A Test of a Model of Sexual Victimization:

A Latent Variable Path Analysis

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(ABSTRACT)

Both a recent narrative review and a meta-analytic review of prevalence rates, indicates that prior sexual victimization increases risk for future victimization (Messman & Long, 1996, Roodman & Clum, in press). The purpose of this study was to examine two competing models of sexual victimization that examined the path between child abuse and later sexual victimization. Hypothesized mediating variables were negative cognitive schemas, dissociation, risky behaviors, and coping strategies. Structural equation modeling was used to examine two competing models of sexual victimization. A sample of 276 college students taking introductory psychology were participants. They anonymously completed a packet of questionnaires that provided the indicator variables for the path models that were tested.

Both models tested received minimal support but many of the proposed pathways in the model were not statistically significant suggesting problems with the models. Due to measurement issues with the manifest indicators of the latent factors, any results should be viewed with caution. It appears as though none of the factors in the model mediate the relationship between early and later victimization. However, both models tested demonstrated significant pathways between the factor for child abuse (comprising physical and sexual abuse) and negative cognitive schemas and for child abuse and dissociation. However, the paths from negative cognitive schemas and dissociation to sexual victimization (comprising both adolescent and adult sexual victimization) were not significant suggesting that, although these factors are influenced by child abuse, they do not mediate revictimization. Risky behaviors, as measured by consensual sex and alcohol consumption, do not appear to be influenced by early abuse, but there was a significant pathway between this factor and sexual victimization suggesting that these risky behaviors are independent risk factors for sexual victimization in adolescence and adulthood. In one model there was a significant pathway between child abuse and sexual victimization which is what would be expected given previous findings that suggest past abuse is the best predictor of future victimization experiences (Roodman & Clum, in press). That the other model did not demonstrate this relationship was surprising.

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Introduction

> Imagine an 18-year old survivor of child sexual abuse on a date with a man who is sexually aggressive. Perhaps she accepted the date out of loneliness or insecurity. If there are early warning signs of danger, she may discount them, lacking the confidence to trust her feelings. She is conceivably confused about the normal course of dating and sexual behavior. Even as the date becomes increasingly uncomfortable, she may not be assertive enough to reject an unwanted advance or to escape. Initial sexual contact is likely to bring on feelings of fear, powerlessness, or aversion: perhaps a flashback to earlier traumatic events paralyzes her in the face of attack (Himelein, Vogel & Wachowiak, 1994, p. 414).

The after effects of sexual abuse in childhood are significant and long lasting (Wyatt & Newcomb, 1990). They include anxiety, depression, somatic complaints, low self-esteem, substance abuse, suicidality, inappropriate sexual behavior, and early pregnancy (Browne & Finklehor, 1986; Trickett & Putnam, 1993). Additionally, dissociation, sleep disturbance, tension, sexual problems and anger have been found (Briere & Runtz, 1988). Similar problems are evidenced in women experiencing adult sexual assault including depression, anxiety, fear, anger, low self-esteem, social problems, negative attitudes about future sexual encounters, guilt and unintended pregnancy (Gidycz & Koss, 1990; Marhoefer-Dvorak, Resick, Hutter, & Girelli, 1988; Wyatt, Guthrie, & Notgrass, 1992;). Furthermore, there is evidence that revictimized women may have their symptomatology from previous abuse exacerbated by repeated victimization (Cohen & Roth, 1987; Hamilton, 1989; Ruch, Amedeo, Leon, & Gartrell, 1991) with evidence that revictimized women demonstrate more dissociative symptoms, are more alexithymic, have attempted suicide more often, and have more interpersonal problems than adult-only victims (Cloitre, Scarvalone, & Difede, 1996).

Unfortunately, revictimization seems to be a fairly common phenomenon. Both a recent narrative review and a meta-analytic review of prevalence rates, indicates that prior victimization increases risk for future victimization (Messman & Long, 1996, Roodman & Clum, in press). A meta-analytic investigation of 19 studies supplying rates of child to adult revictimization found a moderate effect size of .59 suggesting that revictimization is occurring at rates higher than mere chance (Roodman & Clum, in press). A similar finding was reported in another recent meta-

analysis examining the long-term sequelae of child sexual abuse (Neumann, Houskamp, Pollock, & Briere, 1996) which found an effect size of .67 for revictimization for the five studies they included.

Despite a recent surge in investigation of this phenomenon, few comprehensive theories or explanatory models have been described with even fewer actually empirically tested. However, numerous variables have been investigated to determine their relationship to revictimization. These variables fall into several main categories including sociodemographic variables (Fergusson, Horwood & Lynskey, 1997), behaviors (Fergusson, Horwood, & Lynskey, 1997; Himelein et al., 1994, Himelein, 1995; Krahé, Scheinberger-Olwig, Waizenhöfer & Kolpin, 1999; Mayall & Gold, 1995; Merrill et al., 1999), affective states or symptoms (Kessler & Bieschke, 1999; Krahé, Scheinberger-Olwig, Waizenhöfer & Kolpin, 1999; Mandoki & Burkhart, 1991) and styles of coping and attribution (Mayall & Gold, 1995).

