy for neglect, in childhood were explanations for childlessness in a sample of eight childless women nearing the end of their childbearing years (Slosar, 2004). These women were recruited by word of mouth and were between the ages of 37 and 42. They had never borne

children, and did not exhibit symptoms of psychopathology. Through semi-structured interviews and projective tests, Slosar (2004) found that all the women reported a desire to have children but attributed their childlessness to forces outside their control, including a history of childhood trauma, anger at parents due to childhood treatment, lack of parental encouragement to have children, men they have dated or married, avoiding responsibility, and pregnancy fears.

In general, much less is known about factors affecting men's decision to have children. In one of the few studies exploring the influence of men's childhood experiences in remaining childless, Lunneborg (2000) interviewed 30 childless American and British men and found that those men who felt that their fathers were distant or abusive were less likely to be interested in parenting than those men who did not report having distant or abusive fathers. While literature suggests that the relationships, attachment, and behavior modeled in the family of origin, in addition to the effects of mental illness, influence the decision to bear children in both men and women, it is still unclear whether those with documented histories of child abuse (i.e., not only self-reported), those who have suffered other forms of childhood abuse besides sexual abuse (e.g., physical abuse and neglect) and men with a history of childhood victimization share similar expressed desires about having children. This dissertation aims to add to the literature on childhood victimization and the decision to have children by exploring these further questions.

Research Questions

The existing childlessness literature has focused primarily on female, middle-class samples. In addition, most child maltreatment research has focused on those adults who have experienced childhood abuse and neglect and who have children. There is sparse literature on adults who have experienced childhood maltreatment and remain childless in adulthood. This dissertation explores whether maltreated children are more likely to be childless in adulthood than adults without histories of childhood victimization. In addition, differences between individuals who have children and those who remain childless are explored, as are several characteristics that might interact with child maltreatment (moderators) to increase risk of childlessness.

This dissertation draws on different but convergent theoretical backgrounds. The child maltreatment literature explores the consequences of child victimization and recent research has focused on resiliency and the role of protective and coping factors (Dufour, Nadeau, and Bertrand, 2000; McGloin and Widom, 2001). In addition, feminist literatures emphasize survivor strength and problem-solving strategies that families can use to defend against aggression and cope with its consequences (French, Teays, and Purdy, 1998). The lives of abused and neglected children who are childless may represent a conscious and unconscious breaking of a cycle (Romito, Saurel-Cubizolles, and Crisma, 2001). The absence of children for those who have suffered violent childhoods may be the product of a conscious choice driven by motivations to end the cycle of violence, a result of attributions about children and child-rearing, or a consequence of physiological dysfunction. Based on this review of the literature, it is reasonable to hypothesize the following:

Hypothesis 1. Individuals who are childless will be more likely to have a high school diploma, be employed, have high self-esteem, be faithful in intimate relationships, and have less religiosity than individuals with children. That is, the characteristics of individuals in the childlessness literature are expected to also describe the present sample.

Hypothesis 2. Individuals with documented histories of childhood abuse and neglect are predicted to be childless more often in adulthood compared to matched controls.

Based on the existing literature on childlessness, the following factors are expected to moderate the relationship between childhood victimization and childlessness.

Hypothesis 3. It is hypothesized that for women child maltreatment will interact with high levels of education to lead to higher levels of childlessness. That is, abused and neglected women with higher levels of educational attainment will be less likely to have children (i.e., more likely to be childless) than abused and neglected women with lower levels of education and controls from both groups.

Hypothesis 4. Although individuals who are faithful in their relationships are more likely to be childless than those who are unfaithful, it is hypothesized that childhood maltreatment status will interact with fidelity in relationships to predict risk of childlessness. Specifically, it is hypothesized that fidelity in combination with child maltreatment will lead to higher rates of childlessness.

Hypothesis 5. Although individuals (those with histories of childhood abuse and neglect and those without) who attend religious services less frequently will be more likely to be childless than those who are attend more frequently, it is hypothesized that

child maltreatment status will interact with religiosity to predict risk of childlessness. Specifically, it is hypothesized that less religiosity in combination with child maltreatment will lead to higher rates of childlessness.

Hypothesis 6. Although it is expected that individuals with high self-esteem will be more likely to be childless than those with lower levels of self-esteem, it is hypothesized that the effect will be greater for abused and neglected individuals than controls. That is, the combination of child maltreatment status and high self-esteem will lead to higher rates of childlessness.

Hypothesis 7. Although it is expected that individuals with a lifetime history of psychopathology will be more likely to be childless than those without a history of psychopathology, it is hypothesized that the effect will be greater for abused and neglected individuals than controls. That is, the combination of child maltreatment status and a history of psychopathology will lead to higher rates of childlessness.

Based on the existing literature, different forms of child abuse (i.e., sexual abuse, physical abuse, and neglect) may interact with these characteristics described above to predict different risks for childlessness. There is substantially more literature on the sexual behaviors in victims of childhood sexual abuse than in victims of childhood neglect or physical abuse; therefore, it is more feasible to make predictions about childlessness in the sexually abused. For example, Brown, Cohen, Chen, Smailes, and Johnson (2004) found that individuals who suffered two or more incidents of childhood sexual abuse were more likely to experience early puberty and early pregnancy after gender, class, race, paternal absence, and mother's age at the birth of the study child were

statistically controlled. Also, Widom and Kuhns (1996) found that for females, childhood sexual abuse was associated with increased risk for prostitution. Based on these literatures, it is possible that individuals who have suffered childhood sexual abuse may have lower rates of childlessness than the other abuse types and controls.

Childhood neglect and physical abuse may be more systematically present in the parent-child dynamic than an episode or incidents of sexual abuse. Therefore, it is possible that victims of childhood neglect and physical abuse may have more self-doubt, or apprehension, about bearing/raising children and may demonstrate higher rates of childlessness than controls or victims of childhood sexual abuse (whose misgivings or apprehension may focus on sexual/intimate relationships). In addition, childhood victims of physical abuse and neglect may more readily seek to end the cycle of violence in their families by being childless. This dissertation hypothesizes increased risk of childlessness for all three types of childhood maltreatment and, for the reasons described above, does not specify whether one type of maltreatment will be more or less likely to lead to childlessness.

Methods

Sample and Design

The data employed in these analyses are part of a research project based on a cohort design study (Leventhal, 1982; Schulsinger, Mednick, and Knop, 1981) in which abused and neglected children were matched with non-abused and non-neglected children and followed prospectively into adulthood. The prospective nature of this study allows some issues of causality to be examined and helps to disentangle the effects of childhood victimization from other potentially confounding effects. Because of the matching procedure, the subjects are assumed to differ in the risk factor (that is, having experienced childhood sexual or physical abuse and/or neglect). Since it is not possible to randomly assign subjects to groups, the assumption of equivalency for the groups is an approximation. For complete details of the study design and subject selection criteria, see Widom (1989b).

In the first phase of this research, a large group of children who were abused and/or neglected approximately 20 years earlier were followed through an examination of official criminal records and compared with a matched group of children (Widom, 1989c). The abused and/or neglected group was composed of victims of substantiated childhood physical and sexual abuse and/or neglect whose cases were processed during the years 1967 through 1971 in the county juvenile or adult criminal court (situated in a metropolitan area in the Midwest). The group was restricted to cases of early child abuse and/or neglect (i.e., children who were 11 years of age or younger at the time of the abuse or neglect incident). Physical abuse cases included injuries such as bruises, welts, burns, abrasions, lacerations, wounds, cuts, bone and skull fractures, and other evidence of

physical injury. Sexual abuse cases varied from those involving relatively nonspecific charges of “assault and battery with intent to gratify sexual desires” to more specific ones of “fondling or touching in an obscene manner,” sodomy, incest, and so forth. Neglect cases reflected a judgment that the parents’ deficiencies in child care were beyond those found acceptable by community and professional standards at the time. These cases represented extreme failure to provide adequate food, clothing, shelter, and medical attention to children.

A control group was established with children who were matched on age, sex, race, and approximate family social class during the time period of the study (1967 through 1971). Children who were under school age at the time of the abuse and/or neglect were matched with children of the same sex, race, date of birth (+/- 1 week), and hospital of birth through the use of county birth record information. For children of school age, records of more than 100 elementary schools for the same time period were used to find matches with children of the same sex, race, date of birth (+/- 6 months), class in elementary school during the years 1967 through 1971, and home address, preferably within a five-block radius of the abused or neglected child. No members of the control group were reported to the courts for abuse or neglect (Widom, 1989b); however, it is possible that some may have experienced unreported abuse or neglect.

The second phase of the research involved the tracing, locating, and interviewing of the abused and/or neglected individuals (20 years after their childhood victimization) and comparison subjects. Two-hour follow-up interviews were conducted between 1989 and 1995. The interview consisted of a series of structured and semi-structured questions and rating scales, measures of IQ and reading ability, and a psychiatric assessment.

Interviewers were blind to the purpose of the study, to the inclusion of an abused and/or neglected group, and to the participants' group membership. Similarly, the subjects were blind to the purpose of the study. Subjects were told that they had been selected to participate as part of a large group of individuals who grew up in the late 1960s and early 1970s. Subjects who participated signed a consent form acknowledging that they were participating voluntarily. Of the original group of 1,575, 1,307 subjects (83%) were located and 1,196 (76%) interviewed between 1989 and 1995. Of the people not interviewed, 43 were deceased (before interview), eight were incapable of being interviewed, 268 were not found, and 60 refused to participate (a refusal rate of 3.8%). The findings reported here are based on 1,196 subjects (676 abused and/or neglected and 520 comparison subjects). Of the abused or neglected participants, 73 (6.1%) were sexually abused, 53 (4.4%) were physically abused, 480 (40.1%) were neglected. The numbers of cases of specific types of abuse and neglect do not add up to the total in the abuse/neglect group (N= 676) because some individuals experienced more than one type of abuse or neglect. There were no significant differences between the follow-up sample (N = 1,196) and the original sample (N = 1,575) in terms of demographic characteristics (male, White, non-Hispanic, poverty in childhood census tract, or current age) or group status (abuse/neglect versus comparison group).

Approximately half the group was women and about two-thirds were white. At the time of interview, the average age of the participants was 28.72 years. There were no differences between the abused and neglected group and comparison subjects in terms of gender, race/ethnicity, or age. The average highest grade of school completed for the group was 11.47. Occupational status of the sample was coded according to the

Hollingshead Occupational Coding Index (Hollingshead, 1975) and levels ranged from 1 (laborer) to 9 (professional). Of the overall sample (N = 1196), 53% were in menial/ semiskilled occupations, 36.6% held skilled, clerical/semiprofessional jobs, and 7.9% held professional/managerial jobs. Overall, the group is skewed toward the lower end of the socioeconomic spectrum where the median occupational level was semiskilled.

Variables and Measures

Child Abuse and Neglect. Identification of childhood physical and sexual abuse and neglect was based on court substantiated cases from a Midwest county area during the years 1967 through 1971. Physical abuse cases included injuries such as bruises, welts, burns, abrasions, lacerations, wounds, cuts, bone and skull fractures, and other evidence of physical injury inflicted by a parent or caregiver. Sexual abuse charges varied from relatively non-specific charges of "assault and battery with intent to gratify sexual desires" to more specific charges of "fondling or touching in an obscene manner," rape, sodomy, incest, and so forth perpetrated by parents, relatives, caregivers, acquaintances, and strangers. Neglect cases reflected a judgment that the parent's (or caregiver's) deficiencies in child care were beyond those found acceptable by community and professional standards at the time. These cases represented extreme failure to provide adequate food, clothing, shelter, and medical attention to children. The overall abuse/neglect variable is a dichotomous variable based on official records of any of the three types of maltreatment (0 = control, 1 = abuse/neglect).

Childlessness. For the purposes of this study, 'childless' is defined as the absence of children by the time of the follow-up interview where the mean age of participants was

28.72. This age is considered a reasonable age by which to assess childlessness because the mean age of first-time mothers is 25 years, according to the National Center for Health Statistics, although this age varies for different races (Martin et al., 2003). Childlessness is a dichotomous variable based on participants' self-report (0 = have one or more child, 1 = childless). In the total sample of 1,196 participants, 72.5% (N = 867) had children by the time of the interviews and 329 participants (27.5%) were childless. Rates of childlessness differed significantly based on sex and age (see variables below for details); however, rates did not differ based on race/ethnicity.

Religiosity. As a proxy for religiosity, an ordinal variable was created to reflect the extent of church attendance, where 1 = never attend church, 2 = attend church once per year, 3 = attend church several times per year, 4 = attend church at least once per month, 5 = attend church at least once per week. In the total sample, 456 participants (38.1%) reported that they never attend church, 224 participants (18.7%) reported that they attend church at least once per week, 170 participants (14.2%) reported that they attend church at least once per month, 171 participants (14.3%) reported that they attend church several times per year, and 174 participants (14.5%) reported that they attend church once per year.

Psychopathology. The National Institute of Mental Health Diagnostic Interview Schedule revised (DIS-III-R), which corresponds to the third version of the Diagnostic and Statistical Manual (DSM-III-R) of the American Psychiatric Association (1987), was used to gather information on mood and anxiety disorders and alcohol and drug abuse/dependence. The DIS-III-R is a fully structured interview schedule designed for use by lay interviewers and has demonstrated reliability and validity (Helzer et al., 1985).

Although the DIS-III-R is a structured interview schedule, interviewers received a week of training in the administration of the interview.

Major depressive disorder, dysthymia, generalized anxiety disorder, post-traumatic stress disorder, alcohol abuse and/or dependence, and drug abuse and/or dependence disorder were assessed using DSM-III-R (American Psychiatric Association, 1987) criteria. For these analyses, lifetime diagnosis was used rather than current or lifetime symptoms to reflect the DSM-III-R threshold for the various diagnoses. A dichotomous variable, "any lifetime diagnosis," was created to reflect individuals who have a lifetime history of any one of these psychiatric disorders (i.e., these individuals met the criteria for at least one of these psychiatric disorders at some point in their lives).

Self-Esteem. Self-esteem was measured by the sum of the self-esteem items on the Rosenberg Self-Esteem Scale (Rosenberg, 1965). For the total sample, the mean level of self-esteem was 42.28 with a standard deviation of 6.33 (minimum score was 9.00, maximum score was 50.00). The distribution of scores were skewed to the upper end of the distribution (skewness = -1.22). A dichotomous variable was created for self-esteem with 0= lower self-esteem and 1= high self-esteem. High self-esteem was measured by taking the upper quartile of the distribution (all scores equal to and above 47.00), all scores below this mark were considered lower self-esteem. According to this criterion, 29.8% of the overall sample was considered high self-esteem, and 70.1% were considered lower self-esteem.

Educational Attainment. A dichotomous variable was created for educational attainment so that 0 = less than 12 years of education and 1 = at least 12 years of

education (a high school diploma). Mean highest grade completed was 11.47 (SD = 2.19, range = 5-26).

Fidelity in Relationships. A dichotomous variable was created to reflect whether a person was faithful in his/her intimate relationships (0 = not faithful, 1 = faithful). Two questions were used to assess the quality of respondents' fidelity: 1) "During any marriage, did you have sexual relations [homosexual or heterosexual] outside of marriage with at least 3 different people?" and 2) "Have you ever been faithful for more than one year - - with no other sexual relationships at all during that period?" If a person responded 'yes' to the first question and 'no' the second question of fidelity the person was considered unfaithful. All other responses were considered faithful. According to this criterion, 9.2% of respondents were unfaithful, 70.6% of individuals were faithful, and 20.2% of individuals reported not being in an intimate relationship and were removed from the analyses.

Race/Ethnicity. A dichotomous variable was created (0 = White, non-Hispanic, 1 = non-White) for race/ethnicity and was determined by self-report. In the sample overall, 61.5% were White, non-Hispanic and 38.5% were non-White. Race/ethnicity did not distinguish groups on childlessness [odds ratio (OR) = 1.00, 95% confidence interval (CI) = .77-1.32, p = .98], and thus, was not used as a control variable.

Age. Age was a continuous variable which referred to the person's age at the time of the follow-up interview where the mean age of participants was 28.72 years (SD = 3.84, range = 18–40). Because the entire sample was still in the childbearing age range, the distribution of people in the sample was examined in relationship to childlessness. Fifty-six percent of the overall sample was under the age of 30. Of those who were under

30 years of age, 35.2% were childless, while 17.7% of individuals 30 years of age or older were childless. Thus, because rates of childlessness differed depending on the age of the person (OR = .42, 95% CI = .32-.55, $p < .001$), age was used as a control variable.

Sex. A dichotomous variable was created (0 = male, 1 = female) for sex and was determined by self-report. In the overall sample, 48.7% of participants were female (17.7% of women were childless) and 51.3% were male (36.8% of men were childless). Because rates of childlessness differed depending on the sex of the person (OR = .39, 95% CI = .29-.51, $p < .001$), sex was used as a control variable.

Analyses

The Pearson chi-square statistic was used for simple bivariate comparisons of groups. Logistic regression equations were computed with interactions for childhood maltreatment and hypothesized moderators predicting the dichotomous dependent variable of childlessness. The use of the phrase "increased risk" is used statistically to refer to significant odds ratios. It is recognized that childlessness may be protective and the phrase "increased risk" is not meant to pathologize the childless. Because the primary hypotheses take the form of predictions regarding the interaction of childhood maltreatment status with hypothesized moderator variables, a brief comment on interaction analyses is appropriate. Separate independent variables (e.g., child abuse and neglect, relationship fidelity, etc.) may not predict childlessness. However, this dissertation is hypothesizing that it is the combination of factors (a history of child abuse or neglect *and* other characteristics) that lead to higher risk of childlessness in this sample. Analyses were performed for the overall sample as well as for the specific types

of abuse/neglect, for males and females, and younger (under age 30) and older (30 and older) age groups, separately. A *p* value less than .05 was considered statistically significant and statistical analysis was performed with the SPSS program, version 16.

Results

The results are divided into seven sections and are organized according to the order of the hypotheses. First, the characteristics of childless individuals in the overall sample are described and then rates of childlessness in the sample of individuals who suffered childhood victimization are compared to those who do not have documented histories of childhood victimization. Sections 3-6 describe the findings for the hypothesized moderators beginning with educational attainment (Section 3), fidelity in relationships (Section 4), religiosity (Section 5), and self-esteem (Section 6). Findings for analyses examining whether a history of childhood victimization interacts with a history of psychopathology (any or specific types) to predict childlessness are found in Section 7. In each section, results are presented for the overall sample and then separately for males and females and for the two age groups (under age 30 and age 30 and over). Main effects and moderating relationships between the childhood maltreatment status (i.e., overall abuse/neglect group and each specific abuse types: physical, sexual, and neglect) and childlessness are reported.

Section 1: Characteristics of the Childless

Table 1 presents the characteristics associated with childlessness in the sample. The present results show that people who are childless are less likely to be female ($p < .001$), and more likely to have graduated high school ($p = .001$), to be professionally employed ($p = .01$), and to be under the age of 30 ($p < .001$) than people with children. However, in the present sample there were no significant differences between individuals with children and the childless on race/ethnicity, self-esteem, relationship fidelity, and

religiosity (see Table 1). More specifically, childless individuals were not more likely to be White, non-Hispanic (or non-White) than individuals with children. Similarly, childless individuals were not more likely to report being faithful in intimate relationships, or to attend religious serves less frequently, or to score in the upper quartile of the Rosenberg Self-Esteem Scale, i.e., have high self-esteem, than individuals with children.