Finkelhor (1986) noted that four preconditions must be met for sexual abuse to occur. They are 1) the existence of an offender with the motivation to abuse; 2) the offender must overcome internal inhibitions against abusing; 3) the offender must overcome external obstacles against abusing, and 4) the offender must overcome resistance by the victim. Accordingly, it has been said that in order to fully explain sexual aggression, "one must fully account for the presence of all four of these preconditions" (p. 168; Harney & Muehlenhard, 1991; Finkelhor, 1986). It is clear from the above that understanding the motivations and actions of the offender is crucial to the understanding of the phenomenon of sexual abuse. However, findings that child or adolescent sexual abuse increases risk for revictimization suggests a need to examine characteristics of repeat victims that distinguish them from non-revictimized. An alternative way of framing this question is what are characteristics of the victim that "increase the likelihood of the offender's overcoming obstacles and resistance" (p. 168, Harney & Muehlenhard, 1991).

Studies investigating sexual assault on college campuses have found evidence that approximately 50% of college females have experienced some type of sexual assault in their lifetime, with one in four experiencing attempted or completed rape (Koss & Dinero, 1989). With the increasing publication of this high prevalence rate, most colleges and universities have endorsed the creation of sexual assault prevention programs, although few have examined their effectiveness in actually preventing sexual assault (Lonsway, 1996). One rare study that did evaluate the effectiveness of a brief prevention program found that the group of women receiving

the intervention experienced fewer sexual assaults during a 9-week period as compared to the control group (Hanson & Gidycz, 1993). However, they also found that for students who had previously been victimized there was no reduction in sexual assault. This suggests the need for an alternative intervention and prevention strategy for the considerably large number of young women who have already experienced sexual victimization before they even begin college. Clearly, not all women who have experienced early abuse suffer later unwanted sexual contact. Understanding what differentiates these women from those that are revictimized might point to both risk factors and protective factors that can then be used in the development of more comprehensive prevention strategies.

Therefore, the purpose of this investigation was to test a model of revictimization based on existing theory and evidence. The model was created taking into account several studies that looked at revictimization in addition to theoretical papers on the topic.

Theories

Several theories or models to explain the phenomenon of revictimization have been discussed in the literature. Many writers incorporate aspects of the traumagenic model of child sexual abuse proposed by Finklehor and Browne (1985) and the reformulated learned helplessness theory of Peterson and Seligman (1983). The learned helplessness theory (Peterson & Seligman, 1983) suggests that individuals with childhood abuse learn to respond to negative events with an internal, stable, and global attributional pattern and feel helpless to stop further abuse. An additional theory that examines the role of dissociative phenomenon (Kluft, 1990) will also be reviewed briefly. Finally, a more recent model proposed by Cloitre (1998) utilizing a social developmental perspective will be discussed.

Finkelhor's Model and Seligman's Learned Helplessness Model

According to Finkelhor's model, sexual abuse can cause both cognitive and affective changes in a developing child and it is these changes that are responsible for the effects of child abuse. The traumagenic model is a set of four dynamics thought to contribute to a pattern of revictimization including traumatic sexualization, powerlessness, betrayal and stigmatization (Finkelhor & Browne, 1985). Traumatic sexualization, "refers to a process in which a child's sexuality is shaped in a developmentally inappropriate and interpersonally dysfunctional fashion as a result of sexual abuse" (Finkelhor & Browne, 1985, p.531). According to the authors, this can cause a host of problems that could lead to revictimization including misconceptions about

sex norms and appropriate standards for sexual relationships and confusion about the role of sex in affectionate relationships. They also note that early abuse can lead victims to display knowledge about sex and an interest in sex that seems inappropriate to their age which may cause others to think them willing to engage in sexual behaviors.

The next dynamic is betrayal, which refers to the experience a child, has when someone on whom they were dependent causes them harm. This betrayal can also result when family members do not intervene or believe the child. As trust and security are lost, children may feel an intense need to regain a sense of trust and security in their lives. Others have described this from an attachment point of view as a need to restore feelings of security in the once trusted person which may result in blaming oneself for the abuse thereby absolving the abuser and maintaining the attachment (Carey, 1997). Conversely, this desire for a trusted figure could result in a child being so needy that they make poor choices about who to trust (Finkelhor & Browne, 1985). This need for an attachment may last into adulthood with continued impaired ability to judge trustworthiness in others. Therefore, one potential outcome of this betrayal is difficulty with trust, a crucial component of consensual sexual relationships, and a hypothesized contributing factor to revictimization. Conversely, betrayal may result in extreme anger and hostility, which may cause interpersonal difficulties, especially in intimate relationships.

Finkelhor and Browne's (1985) third dynamic, powerlessness, resembles the learned helplessness theory of Peterson and Seligman (1983). According to the powerlessness dynamic, disempowerment occurs when a child's desires and sense of efficacy are consistently compromised by the experience of abuse. This feeling of powerlessness is reinforced when attempts to halt the abuse are unsuccessful. Not only are fear and anxiety a likely reaction to this feeling (Finkelhor and Browne, 1985), but other likely reactions include feeling helpless to alter the pattern, the adaptation of a passive stance, and an attribution pattern that is stable, internal and global (Peterson & Seligman, 1983). Taken together, this passive stance and sense of powerlessness could make the individual appear an "easy target" for sexual predators who would identify them as unlikely to stop unwanted advances. Taken together with the dynamic of traumatic sexualization, individuals who may experience sexually abusive relationships may passively accept them as normal and feel powerless to change the relationship or disengage from it.

The fourth dynamic, stigmatization, can result from both the actions of the abuser and the response of people in the surrounding environment. Negative reactions contribute to victims' silence and sense of being different from others and feeling like "damaged goods". Finkelhor and Browne (1985) relate this stigmatization to a lowering of self-esteem. While this is repeatedly mentioned in articles on revictimization, it is not clear how this results in risk for revictimization. One possibility is that a negative self-view could contribute to the appearance of vulnerability or could contribute to poor judgment in relationships or situations (i.e. alcohol use).