Section 2: Childhood Victimization and Childlessness

It was hypothesized that people who have suffered childhood maltreatment would be more likely to be childless in adulthood than matched controls. Contrary to expectations, the results showed that those who suffered childhood maltreatment were not more likely to be childless than matched controls (see Table 2). No significant differences were found for the overall abuse/neglect group or for specific types of abuse. Because little is known about childlessness in maltreated populations and about childlessness in lower socioeconomic brackets, additional analyses were conducted to examine the sample separately by sex and by age (see Tables 3 and 4). Surprisingly, a lack of relationship between child maltreatment status and childlessness was found, despite these additional analyses for men, women, younger age, older age, and by specific type of abuse and/or neglect.

Section 3: Childhood Victimization, Educational Attainment and Childlessness

As seen in Table 1, people with higher levels of educational attainment were more likely to be childless ($p = .001$) than those with lower levels of educational attainment.

For the whole sample, although there were a number of marginally significant interactions for education moderating the relationships between maltreatment status (i.e., abuse/neglect overall category, neglect, and sexual abuse) and childlessness, these were not in the predicted direction. Furthermore, analyses for physical abuse in the whole sample revealed no significant results for this abuse type predicting childlessness or for its interaction with education predicting childlessness.

Similarly for women, there were a number of marginally significant interactions for education moderating the relationship between maltreatment status (i.e., abuse/neglect overall category and neglect) and childlessness, but these were also not in the predicted direction. For women, there was a significant interaction for education (OR = .11, 95% CI = .02-.58, p = .01) moderating the relationship between childhood sexual abuse and childlessness, such that the effect of educational attainment was associated with an increased rate of childlessness for control women, but decreased the rate of childlessness for female victims of childhood sexual abuse (see Figure 1). For men, there was no interaction for education moderating the relationship between child maltreatment status and childlessness, such that men, regardless of victimization history, with a high school diploma were equally likely to be childless as men without a diploma. Analyses for sexual abuse, physical abuse, and neglect in men revealed no significant results for the specific abuse types predicting childlessness or for their interaction with education predicting childlessness.

Analyses for the younger age group, adjusted for sex, revealed a main effect for education, such that people under age 30 with a high school diploma were significantly more likely to be childless than those under age 30 without a diploma (OR = 1.69, 95%

CI = 1.21-2.36, $p < .01$). There was a significant interaction for education (OR = .47, 95% CI = .23-.96, $p < .05$) moderating the relationship between child maltreatment status and childlessness, such that the effect of education on childlessness was stronger for controls under age 30 than for maltreated individuals (see Figure 2). Analyses for the specific abuse types in people under 30 revealed a significant interaction for education moderating the relationship between childlessness and sexual abuse (OR = .17, 95% CI = .03-.92, $p < .05$; see Figure 3). For individuals under age 30, the effect of education attainment in combination with childhood sexual abuse decreased the rate of childlessness as compared to controls. There was a marginally significant interaction for education moderating the relationship between childhood neglect and childlessness for individuals under age 30, but this was not in the predicted direction. There were no significant main effects for childhood physical abuse or interactions with education predicting childlessness in the younger age group.

Section 4: Childhood Victimization, Fidelity in Intimate Relationships, and Childlessness

Contrary to expectations, fidelity did not moderate the relationship between childhood victimization and childlessness. Thus, for individuals with and without histories of childhood victimization, fidelity in intimate relationships did not affect the likelihood of childlessness. Analyses for childhood sexual abuse, physical abuse, and neglect also revealed no significant results for these specific abuse types predicting childlessness or for their interaction with fidelity predicting childlessness.

For men and people over and under age 30, there was no main effect for fidelity predicting childlessness; however, women who reported being unfaithful in intimate

relationships were more likely to be childless than women who were faithful (OR = .35, 95% CI = .17-.77, $p < .01$). For men, women, and people over and under age 30 there was no interaction between fidelity and child maltreatment status predicting childlessness and no significant main effects or interactions by type of abuse or neglect.

Section 5: Childhood Victimization, Religiosity, and Childlessness

The fifth hypothesis investigated whether religiosity moderated the relationship between childhood maltreatment and childlessness. These results revealed no significant interactions between maltreatment status in general and religiosity predicting childlessness. Analyses for specific types of abuse revealed no significant interactions between physical abuse or neglect and religiosity predicting childlessness. However, for women, there was a significant interaction for childhood sexual abuse and religiosity in predicting childlessness (OR = 2.16, 95% CI = 1.16-4.02, $p < .05$), illustrating a crossover effect: higher religiosity was associated with increased rates of childlessness in the female sexual abuse group, but was associated with a decreased rate of childlessness in the female control group (see Figure 4).

For men, there was no interaction between religiosity and child maltreatment status on childlessness. Analyses for the specific abuse types in men revealed no significant results for the abuse types predicting childlessness or for their interaction with religiosity predicting childlessness.

Among older individuals in the sample (age 30 and over), there was a significant interaction between childhood physical abuse and religiosity predicting childlessness (OR = 1.65, 95% CI = 1.00-2.71, $p = .05$). For individuals over age 30, higher religiosity was

associated with an increased rate of childlessness for victims of childhood physical abuse and was associated with a decreased rate of childlessness for controls (see Figure 5). Analyses for sexual abuse and neglect in the older age group revealed no significant interactions with religiosity predicting childlessness. For the younger age group (under age 30), there were no significant interactions with maltreatment group overall or specific type of abuse/neglect and religiosity.

Section 6: Childhood Victimization, Self-Esteem, and Childlessness

There were no significant interactions between childhood victimization (or specific types of child abuse/neglect) and self-esteem predicting childlessness. Furthermore, when dividing the sample by sex and by age groups, there were no significant interactions between self-esteem and maltreatment status on childlessness.

Section 7: Childhood Victimization, Psychopathology and Childlessness

The final hypothesis predicted that psychopathology would moderate the relationship between childhood experiences of abuse and neglect and being childless. Overall, generalized anxiety disorder and alcohol abuse were significant moderators between specific abuse categories and childlessness for different age and sex groups. There was a significant interaction between childhood neglect and generalized anxiety disorder predicting childlessness (OR = 4.38, 95% CI = 1.06-18.07, $p < .05$), such that generalized anxiety disorder was associated with an increased rate of childlessness in the neglected group (see Figure 6). In addition, there was a significant interaction between childhood physical abuse and alcohol abuse predicting childlessness (OR = .33, 95% CI

=.13-.86, p < .05), such that having an alcohol abuse diagnosis was associated with a decreased rate of childlessness in victims of childhood physical abuse (see Figure 7).

Looking only at women, there was no evidence that child abuse and neglect in general interacted with any of the psychiatric diagnoses assessed here to predict childlessness. However, there was a significant interaction between childhood sexual abuse and alcohol abuse (OR = .09, 95% CI = .01-.82, p < .05), such that alcohol abuse was associated with a decreased rate of childlessness in female victims of sexual abuse and a slightly increased the rate of childlessness in female controls (see Figure 8).

For men, there was a significant interaction between child abuse and neglect status in general and alcohol abuse predicting childlessness (0R= .43, 95% CI = .21-.91, p < .05), such that alcohol abuse was associated with an increased rate of childlessness in controls and slightly decreased the rate of childlessness in male victims childhood maltreatment (see Figure 9). There was also a significant interaction between childhood physical abuse and alcohol abuse in males predicting childlessness (OR = .16, 95% CI = .05-.58, p < .01), such that alcohol abuse was associated with a decreased rate of childlessness in male victims of physical abuse and slightly increased the rate of childlessness in male controls (see Figure 10).

In terms of analyses for the two age groups, there was a significant interaction between childhood physical abuse and any lifetime psychiatric diagnosis predicting childlessness for the under age 30 group (OR = .27, 95% CI = .07-.99, p < .05), such that having any lifetime psychiatric diagnosis was associated with a decreased rate of childlessness in victims of childhood physical abuse under age 30 and a slightly increased rate of childlessness in controls under 30 (see Figure 11). Also, for individuals under age

30, there were significant interactions between childhood sexual abuse and alcohol abuse predicting childlessness (OR = .19, 95% CI = .04-1.00, p = .05; see Figure 12) and childhood physical abuse and alcohol abuse predicting childlessness (OR = .28, 95% CI = .08-.91, $p < .05$; see Figure 13). Because the variable 'lifetime psychiatric diagnosis' is a composite of all diagnoses, the result for this variable decreasing rates of childlessness in the physically abuse is likely driven by the 'alcohol abuse' variable. For the older age group (age 30 and over), there was no evidence that childhood abuse and neglect in general (or any specific abuse category) interacted with the psychiatric diagnosis assessed here to predict childless.

Discussion

Prior to this research, the link between child abuse and neglect and childlessness in adulthood had not received much empirical inquiry. Studies to date on childlessness have focused primarily on adults (most often female) without childhood victimization histories. This dissertation utilized a prospective cohort design and a large number of substantiated and validated cases of child maltreatment to determine whether the early childhood experiences of abuse and neglect were associated with differential rates of childlessness in adulthood. In addition to the effect of childhood victimization on childlessness, the role of several potential moderators was also examined. Evaluating the impact of childhood maltreatment on childlessness is challenging because individuals who have suffered childhood victimization are likely to experience long-term effects in many domains of functioning including psychopathology, substance abuse, or low self-esteem that each independently may contribute to childlessness.

This dissertation sought to determine whether childhood maltreatment in and of itself differentially predicted childlessness. Individuals victimized in childhood may consciously select childlessness as a lifestyle choice; may be childless as a result of unconscious experiential avoidance; and/or may be unable to have children as a result of long-term biological consequences of maltreatment that interfere with reproduction. Surprisingly, no direct relationship was found between childhood abuse or neglect, or specific forms of childhood abuse or neglect, and childlessness. That is, in general, individuals who suffered childhood sexual abuse, physical abuse, or neglect were not more likely to be childless in adulthood than matched controls. Possible explanations for

the lack of difference in rates of childlessness between the maltreated and control groups are highlighted in the section below.