Dissociation

Kluft (1990) has noted that dissociation is a common response to overwhelming events such as child abuse. Potential benefits of dissociating are both the diminishment of dysphoria and the exclusion of overwhelming or upsetting information. However, while it may provide relief, it can shatter the cohesion of life experience and people who dissociate information about their lives must try to understand their lives without that important knowledge. This can lead to biases that "further compromise their efforts to cope" (Kluft, 1990, p.168). Kluft concludes that this might lead to a failure to learn from one's experiences. Additionally, without adequate understanding and full awareness of past events, one's ability to sound normal alarms in dangerous sexual situations may be diminished. Dissociation can also enhance the effects of learned helplessness as the lack of awareness contributes to an inability to identify and implement appropriate strategies to evaluate situations. As a result, individuals may become frozen and passively comply with whatever is happening around them.

Social Developmental

Cloitre's (1998) social developmental perspective suggests that abuse in childhood interferes with developmental tasks including affect regulation and interpersonal relatedness. This theory states that CSA interferes with affect regulation because abuse promotes chronic arousal and because the family environment in which abuse is allowed to occur does not provide victims with learning opportunities to develop important affect regulation skills. This perspective then postulates there are several risk factors for those with CSA that are related to affect regulation. One such proposed risk factor is alexithymia. Cloitre et al. (1996) found that women first victimized in childhood had more difficulty identifying and labeling feeling states then women who experienced a first sexual victimization in adulthood. She states that alexithymic individuals have a "diminished emotional vocabulary and affectively out-of-sync

self-presentation, which may lead others to more easily minimize or actively disregard an alexithymic individual's 'no'" (p. 250). Additionally, this may result in a reduction in the ability to accurately detect danger. Cloitre et al. also postulated that dissociation would be a risk factor associated to affect regulation in much the same way that Kluft (1990) described. Third, emotional flooding or numbing that can result from CSA may interfere with a person's ability to respond to a threatening situation with an appropriate fight or flight response. Finally, she sees alcohol and drug use as risk factors for sexual victimization related to affect regulation since those with affect regulation deficits may turn to substances when coping with emotions is difficult.

The second prong in the social developmental perspective describes the effect that CSA has on interpersonal relatedness. Cloitre states that one of the developmental tasks of children involves organizing templates or schemas for relating to others including how to effectively relate. It is possible that children from abusive homes may learn that interpersonal engagement involves abuse and is a way to be connected to others. Interpersonal schemas for attachment involve children wanting to maintain attachments to their caretakers even if that caretaker is abusive. Thus, care and abuse are paired. Cloitre states that a child that learns that "interpersonal relatedness is contingent on sexual behavior is more likely to accept sexual activity as a way of emotionally connecting to others" (p. 282).

Victim Characteristics

In addition to the above mentioned theories, there are a number of discrete variables that have been investigated in relation to sexual revictimization and they will be reviewed below. These variables have been grouped into several categories including prior abuse history, affective or emotional state variables, and behaviors.

Prior Abuse History

Child Sexual Abuse (CSA)

Numerous retrospective and several longitudinal studies of revictimization have documented that the most predictive variable of adult sexual assault is past sexual assault or abuse (Roodman & Clum, in press). Gidycz, Hanson and Layman (1995) assessed college students four times over the course of an academic year. They found that victimization in one assessment period increased the risk of sexual assault for the next assessment period. Women who indicated a victimization experience in the first time period were three times more likely to

be victimized at the next assessment period. This drastically increased from the third time period to the fourth as women who reported victimization at Time 3 were 20 times more likely than non-victims to experience victimization at Time 4. They also found that women who were revictimized in subsequent time periods tended to stay in the same severity category of victimization. Himelein et al. (1994) tried to predict college dating violence using a number of variables and found that the only significant predictor in the model was child sexual abuse.

This association has now been documented outside of the United States as well. Fergusson et al. (1997) examined 520 18 year-old New Zealand women and found that sexual contact and intercourse categories of child sexual abuse yielded significantly higher rates of sexual victimization in adolescents (ages 16 – 18). Women sexually abused as children were three times more likely to be assaulted and 4.8 times more likely to be raped as compared to women without CSA. Likewise, a recent study of 281 German adolescents between 17 – 20 years of age (Krahé et al., 1999) also provided support that childhood sexual abuse leads to significantly higher levels of adult revictimization.

Further evidence suggests that severity of abuse and proximity of the abuser is predictive of revictimization with several studies finding that women sexually abused in childhood by a relative were more likely to experience adult sexual victimization than women abused by a non-relative (Ames, 1990; Brenner, 1991). Wyatt and Newcomb (1990) found that severity of abuse was directly related to negative outcomes and the closer the proximity of the abuser to the victim the more negative the outcomes. However, not all studies that have investigated the link between severity and revictimization have found one (Mayall & Gold, 1995; Whetsell, 1990). Another dimension of the severity of past abuse is the frequency with which it occurred. Brenner (1991) also found that college women who experienced multiple child sexual victimizations had significantly more adult revictimization as compared to women who had experienced one incident.

Child Physical Abuse (CPA)

The majority of studies that have examined sexual revictimization have failed to also assess for childhood physical abuse. Evidence from the few studies that do investigate childhood physical abuse suggests that physical abuse may also be a significant risk factor for sexual victimization as an adult although the results are somewhat mixed (Roodman & Clum, in press). Ames (1990) provides the most complete picture of the interaction of childhood physical and

sexual abuse and adult physical and sexual abuse. She found that among women with CPA, 73% had been revictimized in the form of either sexual or physical abuse. However, among women with CSA alone, 41% had either sexual or physical abuse in adulthood. A similar finding resulted from a study of female inpatients (Cloitre, Tardiff, Marzuk, Leon, & Portera, 1996). They found that rates of adult sexual victimization were higher among women reporting CPA alone (36%) or CPA and CSA (51%) than CSA alone (13%). Likewise, Merrill et al. (1999) examined female Navy recruits and found that both CSA and CPA increased likelihood of adult rape (5.12 times and 1.89 times respectively). When they controlled for CPA, rape was still significantly more likely (4.8 times) to occur among women with CSA vs. women without CSA. However, when they examined CPA controlling for CSA, the relationship was no longer significant. These authors concluded that the relationship between CPA and adult rape is an artifact of the high co-occurrence of CPA and CSA.

Variables Related to Affect and Emotional States

Self-esteem/Self-blame

Several of the theories previously discussed incorporated the importance of the effects of child abuse on self-esteem. Leonard (1991) explored the relationship between six different aspects of incestuous child abuse and revictimization to determine any possible relationship and only found that a measure of sexual self-esteem differentiated the revictimized from the non-revictimized groups. Ames (1990) also found that low self-esteem was related to revictimization in a community sample of 584 volunteers. While she did not find that childhood sexual victimization predicted adult sexual assault using a logit model, she did find that a measure of self-blame for the childhood abuse was a significant predictor. She also found that high levels of depression and low self-esteem were related to revictimization, while none of the lifestyle behaviors such as alcohol use, being out alone at night, and leaving public places with strange men were related. She noted that the revictimized in her study tended to attribute almost all the blame for their early abuse to themselves whereas the child abuse only group did not. She provides several plausible explanations for these findings. First, she proposes that self-blame could be the result and not the cause of revictimization in that adult victimization might cause a reinterpretation of the child abuse that leads to self-blame for both events. Second, she notes that the inclusion of a self-blame measure might produce response reactivity differentially between groups and it is possible that this is mediated by low self-esteem. Namely, it may be that

children who are abused develop lower self-esteem and are more likely to attribute blame to themselves. However, this does not explain how child abuse leads to different levels of self-esteem between child only victims and repeat victims. Additional studies examining the effects of child abuse have found that self-blame for the abuse is related to poorer long-term adjustment (Coffee, Leitenberg, Henning, Turner, & Bennett, 1996; Wyatt & Newcomb, 1990).

Depression and Anxiety

Variables that have received consistent support as being related to revictimization are depression and anxiety (Roodman & Clum, in press). However, only a study by Gidycz et al. (1993) provides possible evidence that poor adjustment predates the revictimization and may play a causal role, although the mechanism for this is unclear. Current adjustment as measured by anxiety and depression has been examined in two longitudinal studies conducted by Gidycz and her colleagues (1993, 1995). In their first study they found that both child sexual victimization and adolescent (after 14 years of age) victimization were directly related to adjustment at the beginning of the academic quarter (Time 1) and that the more severe the victimization, the poorer the adjustment. Additionally, adult victimization and adjustment at Time 1 were directly related to adjustment at Time 2 three months later. This suggests that poor adjustment predates and predicts further victimization among both child and adolescent sexual victims. This is the first study that provides evidence that the coexistence of higher levels of anxiety and depression among revictimized women is not merely the result of greater levels of trauma, but is in evidence prior to the revictimization. It is not clear how higher levels of anxiety and depression lead to greater revictimization, but it may be that these two symptoms inhibit coping and problem solving ability necessary to avoid assault or that they increase the appearance of vulnerability. While this was a strong finding in the first longitudinal study, the second study by Gidycz and her colleagues (1995) did not find the same significant relationship. The path model in the second longitudinal study included more than double the number of parameters to be estimated which the authors contend may have reduced their ability to find the same effect.

Post-traumatic Symptomatology

Post-traumatic symptomatology is hypothesized to lead to revictimization via its impact on information processing (Kluft, 1990; Sandberg, Matorin, and Lynn, 1999). Using a revised Impact of Events Scale (IES, Horowitz, Wilner, & Alverez, 1979), Sandberg et al. (1999) investigated post-traumatic symptomotology as a possible mediator or moderator of

revictimization. The IES was not correlated with adult sexual victimization therefore it could not qualify as a mediator. However, using hierarchical logistic regression to examine possible moderator effects, they did find that the interactive effects of childhood sexual abuse and post-traumatic symptomatology yielded a significant change in chi square. They, therefore, concluded that post-traumatic symptomatology did moderate the effect between CSA and adult victimization.

Dissociation

Cloitre et al. (1996) investigated whether women who were revictimized would show more dissociative symptomatology as compared to adult only victims or nonvictims. Using chi square statistics, they found that revictimized women were more at risk for dissociative disorders as compared to adult only victims, were more alexithymic, had attempted suicide more often, and had more interpersonal problems, specifically in the areas of sociability, submissiveness, intimacy, responsibility and control. However, in examining whether dissociation might moderate or mediate the link between CSA and adult victimization, both Sandberg et al. (1999) and Kessler and Bieschki (1999) found no relationship in their samples of college women. Sandberg et al. noted that dissociation as measured by the Dissociative Experiences Scale (DES, Bernstein & Putnam, 1986) in college students can be evidence of fantasy-proneness (Lynn, Neufeld, Green, Rhue, and Sandberg, 1996). Likewise, the DES measures the tendency to dissociate in every day life and it could be that it is a more specific type of dissociation that occurs following child abuse that might link CSA with adult sexual victimization (Sandberg et al., 1999).