Explanations for the Lack of Difference in Rates of Childlessness

Age. The average age of the overall sample was 28.72, and as a result, participants' statuses regarding childlessness may not have been final at the time it was assessed. However, in order to determine whether age made a difference in terms of rates of childlessness, we divided the sample by age and found that individuals over the age of 30 were significantly less likely to be childless, and moderation was predominantly observed in the under-30 age group. Two factors may help explain why age influenced the lack of difference in rates of childlessness between the maltreated and control groups. First, for people over age 30, other factors (e.g., infertility, preferences of a sexual partner, concretization of lifestyle, career expectations), apart from the experience of childhood victimization, begin to influence, if not dictate, childbearing decisions. Second, the true drivers of the differential rates of childlessness observed in the under-30 age group could be a certain subset of childhood abuse/neglect victims, who, as a result of their maltreatment, will be significantly more likely to have children before the age of 30 than the control group. The subset of childhood abuse/neglect victims who tend to respond to their victimization by producing children are likely to have already produced children by age 30. Any victim of childhood abuse or neglect who has arrived at age 30 and does not have children may not have the predisposition to respond to their abuse through reproductive behaviors. Future inquiry would benefit from following this sample into older age, as data collection after childbearing years may yield fruitful insights into

the driving forces behind childlessness in samples typically not studied -- the maltreated, males, and lower socioeconomic groups.

Methods. Another critical factor that may explain the lack of difference in rates of childlessness between the maltreated and control groups may relate to the possibility that the researcher's definition of childlessness may not map directly onto those of participants. Future research should emphasize the importance of ascertaining respondents' perceptions of choice and circumstance resulting in their childbearing situations. Further investigation of this sample's reproductive behavior and behavioral attributions will clarify the impact of childhood victimization on having children, delaying childbearing, and for deciding to be childless.

Consistent with findings in the literature on childlessness based on primarily non-maltreated, Caucasian, and middle class samples, there were significant main effects for age, sex, occupational status, and educational attainment predicting childlessness. These variables proved robust in their relationship to childbearing, their effect cutting across childhood experiences of abuse. Contrary to expectations, the findings for religiosity, relationship fidelity, self-esteem, psychopathology and race were not consistent with the prior research on childlessness. Given these unexpected findings, it is possible that these variables are more subject to issues of sampling and more influenced by methods of measurement.

Base Rate. Another factor that may explain the lack of difference in rates of childlessness between the maltreated and control groups may relate to the generally low levels of childlessness in the present sample. The overall rate of childlessness in this sample of women was 31.3%, substantially lower than the 44.2% reported by the U.S.

Census Bureau's fertility indicators collected for women between the ages of 25 and 29 years. The difference between census figures and the present sample may in part be accounted for by the geographical limitations of the sample. According to the U.S. Census Bureau (2005), for women between the ages of 15 to 44, the Midwest has nearly the lowest rate of childlessness (43.7%), compared to other regions: Northeast (48% childless), West (46.1% childless), South (42.5% childless). It should be noted that for women between the ages of 40 to 44, the Midwest has the lowest rate of childlessness (17.5%), compared to other regions: Northeast (19.7% childless), West (20.1% childless), South (19.7% childless). In addition, the sample in this study was skewed toward the lower end of the socioeconomic spectrum which, in general, has higher rates of childbearing, whereas census reports are based on data collected from all economic groups.

Interventions. A final factor that may explain the lack of difference in rates of childlessness between the maltreated and control groups may relate to the characteristics associated with the current maltreated sample. Given that most of the existing literature on childhood maltreatment and childlessness is based on self-reported abuse or neglect, not the court document cases studied here, it is possible that court or social system involvement and/or maltreatment severity may have affected the relationship between maltreatment and childlessness in this sample. For example, maltreated individuals who experienced interventions from social and legal systems (e.g., termination of parental rights or foster care) as children may feel more strongly about having biological children as adults than maltreated individuals who experienced no such interventions. Future research may benefit from understanding the relationship between different childhood

experiences of maltreatment (e.g., severity of abuse, amount of interventions) and later childbearing outcomes.

Despite the surprising lack of main effects of childhood victimization on adult rates of childlessness, specific trends emerged for men and women as well as for younger and older adult victims of maltreatment. The following two sections will discuss the age- and gender-specific findings related to rates of childlessness.

Gender-Specific Findings

Recent data from the United States Census Bureau (2005) indicate that women in the labor force and in higher income brackets are more likely to be childlessness than unemployed women and those in lower income brackets. Similarly, results from this study showed that childless women are more likely to have a high school diploma and to be professionally employed. Interestingly, while graduation from high school was predictive of childlessness for women, having a high school diploma was only marginally predictive of childlessness for men. The marginal finding for men may be explained by considering the relative disruption in men's versus women's educational lives when having a child. Having a child, for females, typically encompasses carrying, delivering, and often, being the primary caretaker. Thus, these associated duties of having a child for females may impede educational attainment to a greater extent than having a child and associated duties impede educational attainment for males. Therefore, it may be easier for men to graduate high school and have a child, thereby diminishing the predictive power of educational attainment on childlessness for men.

In reference to interactional analyses, it is noteworthy that for women the relationship between childhood sexual abuse and childlessness is moderated by educational attainment, alcohol abuse, and religiosity; however, for men the relationship between child maltreatment overall and childhood physical abuse and childlessness is moderated by alcohol abuse. It appears that for men and women different types of childhood victimization interact with different moderators to result in decreased or increased rates of childlessness. Future research may benefit from understanding how these moderators function in the lives of men and women to influence childbearing outcomes.

Age-Specific Findings

Age proved to be an important control variable in highlighting specific moderators affecting the relationship between childhood physical and sexual abuse and childlessness. It is of note that moderation was predominantly observed in the group of individuals under age 30. There was one significant interaction in the over-30 group in which the rate of childlessness was increased, while there were four significant interactions in the under-30 group in which the rate of childlessness decreased. For individuals under age 30, interactional analyses indicated that three characteristics – education (in the sexually abused group), and having an alcohol abuse diagnosis (in each of the sexually and the physically abused groups) – were associated with decreased rates of childlessness. It should be noted, however, in regards to education that for individuals under age 30, interactional analyses indicated that education was associated with

increased rates of childlessness for the abuse/neglect group as a whole, although this effect was stronger for the control group.

For participants over age 30, interactional analyses indicated that religiosity was associated with increased rates of childlessness in the physically abused group; however no moderator served to decrease the rate of childlessness (i.e., increase the rate of childbearing). For the older age group, the moderators associated with decreased childlessness in the younger age group (alcohol abuse and a high school diploma) might be associated with other factors such as fertility, sexual partner preferences, concretization of lifestyle, or career expectations that influence, if not dictate, childbearing decisions. As most people will have a child at some point in their lives (and for many this may occur by age 30), perhaps the equal rates of childlessness in the older control and maltreated samples is accounted for by the control group having their first child at this later age, allowing controls to "catch up" and eliminate the differential rates of childlessness that are observed between the control and maltreated samples in the under 30 group. These age-specific findings highlight the importance of considering how lifespan development is affected particularly for victims of childhood sexual and physical abuse, and in turn how moderators at different developmental stages may impact childbearing outcomes.

In addition to age and gender, several specific moderating variables were found to influence rates of childlessness. The three sections below highlight how rates of childlessness are increased in the context of religiosity and generalized anxiety disorder; decreased in the context of educational attainment and alcohol abuse; or remain constant in the context of relationship fidelity and self-esteem.

Moderators that Increase the Risk of Childlessness

Although religiosity and generalized anxiety disorder did not directly influence rates of childlessness, there were significant interactions. Religiosity in the context of childhood sexual abuse (for women) and childhood physical abuse (for participants over age 30) was associated with increased rates of childlessness. Likewise, generalized anxiety disorder in the context of childhood neglect was associated with increased rates of childlessness. The two sections below offer potential explanations for these findings and provide directions for future research.

Religiosity. Despite hypotheses and grounding in the literature, no direct relationship was found between degree of religiosity and childlessness. Perhaps the ordinal measure of church attendance used here as a proxy for religiosity may have been insufficient to capture the relationship between religiosity and childlessness in the present sample. Lawson, Drebing, Berg, Vincellette, and Penk (1998) studied the long-term impact of childhood abuse in 1,207 male veterans (mean age 43.7 years) of various religious backgrounds (i.e., Roman Catholic, Protestant, Christian Scientist, Jewish, Muslim, and no specific religious affiliation) who were admitted to a substance abuse treatment program at a Veteran's Affairs Medical Center. Lawson et al. (1998) found that men who reported experiencing childhood abuse (sexual, physical, or emotional) endorsed a higher frequency of spiritual experience and praying; however, childhood maltreatment was unrelated to other behavioral proxies for religiosity such as bible reading or church attendance. Lawson et al.'s (1998) findings highlight that for maltreated samples, less conventional proxies for religiosity, such as non-denominational

spiritual experiences or religious behaviors preformed outside the context of houses of worship or organized religion, such as independent bible reading, may better capture the construct of faith or religiosity.

It is possible that different results might have been found if a better measure of spirituality or spiritual experience had been used, to capture different belief processes, rather than the ordinal variable of church attendance that was used to predict childlessness. It may be that adults who were maltreated in childhood seek an alternative to institutional religious service attendance in order to exercise their spirituality. Such an aversion to structured religious authority might be traced to previous victimization by an adult caregiver or other authority figure.

Despite the absence of a main effect, there were two significant interactions illustrating the role of religion as a moderator between childhood abuse and neglect and childlessness. First, among individuals over age 30, victims of physical abuse who were more religious were more likely to be childless than religious controls in the same age group. Given the dearth of research on religious behavior in childless individuals who suffered childhood maltreatment, interpreting this finding is challenging. For victims of childhood physical abuse over age 30, it is possible that the frequency of religious service attendance is a proxy for other involvement in a religious community, and involvement in religion may provide a sort of family replacement, providing a sense of belonging and affiliation, without evoking the potentially troubling associations of childhood and parenting.

The second interaction illustrating the role of religion as a moderator showed that female victims of childhood sexual abuse with high levels of religiosity had similar rates

of childlessness as less religious controls. Among female victims of sexual abuse, religious services may provide a needed social support or family network that the less religious do not benefit from and, as a result, may seek through sexual partnering or having a child. Future research may consider the relationships between physical and sexual abuse, religiosity or spirituality, and childlessness in order to uncover mechanisms of coping in these types of abuse. As the findings described above were not observed in victims of childhood neglect, it may be that victims of physical and sexual abuse are more likely to seek out religion as way of coping or understanding their victimization.

In contrast to expectations, interactional analyses revealed that female victims of sexual abuse with low religiosity were less likely to be childless than female controls with low religiosity. For female victims of childhood sexual abuse, less frequent religious service attendance may reflect less social support and interpersonal alienation. In lieu of religious affiliation, these victims may be more likely than low religiosity female controls to have children in order to achieve affiliation and/or create a sense of meaning or purpose in their lives. In lieu of religion, the low religiosity female controls may be equipped with other coping strategies than childbearing to achieve a sense of belonging and to give their lives a sense of meaning. Additionally, female victims of childhood sexual abuse with low religiosity may be more prone to promiscuous sexual behavior (frequently discouraged in religious communities) than female controls with similar levels of religiosity. As a consequence of their traumatic past, current coping strategies, and insufficient social supports, female victims of sexual abuse with low levels of religiosity may face situational influences that result in more frequent childbearing than female controls with similarly low levels of religiosity.

These results highlight the complex relationship between childhood maltreatment and later religious affiliation and childbearing decisions. Existing research has demonstrated that the relationship between specific abuse factors, such as the victim's sex and relationship to the perpetrator, may be important determinants of religiosity. Bierman (2005) found that abuse committed by a father was associated with less religiosity, while abuse committed by a mother did not affect religiosity. In addition, abuse from adults outside the family was related to higher self-reported spirituality ratings. Future research should clarify how religious behavior reflects spiritual belief systems and how these beliefs effect childbearing decisions differently in maltreated and control samples.

Generalized Anxiety Disorder. Although there was no relationship between generalized anxiety disorder and childlessness, interaction analyses for the sample overall revealed that victims of childhood neglect with generalized anxiety disorder were significantly more likely to be childless than controls with this same diagnosis. Perhaps for victims of childhood neglect, the pervasive worry associated with generalized anxiety disorder extends to their perception of their ability to successfully parent, particularly in light of their childhood experiences. These victims may manifest these worries as experiential avoidance to a greater extent than do controls with this diagnosis. In addition to differing underlying cognitions, perhaps victims of neglect with generalized anxiety disorder experience and cope with their symptoms (e.g., fatigue, irritability, sleep disturbance) differently than controls with this disorder, such that having a child is perceived as being a burdensome, aversive stimulus to a greater extent than this perception exists for controls with generalized anxiety disorder.

Moderators that Decrease the Risk of Childlessness

Educational Attainment. Consistent with expectations, individuals with higher levels of educational attainment were more likely to be childless than those with lower levels of educational attainment. However, educational attainment moderated the relationship between childhood sexual abuse and childlessness for women and individuals under age 30. Contrary to expectation, obtaining a high school diploma was associated with decreased rates of childlessness for victims of childhood sexual abuse who are female, and also for victims of sexual abuse under age 30, as compared to controls. These results run counter to hypotheses about the role of education as a factor associated with increasing childlessness and warrant attempt at explanation. One possible explanation is that other consequences of childhood sexual abuse, such as sexual risk taking behavior (Paolucci, Genuis and Violato, 2001; Widom and Kuhns, 1996), may outweigh the effect of educational attainment normally seen on childlessness. It is also possible that female victims of childhood sexual abuse who completed high school may have had more opportunities for sexual behavior (i.e., with classmates) throughout the course of high school than female victims of childhood sexual abuse who did not complete school and, for example, went to work instead. Third, women with a history of childhood sexual abuse who already have children may be more motivated to obtain a high school diploma to ensure greater financial security for their child(ren). While research has demonstrated the importance of educational attainment in terms of resiliency and long-term outcomes in maltreated samples (McGloin and Widom, 2001), future

research would benefit from understanding the role that education serves in the lives of women with histories of childhood sexual abuse.

Alcohol Abuse. The present results indicated that *most* of the psychiatric disorders assessed here did not have relationships with childlessness. However, a diagnosis of alcohol abuse in combination with childhood sexual abuse (in women and individuals under age 30) and with childhood physical abuse (in men and individuals under age 30) had a negative effect on childlessness. That is, having a diagnosis of alcohol abuse was associated with a decreased risk of childlessness (that is, higher likelihood of childbearing) for victims of childhood sexual abuse who were female and younger (under age 30) and victims of childhood physical abuse who were male and younger (under age 30). Again, these findings are contrary to what was hypothesized and need some discussion. Among those sexually abused, women and younger sample members who have an alcohol problem may be less likely to engage in contraceptive use and more likely to engage in risky sexual behaviors (Wilson and Widom, 2008). By exposing themselves to these risks, they may be increasing their chances of becoming pregnant and having children. Another possibility is that younger female victims of sexual abuse and male victims of physical abuse may turn to alcohol as a coping strategy and become problem drinkers to handle the added pressures or stressors of childbearing and child-rearing. Future research on the ways that alcohol abuse interacts with childhood victimization to influence reproductive behaviors might consider different cognitive schema and coping styles.

Furthermore, alcohol abuse may also lower behavioral inhibitions to overcome any existing apprehensions about childbearing for female victims of childhood sexual

abuse and male victims of childhood physical abuse. These results suggest some gender-specific relationships in the way alcohol abuse interacts with childhood victimization to influence childlessness. Alcohol abuse was associated with decreased rates of childlessness for females with a history of childhood sexual abuse, whereas alcohol abuse was associated with decreased rates of childlessness for males with a history of childhood physical abuse. Future research might consider the maladaptive cognitive schema that result from childhood sexual abuse in women and childhood physical abuse in men and how these schema frame later childbearing decisions in the presence of alcohol abuse.

Potential Moderators with No Effect on Childlessness

Self-esteem and fidelity in intimate relationships did not moderate the relationship between childhood victimization and childlessness. The sections below speculate on possible explanations for these unexpected results.

Fidelity in Intimate Relationships. Evidence suggests that traumatic life events and their sequelae can alter one's sense of self and one's relationship to others, and that early parent-child relationships show some continuity in terms of attachment and behavior in adult intimate relationships (Ainsworth and Eichberg, 1991; Benoit and Parker, 1994). The results of the present analyses indicated that fidelity did not moderate the relationship between childhood victimization (of any type) and childlessness. Possible explanations for this result may be found in the cultural notions and valuing of relationship fidelity. For example, while current literature on childlessness with non-maltreated samples suggests that childless individuals are more likely to have higher ratings of satisfaction and cohesion in their intimate relationships, these findings

demonstrated relationship that fidelity was not associated with childlessness. Furthermore, for women, being faithful was significantly associated with decreased childless (i.e., higher rates of childbearing). For men, the relationship between fidelity in intimate relationships and childlessness remains unclear. It is possible that fidelity in intimate relationships has a different emphasis across samples of lower socioeconomic status and that different gender roles may influence the relationship between fidelity and childlessness in different economic strata. Alternatively, there may be a bimodal relationship where both 1) having children influences relationship satisfaction which in turn influences relationship fidelity, and 2) relationship satisfaction influences fidelity which influences childbearing. For this sample, having children may be associated with increased relationship satisfaction and cohesion resulting in greater fidelity similar to the way that being childless increases satisfaction and cohesion in middle-class, non-victimized samples. Finally, it is also possible that fidelity in intimate relationships was not an adequate proxy for overall relationship satisfaction or cohesion with an intimate partner.

Self-Esteem. The limited research on childlessness and self-esteem in non-maltreated samples suggests that those with high self-esteem may be more comfortable making unconventional life decisions and leading more unconventional life styles (i.e., being childless). The literature on childbearing among women who reported maltreatment shows that the childless women reported that they did not feel like they were in control of their life circumstances which led them to childlessness. Contrary to expectations that beliefs and emotions about one's personal worth may affect childbearing behavior, the present results indicate that there was no relationship between self-esteem and

childlessness. It is possible that the assumption of the hypothesis (i.e., that those with higher self-esteem would experience increased perceived choice and be more likely to be childless than those with lower self-esteem) may not be applicable to a sample of maltreated individuals of lower socioeconomic status. It is also possible that other measures of personality (extraversion, introversion, ambiversion), locus of control, or self-efficacy may be more accurate predictors of childlessness for this sample.

Strengths and Limitations

This dissertation examined the relationship between childhood victimization and childlessness and whether education, fidelity in intimate relationships, religiosity, self-esteem, and psychopathology moderated the relationship. Results from this study were mixed and revealed nuances in both the area of child maltreatment outcome research and childlessness research. The data were based on information gathered from the follow-up interviews with a large group of people who had been abused or neglected as children, approximately 20 years earlier, and a control group matched on age, sex, race, and approximate social class. The findings of this dissertation represent the first prospective study of childlessness in individuals with documented cases of childhood victimization. In addition, this work included males as well as females and three different types of child maltreatment (physical and sexual abuse and neglect) in an attempt to determine the breadth or specificity of the relationship between childhood abuse and neglect and childlessness.