Behaviors

Consensual Sexual Experience

Mayall & Gold (1995) conducted a study with 654 college women and found that women sexually assaulted as adults had more adult sexual experience than those without sexual assault. They also found that women with a history of child sexual abuse had more sexual experiences during adulthood than non-childhood victims. Additionally, sexual experience was highly correlated with the discriminant function found to discriminate sexually assaulted from non-assaulted adults. While they expected child sexual abuse to be the best predictor of adult sexual assault, they found that adult sexual experience actually predicted better. Mandoki and Burkhart (1989) also found that severity of the child victimization among their female college sample was

correlated with the number of adult consensual sexual partners. While their sample did not evidence a significant amount of revictimization, they suggested that more severe child abuse might result in greater numbers of sex partners and that greater numbers of sex partners increases likelihood of adult victimization. Gidycz et al. (1995) also found that an adolescent victimization predicted number of sexual partners at the first adult time period they examined. However, they did not find that number of sexual partners predicted adult victimization in the next assessment period three months later.

Himelein et al. (1994) also investigated the impact of consensual sexual experiences among a sample of 315 dating college students. Using logistic regression analysis they tried to predict college dating aggression with three predictor variables: child sexual abuse, age of first consensual experience, and total number of consensual partners. Only child sexual abuse yielded a significant model. However, they noted that CSA and consensual sex were significantly related and suggested that the sequelae of child sexual abuse might predispose young women to earlier and more frequent sexual activity which then enhances risk for dating sexual victimization. Himelein (1995), in an effort to explore variables previously found to be related to risk for revictimization, conducted a longitudinal study using 100 college women assessed prior to the start of their first academic year and then again after their third year of college. She examined nine variables hypothesized to be related to revictimization including CSA, sexual victimization in dating prior to college, consensual sexual experience, alcohol use in dating, assertiveness, and four attitude measures. She found that precollege sexual victimization, consensual sexual experience, alcohol use and sexual conservatism were significant correlates of sexual victimization during college. This finding is further supported in a large study investigating sexual victimization among 1,093 female Navy recruits (Merrill et al., 1999) which found that number of consensual sexual partners did predict rape but occurs independent of the effects of CSA.

Alcohol Use

There have been mixed findings regarding the role of alcohol in revictimization. Ames (1990) found no relationship between alcohol and revictimization and Mayall & Gold (1995) found that alcohol did not differentiate adult sexual assault victims from nonvictims. However, a discriminant function analysis conducted by Koss & Dinero (1989) indicated that variables related to traumatic sexualization were most predictive of rape when coupled with higher alcohol

usage. Other studies examining sexual assault on college campuses have found a link between assault experiences and alcohol use (Abbey, Ross, McDuffie, McAuslan, 1996; Koss, 1988; Muehlenhard & Linton, 1987). Similarly, Merrill et al. (1999) found that women with alcohol problems were more likely to have been raped. Univariate statistics indicated that women with CSA had significantly higher scores on a measure of alcohol problems than those with no CSA. However, a hierarchical logistic regression analysis was undertaken to determine whether child abuse would predict adult rape after controlling for alcohol problems. Results indicated that the association between CSA and adult rape was not eliminated. Therefore, they concluded that alcohol is related to adult rape but does not mediate the effects between CSA and adult rape.

Coping

Proulx, Coverall, Fedorowicz & Kral (1995) examined general coping strategies among a sample of female nonvictims, childhood only victims, and revictimized. Among their sample, revictimized women used more coping strategies of all types and specifically used more strategies indicative of negotiation, self-blame, and escapism as compared to nonvictims. This finding that avoidant coping styles are employed by women who have been repeatedly victimized is further supported by Roth, Wayland, & Woolsey (1990) who found that women experiencing incestuous child abuse or repeat victimization used more denial as measured by a subscale of the Impact of Events Scale as compared to nonvictims. Both case-study reviews and experimental research on coping strategies of trauma victims indicates that avoidance of stressful material is not an effective strategy (Roth & Newman, 1993).

Another study addressed the issue of coping in a community sample of women who had experienced child sexual abuse (Coffee et al., 1996). They measured coping in two ways using the same instrument by instructing participants to answer the questions for how they have coped with the sexual abuse since turning 16 and then to respond as to how they coped with a stressful life event in the past month. They found that for the stressful current event, engagement coping strategies were used more frequently whereas for the sexual abuse, more disengagement coping was utilized. Moreover, they found that avoidant coping methods were associated with higher levels of psychological distress.

Proposed Theoretical Model for Revictimization

Using the compiled findings of existing research and theory on the effects of child abuse, and predictors of adult victimization and revictimization, the following model is proposed (see

Figure 1). Since the model is attempting to explain the mechanism by which abused children are more likely to be sexually victimized as adolescents and adults, the model begins with child abuse (CA). While there are likely causal factors that lead to child abuse and while those factors may influence other constructs in the model, they are not included since that is not the focus of this investigation. Thus CA is the sole exogenous variable in the model. Studies previously cited have indicated the potential negative effects of CSA on children. According to Finkelhor et al.'s traumagenic model (1985), abused children suffer stigmatization, betrayal and powerlessness. These lead to significant amounts of self-blame (Ames, 1990; Coffee et al., 1996; Wyatt & Newcomb, 1990), low self-esteem (Leonard, 1991), depression and anxiety (Gidycz et al., 1993), and post-traumatic symptomatology (Sandberg et al., 1999). Further, Cloitre's social developmental model of revictimization notes that CSA interferes with interpersonal relatedness by contributing to maladaptive schema development. Therefore, the model indicates that CA leads to negative cognitive schemas and affects. This includes both negative views about one's self and the world and incorporates aspects of stigmatization, self-blame, betrayal and powerlessness. Likewise, as has been demonstrated (Cloitre et al., 1996), CSA results in dissociative symptoms and revictimized women demonstrated more dissociation than either non-revictimized or single victimized women. Therefore there is a path from CA to sexual victimization. It has also been shown that CSA tends to result in more frequent risky behaviors (Himelein, 1995; Koss & Dinero, 1989; Mayall & Gold, 1995; Merrill et al., 1999) and less adaptive coping strategies (Coffee et al., 1996; Proulx et al., 1995; Roth et al., 1990) and therefore, there are direct and indirect paths (through Negative Views) from CA to Coping Strategies and Risky Behaviors. It is then hypothesized that Dissociation, Risky Behaviors and poor Coping Strategies will result in both adolescent and adult victimization as these three constructs have been shown to increase risk for adult victimization (Merrill et al, 1999; Proulx et al., 1995). Ideally, the constructs in the model would be expected to account for all of the variance in the prediction of adolescent and adult victimization. However, CSA has repeatedly been shown to be the strongest predictor of adult victimization (Messman & Long, 1996) and therefore, there is a direct pathway from CA to adolescent and adult victimization.

An alternative model will also be tested in which Negative Views will not mediate the effects of Risky Behaviors and Coping Strategies, but will be an independent predictor of future victimization (Figure 3). Support for this alternative model can be found in Cloitre's social

developmental perspective of revictimization that shows how disturbances in interpersonal relatedness result in negative and maladaptive schemas.

Testing the Model

This model is not exhaustive in terms of all known possible correlates of revictimization because such a model would be untestable. While researchers have conducted both retrospective and longitudinal studies designed to examine the intercorrelations of variables thought to lead to revictimization, to date, no one has proposed and tested a model for victimization using a path model with latent factors, more commonly known as structural equation modeling (SEM). Although Gidycz and colleagues (1993, 1995) used path analysis to test their model of revictimization, they did not utilize specific fit indices to determine how well their model fit their data nor did they suggest any modifications to their model based upon their results. SEM allows researchers to determine how well their data fits their theoretical model using a number of structured steps. Additionally, SEM allows for the modification of the model based on specific indices that allow a possible improvement of fit over the original model. SEM also involves a model of hypothetical latent constructs that are not measured directly. Manifest or indicator variables are used to measure each latent construct. This method has two advantages over standard path analysis. First, convergent and discriminant validity of the measures used can be assessed (Hatcher, 1994). This provides evidence that the hypothetical constructs in the model are actually being investigated. A path analytic model assumes that the manifest or indicator variables are being measured without error which is an assumption that frequently is violated in the social sciences (Hatcher, 1994). However, SEM with latent factors excludes the error variance from the manifest variables and models this unwanted part separately.

Because several studies have suggested that child physical abuse is also a significant risk factor for sexual revictimization, Child Abuse will be measured by both CSA and CPA. The second latent factor in the model is Dissociation and the indicator variables will be the three subscales of the Dissociative Experiences Scale (DES, Bernstein & Putnam, 1986). Risky Behaviors will be measured by only two indicators, alcohol consumption and consensual sexual activity. Coping Strategies will be measured by the four subscales of the Assessment of Coping with Traumatic Situations questionnaire (Clum & Chandler, 1999) and the Coping Strategies in Sexual Situations (CSSEX), a measure created for this study. Victimization will be measured by two indicators, Teen Sexual Victimization (TeenSV) and Adult Sexual Victimization (AdultSV)

which will both be assessed using the Sexual Experiences Survey (SES, Koss & Oros, 1992; Koss & Gidycz, 1985).

Method

Participants

Participants were 290 female undergraduate students enrolled in introductory psychology at a large midwestern university. Of the 290 participants who completed study questionnaires, 14 students provided incomplete data, mostly on the ACTS, the questionnaire asking about coping strategies for a stressful life event. Participants with incomplete data were compared to those with complete data to see if there were any significant differences between the two groups. The two groups did not differ with respect to age, race, and occurrence of child sexual abuse or adolescent or adult sexual victimization. However, the participants with incomplete data did have significantly less child physical abuse as compared to students with complete data, χ^2 (1, 290) = 6.149, $p < .01$.

Individuals with incomplete data were removed so the sample size for this study was 276. The mean age of participants was 19 years (SD 1.39) with a range from 17 to 29 years. The majority (98%) of participants were between the ages of 17 and 22 indicating that the sample was comprised primarily of traditionally aged college students. Of the 276 participants, 63% were 1st year students and 25% were 2nd year students. The remaining 12 % indicated 3rd, 4th, or "other year" status. The majority of participants identified as Caucasian (86%) with the next largest group being African Americans (5.4%). Hispanic was endorsed by 2.9%, Asian American by 3.6%, and "other" by 2.2%. This is roughly commensurate with the undergraduate student body of the university where data was collected. The vast majority (98.6%) identified as "straight" while 1.5% indicated being "gay" or "bi". Marital and dating status was also collected with 95% of the participants indicating they were single and 5% indicating they were cohabiting or married. When asked about current dating status, 18% indicating they were not dating, 30% were dating casually, and 50% were in an exclusive dating relationship or had already identified that they were married.