Despite these strengths, certain caveats should be kept in mind. First, the data are based on substantiated child abuse and neglect cases that came to the attention of the

authorities. Thus, these findings are not necessarily applicable to the population as a whole and may not apply to cases of child victimization that were not reported or substantiated. Different developmental outcomes may result when a victim's maltreatment is never brought to light. Second, because these are court cases, they were skewed toward the lower end of the socioeconomic spectrum, thus limiting potential generalizability. Third, the measure of childlessness did not account for women who were currently pregnant and/or women who have had pregnancies that ended in abortions or miscarriages. It is possible that women may have reported not having children, but had in fact had an abortion or miscarriage. In addition, as these data contain only participants' self reports, there is no way to confirm the childlessness. Fourth, the age of the sample at the time of the interview was fairly young to determine whether the person would ultimately remain childless. As discussed earlier, a study comparing parents of typical reproductive age, moderate delayers, and childless individuals in both control and maltreated groups would be a better way of determining mediators in the decision to remain childless. Hopefully, other researchers engaged in prospective research with different samples from different geographic areas and time periods will examine these issues and attempt to replicate the findings of this study.

Tables and Figures

Table 1.
Characteristics Associated with Childlessness

Category	% Childless (n=329)	% Not Childless (n=867)	OR	95% CI	p-value	Adjusted OR	95% CI	p-value
Female	31.3	55.2	.37	.28-.48	*.000*	.39	.30-.51	*.000*
White, non-Hispanic	62	61.2	1.03	.79-1.34	*ns*	1.00	.77-1.32	*ns*
Age (% ≥ 30 years)	28.3	49.9	.40	.30-.52	*.000*	.42	.32-.55	*.000*
Education								
High School Graduate	62.9	54.1	1.44	1.11-1.87	*.01*	1.62	1.23-2.13	*.001*
Not High School Graduate	37.1	45.9						
Occupation								
Professional or managerial	11.7	6.8	1.23	1.01-1.50	*<.05*	1.32	1.07-1.62	*<.01*
Skilled, clerical, semi-professional	36.7	37.8						
Menial/semiskilled	51.6	55.3						

Note: OR = odds ratio; CI = confidence interval; Adjusted = adjusted for age and sex.

Table 1, Continued.
Characteristics Associated with Childlessness

Category	% Childless (n=329)	% Not Childless (n=867)	OR	95% CI	p-value	Adjusted OR	95% CI	p-value
Self-Esteem								
High Self-Esteem	27.4	30.8	.85	.64-1.13	*ns*	.81	.61-1.10	*ns*
Lower Self-Esteem	72.6	69.2						
Fidelity								
Faithful in Relationships	84.9	89.2	.68	.42-1.12	*ns*	.72	.43-1.18	*ns*
Not Faithful in Relationships	15.1	10.8						
Religiosity								
Attends church at least once/week	16.7	19.5	.96	.86-1.07	*ns*	1.04	.93-1.17	*ns*
Attends at least once/month	14.3	14.2						
Attends several times/year	13.4	14.7						
Attends one time/year	14.6	14.5						
Never attends church	41.0	37.1						

Note: OR = odds ratio; CI = confidence interval; Adjusted = adjusted for age and sex.

Table 2

Childhood Abuse and Neglect and Childlessness in Young Adulthood

Group	N	Childless (%)	OR	95% CI	p-value	Adjusted OR	95% CI	p-value
Control	520	27.70						
Abuse/Neglect (all types)	676	27.40	0.98	.76 – 1.27	*ns*	0.99	.75-1.29	*ns*
Any Neglect	543	28.50	1.04	.80 – 1.36	*ns*	1.00	.76-1.32	*ns*
Any Physical	110	29.10	1.07	.68 – 1.69	*ns*	1.02	.64-1.63	*ns*
Any Sexual	96	19.80	0.64	.38 – 1.10	*ns*	.95	.54-1.68	*ns*

Note: OR = odds ratio; CI = confidence interval; Adjusted = adjusted for age and sex; the numbers of cases of specific types of abuse and neglect do not add up to the total in the abuse/neglect group (n= 676) because some individuals experienced more than one type of abuse or neglect.

Table 3
Childhood Abuse and Neglect and Childlessness in Young Adulthood for Women and Men

Group	N	Childless (%)	OR	95% CI	p-value	Adjusted OR	95% CI	p-value
Women								
Control	244	19.70						
Abuse/Neglect (all types)	338	16.30	0.79	.52-1.22	*ns*	0.77	.50-1.18	*ns*
Any Neglect	257	16.70	0.82	.52-1.29	*ns*	.76	.48-1.21	*ns*
Any Physical	47	23.40	1.25	.59-2.63	*ns*	1.20	.56-2.54	*ns*
Any Sexual	76	13.20	0.62	.30-1.29	*ns*	.66	.31-1.39	*ns*
Men								
Control	276	34.80						
Abuse/Neglect (all types)	338	38.50	1.17	.84-1.63	*ns*	1.15	.82-1.61	*ns*
Any Neglect	286	39.20	1.21	.86-1.70	*ns*	1.17	.82-1.65	*ns*
Any Physical	63	33.30	0.94	.53-1.67	*ns*	.94	.52-1.70	*ns*
Any Sexual	20	45.00	1.53	.61-3.83	*ns*	1.86	.72-4.78	*ns*

Note: OR = odds ratio; CI = confidence interval; Adjusted = adjusted for age; the numbers of cases of specific types of abuse and neglect do not add up to the total in the abuse/neglect group (n= 338) because some individuals experienced more than one type of abuse or neglect.

Table 4

Childhood Abuse and Neglect and Childlessness in People under 30 Years of Age and in People at or above 30 Years of Age

Group	N	Childless (%)	OR	95% CI	p-value	Adjusted OR	95% CI	p-value
Under Age 30								
Control	282	36.50						
Abuse/Neglect (all types)	388	34.30	.91	.66-1.25	*ns*	.94	.67-1.30	*ns*
Any Neglect	330	34.50	.92	.66-1.28	*ns*	.93	.67-1.31	*ns*
Any Physical	63	36.50	1.00	.57-1.76	*ns*	.99	.56-1.77	*ns*
Any Sexual	39	23.10	.52	.24-1.14	*ns*	.69	.31-1.55	*ns*
At or Above Age 30								
Control	238	17.20						
Abuse/Neglect (all types)	288	18.1	1.06	.67-1.66	*ns*	1.09	.69-1.72	*ns*
Any Neglect	213	19.2	1.15	.71-1.85	*ns*	1.14	.70-1.85	*ns*
Any Physical	47	19.1	1.14	.51-2.53	*ns*	1.10	.49-2.46	*ns*
Any Sexual	57	17.5	1.02	.48-2.19	*ns*	1.35	.61-3.00	*ns*

Note: OR = odds ratio; CI = confidence interval; Adjusted = adjusted for sex; the numbers of cases of specific types of abuse and neglect do not add up to the total in the abuse/neglect group (n= 388 or n= 288) because some individuals experienced more than one type of abuse or neglect.

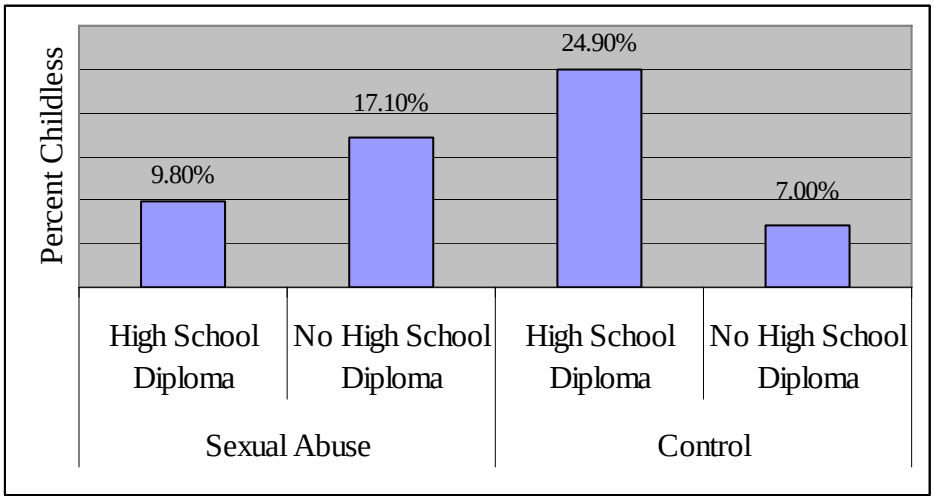
Table 5

Psychopathology and Childlessness

Diagnostic Category	Diagnosis	Childless	No Diagnosis	Childless	OR	95% CI	p-value	Adjusted OR	95% CI	p-value
	N	%	N	%						
Depression	277	24.50	918	28.30	0.82	.61-1.12	*ns*	.93	.67-1.28	*ns*
Generalized Anxiety Disorder	79	27.80	1117	27.50	1.02	.61-1.69	*ns*	1.15	.68-1.97	*ns*
Dysthymia	147	25.90	1046	27.50	0.92	.62-1.36	*ns*	1.11	.73-1.67	*ns*
Post-Traumatic Stress Disorder	315	23.50	874	28.90	0.75	.56-1.01	*ns*	.94	.68-1.29	*ns*
Alcohol Abuse	632	30.10	561	24.60	1.32	1.02-1.70	*<.05*	1.01	.76-1.33	*ns*
Drug Abuse	409	29.60	784	26.40	1.17	.90-1.53	*ns*	1.05	.79-1.39	*ns*
Any Lifetime Diagnosis	859	28.10	330	26.10	1.11	.83-1.48	*ns*	.97	.72-1.31	*ns*

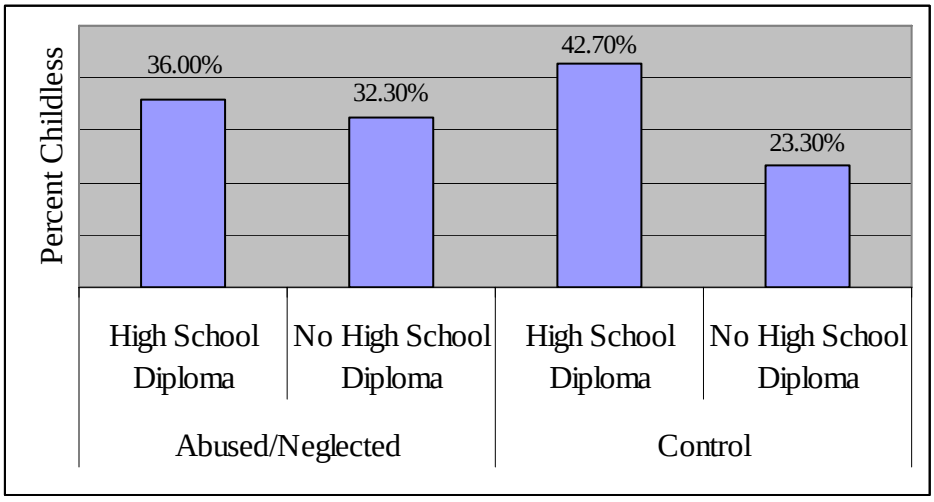
Note: OR = odds ratio; CI = confidence interval; Adjusted = adjusted for age and sex.