Procedure

Student participants were recruited from introductory psychology classes during the fall semester. Students enrolled in introductory psychology are required to participate in 5½ hours of research experiments or they may opt to write a paper to earn equivalent credit. Students sign up

for experiments by consulting the written descriptions of all available studies which are located in a centralized location. Students were able to chose which studies to participate in and were informed of the requirements of study participation and any risks associated with their participation. Students signed up to participate in this study in groups of between 10 to 70 students and were told that participation would require completing several questionnaires one time only that would take approximately one hour to complete. Upon arrival to the designated classroom, students were given a folder with a packet of questionnaires and an instructional sheet (see Appendix A) that informed them about the anonymous nature of the study and their freedom to drop out at any time. Students signed a general informed consent form for the psychology course prior to attending any testing session. An additional informed consent form was included in the students' questionnaire packet. The principal investigator administered all testing sessions. Students were asked to take the last two sheets of their packet with them. The first sheet was a standardized debriefing form that indicated the purpose of the study and the second sheet was a list of available resources for people who have experienced childhood or later victimization experiences. Participants received one hour of research credit for their participation. The packet of questionnaires given to students can be found in Appendix A.

Measures

Childhood Sexual Abuse Survey. Childhood sexual abuse was assessed using the Child Sexual Abuse Survey (Esposito, 1997) which is a modified version of the widely used questionnaire developed by Finkelhor (1979) to determine the extent of sexual contact in childhood. Respondents were asked if they experienced any of six sexual behaviors with another person before the age of 14. The original Finkelhor measure included several items concerning non-contact forms of abuse such as exhibitionism. However, numerous studies (Roodman & Clum, in press) have demonstrated that this form of CSA does not seem to increase risk for revictimization. Thus these types of items were not included. The age cutoff in revictimization research is somewhat arbitrary with college aged samples usually evidencing a younger cutoff age and a resultant smaller effect size for revictimization (Roodman & Clum, in press). The age of 14 was chosen in this study to allow for the evaluation of adolescent victimization from the ages of 14 - 18. Additionally, respondents are asked to provide an estimate of the number of times the event occurred, with whom it occurred, their age when it began and ended, the age of the other person, and whether any type of force was used. These last four items were collected in

order to more accurately determine whether the sexual experiences were consensual or abusive. Previous research has demonstrated that studies that use a strict 5+ age criterion for the perpetrator yield lower effect sizes for revictimization possibly due to the fact that sexual abuse is occurring even when the perpetrator is not 5+ years older (i.e. a brother who is only three years older) (Roodman & Clum, in press).

Experiences were considered child sexual abuse if the participant was under the age of 14 when it began. If the participant indicated that the perpetrator was a friend, it was counted as CSA if any force was used. Additionally, if no force was used but the "friend" was 5 years older it was also counted as CSA. Several composite variables were created from this scale for the purposes of data analysis. First, the total number of perpetrators for each participant was calculated. Additionally, the duration of abuse was calculated by subtracting the age when the abuse began from the age it ended and adding the constant one. This way, if a participant had the same starting and ending age, this was coded as one year rather than zero. Likewise, abuse that began at age five and ended at age seven was coded as three years duration indicating that abuse existed during the 5^{th}, 6^{th} and 7^{th} years. The perpetrator's relationship to the victim was also categorized as peer, sibling, adult other or adult parent. Peer was considered a friend, cousin, stranger, or other that was within five years of the participant's age. Sibling was coded for brothers and sisters and adult parent was coded for birth mothers and fathers. Adult other included uncles, aunts, foster parents and step-parents, or strangers or others that were more than five years older than the victim. Severity of abuse for each perpetrator was categorized as follows: 0 = no abuse; 1= kissing and hugging in a sexual way; 2 = touching part of body except sex organs in sexual way; 3 = touching sex organs in sexual way; 4 = any sexual intercourse including oral and anal intercourse. Often participants listed more than one category of sexual contact. Students were classified according to the most severe level of contact they endorsed for each perpetrator. Finally, a composite variable called CSACOMP was created by multiplying the number for the severity by the frequency for that perpetrator. If a person reported more than one perpetrator, the multiplicative scores will be summed. Participants indicated how frequently each sexual event occurred according to the following scale: 0 = never; 1 = 1 time; 2 = 2 times; 3 = 3 – 4 times; 4 = 5 – 10 times; 5 = 11 – 20 times; 6 = >20 times. For the composite variable described above the following adjustments were made: 3-4 times was considered 3.5 times; 5 – 10 times was considered 7.5 times; 11 – 20 times was considered 15.5 times and >20 was

considered 20 times. This was done to more accurately represent the number of times each event occurred.

Child Physical Abuse Survey. Child physical abuse was assessed using the Child Physical Abuse Survey (Esposito, 1997) which is a modified version of the Child Maltreatment Survey (Yang & Clum, in press) which assesses the extent and severity of various forms of child physical abuse. Respondents were asked, "Have you ever been physically hurt which resulted in marks, breaks in the skin, bruises, or injury, which required medical treatment even if none was received?" A list of 16 possible perpetrators were provided and respondents were asked to indicate the type of physical abuse they have experienced (e.g. being hit really hard, being kicked), the frequency with which it occurred, their age when it began and ended, and the perpetrator's age. Data reduction procedures for this measure were identical to those used for child sexual abuse. However, the categories for type of abuse are not logically ordered. For example, it is unclear that "4 = threw you down" is more severe than "1 = hit you really hard". Therefore there will not be a severity variable. However, number of perpetrators will be calculated as will frequency of events. Perpetrators will again be categorized with respect to their relationship to the victim. A composite variable, CPACOMP was also computed by adding the frequency with which physical abuse occurred summed across perpetrators.