Figure 1. *Childhood Sexual Abuse, Educational Attainment, and Childlessness in Women*



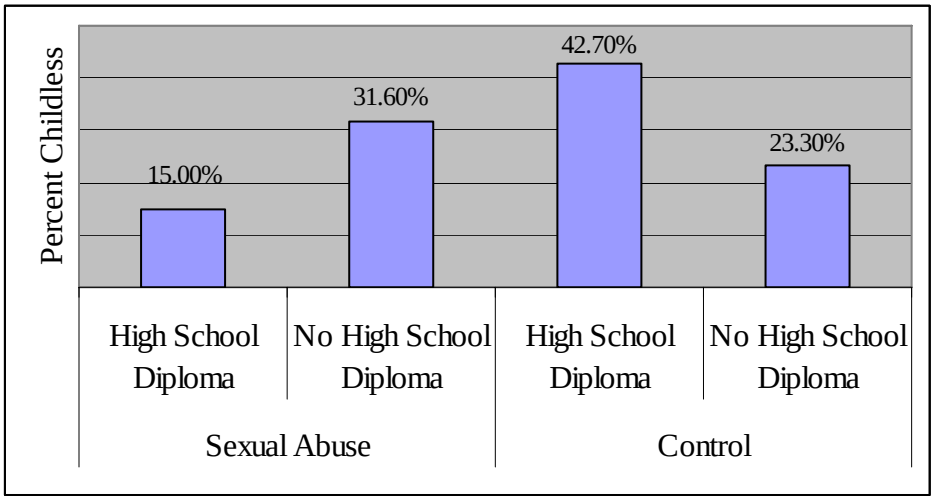
p = .01

Figure 2. *Childhood Abuse and Neglect, Educational Attainment, and Childlessness in People under 30 Years of Age*



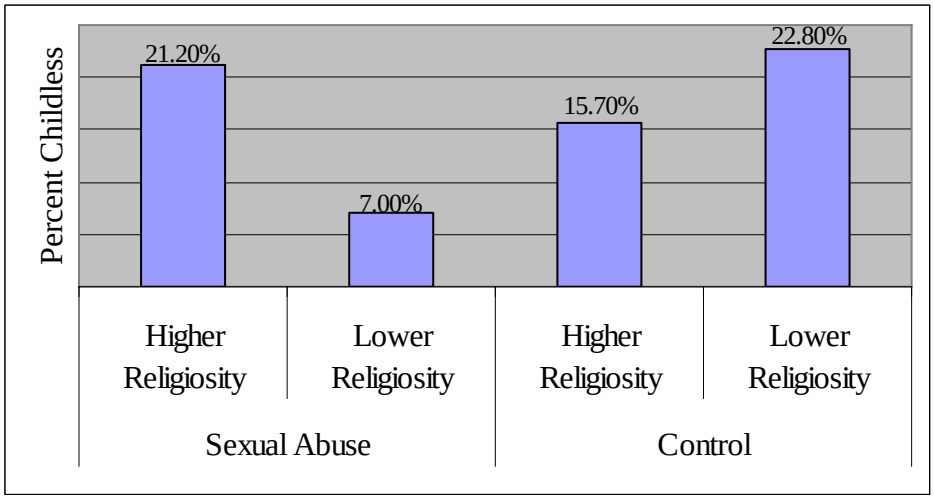
$p < .05$

Figure 3. *Childhood Sexual Abuse, Educational Attainment, and Childlessness in People under 30 Years of Age*



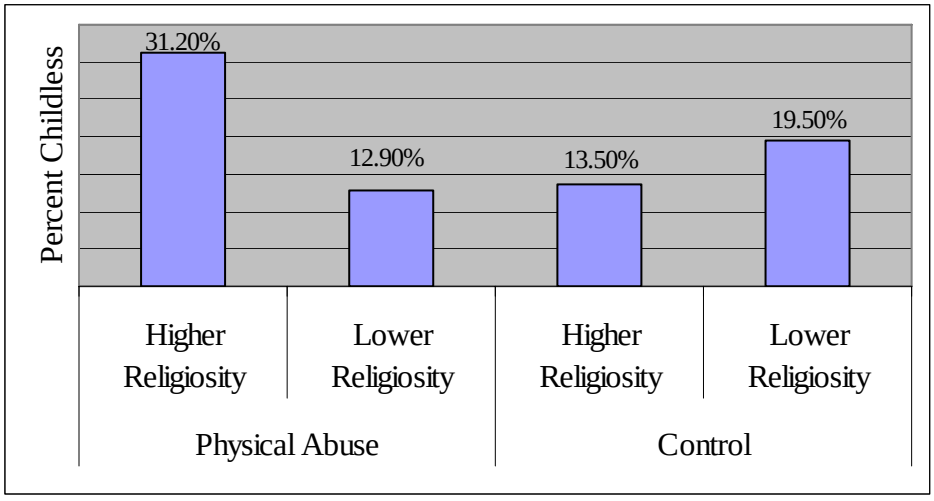
$p < .05$

Figure 4. *Childhood Sexual Abuse, Religiosity, and Childlessness in Women*



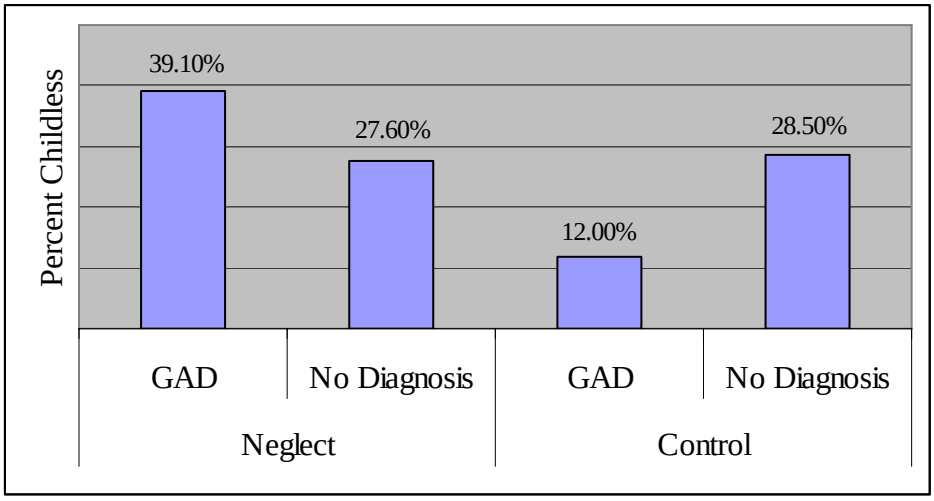
$p < .05$

Figure 5. *Childhood Physical Abuse, Religiosity, and Childlessness in People over 30 Years of Age*



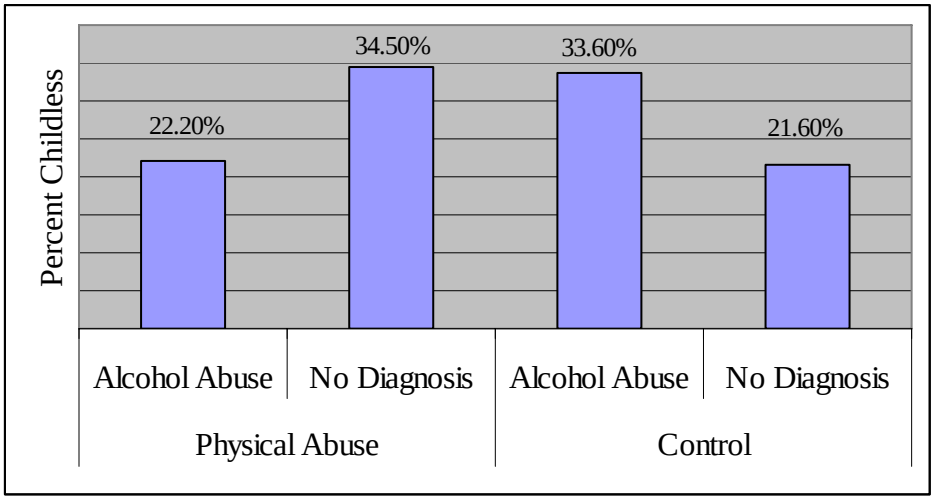
p = .05

Figure 6. *Childhood Neglect, Generalized Anxiety Disorder (GAD), and Childlessness*



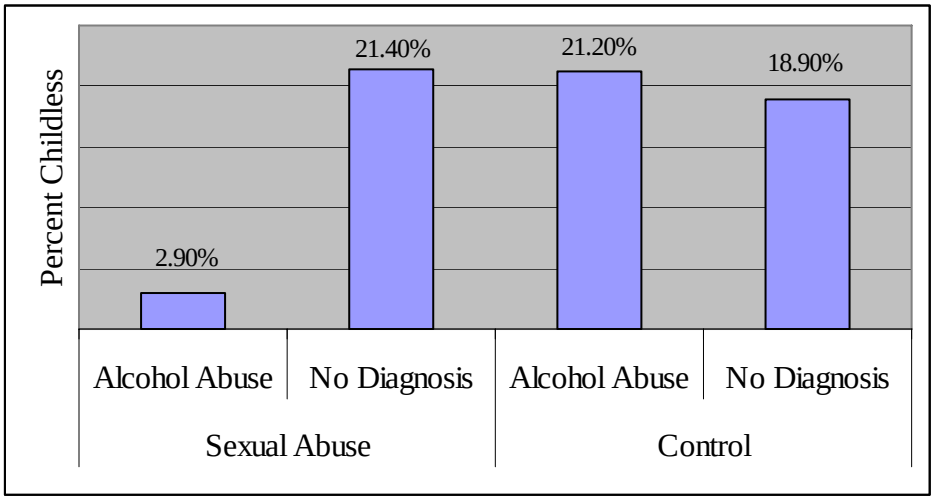
$p < .05$

Figure 7. *Childhood Physical Abuse, Alcohol Abuse, and Childlessness*



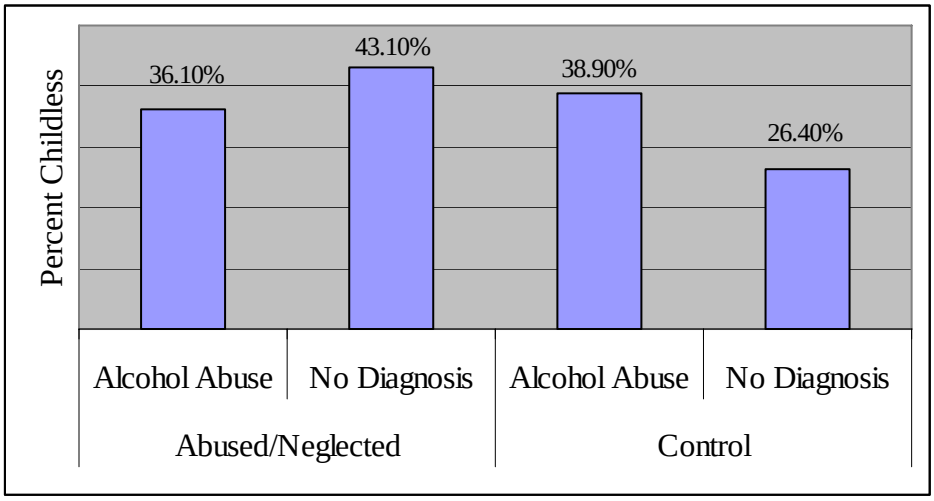
$p < .05$

Figure 8. *Childhood Sexual Abuse, Alcohol Abuse, and Childlessness in Women*



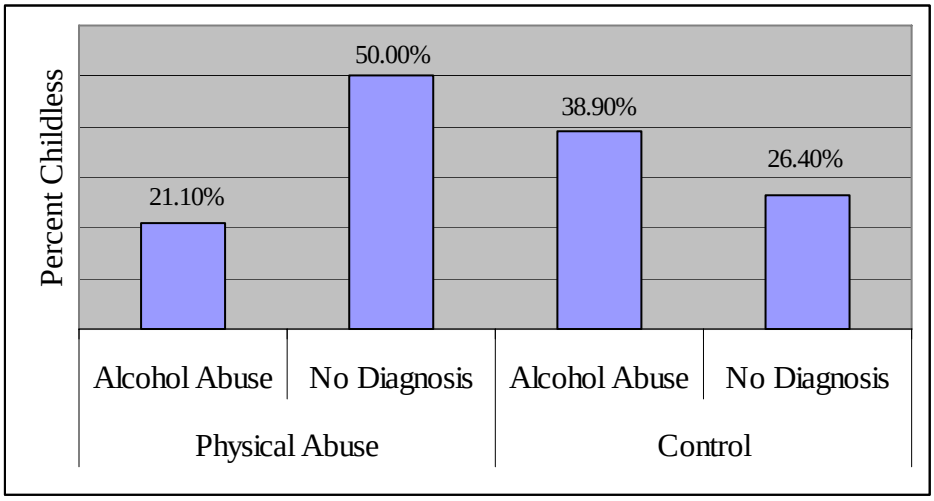
$p < .05$

Figure 9. *Childhood Abuse and Neglect, Alcohol Abuse, and Childlessness in Men*



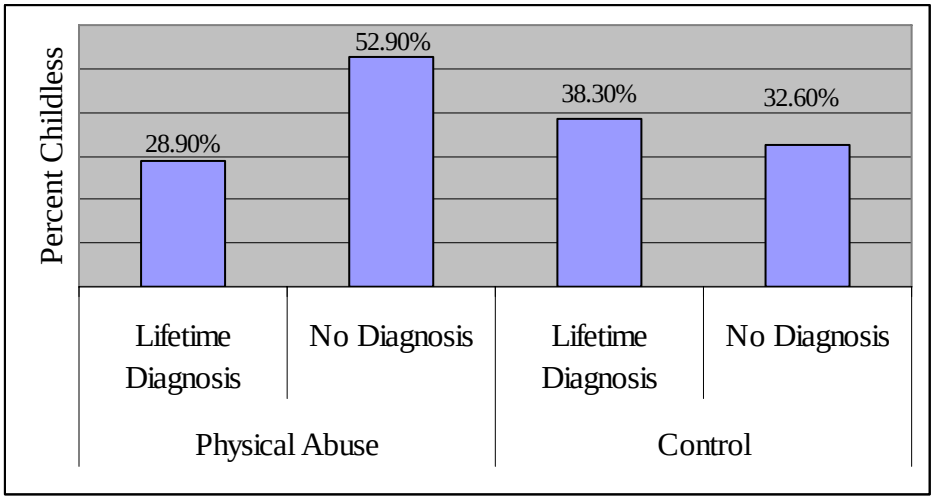
$p < .05$

Figure 10. *Childhood Physical Abuse, Alcohol Abuse, and Childlessness in Men*



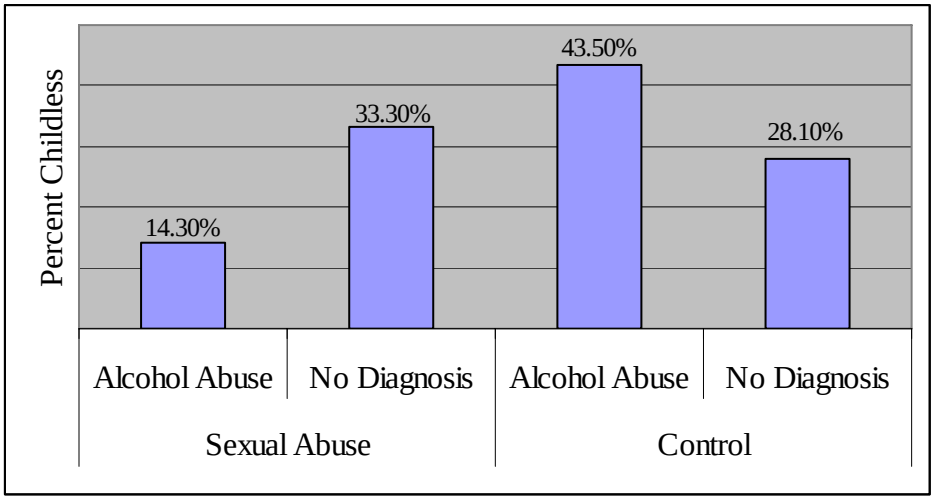
$p < .01$

Figure 11. *Childhood Physical Abuse, Lifetime Psychiatric Diagnosis, and Childlessness in People under 30 Years of Age*



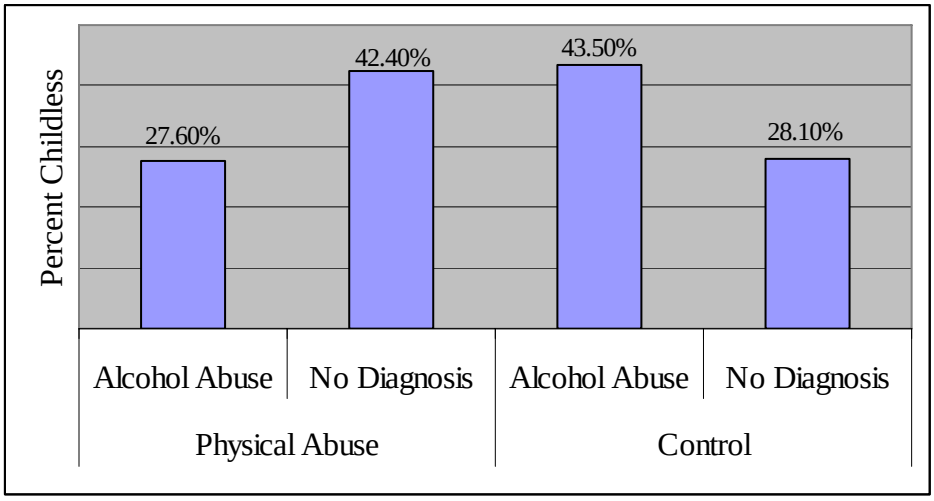
$p < .05$

Figure 12. *Childhood Sexual Abuse, Alcohol Abuse, and Childlessness in People under 30 Years of Age*



p = .05

Figure 13. *Childhood Physical Abuse, Alcohol Abuse, and Childlessness in People under 30 Years of Age*



$p < .05$

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