Sexual Experiences Survey (SES). Adolescent victimization was assessed using a revised form of the SES (Koss & Gidycz, 1985; Koss & Oros, 1982). The SES is the most widely used instrument for assessing the presence of sexual assault. The SES asks respondents if they have experienced a variety of sexual experiences without actually calling the experiences assault or rape. Respondents are asked to indicate if they experienced any of 11 events from age 14 to their 18th birthday or the beginning of their first year of college (whichever came first). The internal consistency (Cronbach alpha) is .74 for women and it has also demonstrated good test-retest reliability (93% agreement; Koss & Gidycz, 1985). Additionally, to explore the truthfulness of self-reported sexual experiences, Koss and Gidycz (1985) selected a sample of women for interviews. The Pearson correlation between a women's self-reported level of victimization and responses based on the interview was .73 ($p < .001$).

Several minor revisions were made to the SES including some word changes to make items clearer and the addition of one question. Question #10 asks if the respondent has ever "been in a situation where a man tried to have sexual intercourse with you when you were too

drunk or under the influence of a drug to stop him". Directly below this question, a follow up question was added that asks, "did sexual intercourse occur" in order to determine whether this was "attempted rape" or "rape". Additionally, the original instrument merely asks whether the experience has ever occurred and this has been changed to allow respondents to indicate how many times each experience has occurred.

The 11 questions allow categorization into four distinct categories as follows: sexual coercion, sexual contact, attempted rape, and rape. Himelein (1995) noted that there is no a priori rationale for ranking one of these categories as necessarily more severe than another (i.e. is sexual coercion more or less severe than sexual contact?). Therefore, the following interval scale was created similar to that of Himelein (1995): 0 = none; 1 = low (verbally coerced sexual intercourse); 2 = moderate (sexual contact with force or attempted rape); and 3 = severe (rape).

Adult victimization was also assessed using the revised form of the SES. Participants were asked to complete this questionnaire for the time period from their 18th birthday or the beginning of their 1st year of college (whichever comes first) to the present. Since the majority of participants in this study were first year students, this meant that the adult victimization time period encompassed approximately three months (or slightly more if they turned 18 before college began).

Assessment for Coping with Traumatic Stress (ACTS). The ACTS is a 69-item self report measure designed to determine the coping strategies utilized by individuals following any type of stressful event (Clum & Chandler, 1999). Respondents were asked to write down the most stressful event they could recall and then to rate how often they used various coping strategies on a 4 point Likert scale from 0 (never) to 3 (frequently). Respondents were asked to complete the 69 questions for three different time periods: during or immediately after, ever, and currently. For this study, the "ever" time period was utilized for analysis. Reliability was calculated for this sample at .90 (Cronbach α).

Responses to the 69-item questionnaire were subjected to a principal component analysis using ones as prior communality estimates. The principal axis method was used to extract the components, and this was followed by a varimax rotation. However, the data failed to converge. Previous factor analysis conducted on the ACTS yielded a four-factor solution (Clum & Chandler, 1999). Given the prior finding of four factors, an additional analysis was conducted by designating a four-factor solution. This resulted in four factors with a high degree of

interpretability that were similar in content to the factors previously found (Clum & Chandler, 1999). The factors were named according to the content of the items as follows. Distraction/Relaxation (CopDist) consists of 17 items (α = .88) that had factor loadings .40 or greater and included items that indicated a variety of strategies suggesting relaxation or a focus on other activities when thoughts about the event arose. Denial/Self-Blame (CopDen) includes 15 items (α=.85) that indicate efforts to deny that the event happened, blaming one's self, or doing activities that punish the self. Cognitive Engagement (CopCog) includes 18 items (α = .85) that involve actively thinking about what happened and learning about how to handle it. Finally, Social Support (CopSS) included 9 items (α =.88) including 3 reverse scored items that indicate strategies that involve talking to friends or family and enlisting their support.

Trauma Constellation Identification Scale (TCIS). The construct Negative Self-Schemas was measured using the TCIS (Dansky, Roth & Kronenberger, 1990). This 30-item self-report instrument assesses negative affective and maladaptive cognitive responses to serious life events. The original questionnaire asks students to "keep in mind a stressful event" while rating a list of 30 statements on a Likert scale from 1 (strongly disagree) to 7 (strongly agree). The instructions were slightly modified for this study to read that students should keep in mind the same event they listed on the ACTS which acts for the "most stressful event that you have encountered". The TCIS has high internal consistency reliability (Cronbach's alpha = .94) and produces two factors, "negative self schemata and affects" (NegSelf) and "hostile world" (HostWor). These factors were found to be stable and robust as they were replicated in two separate subsamples and a full sample rotation. Sample NegSelf items are "I am terrified of things" and "I often blame myself after bad things happen". Sample HostWor items include "I see this world as a bad place to live in" and "I don't trust other people". Reliability for the TCIS for the present study was .95 (Cronbach alpha) and .93 for the subscale NegSelf and .91 for HostWor.

Dissociative Experiences Scale. The Dissociative Experiences Scale (DES, Bernstein & Putnam, 1986) was the measure chosen to assess for dissociation. Ideally, a measure that could evaluate whether participants actually dissociated as a coping mechanism during abuse events would be used. Since none exists, it was decided to assess general dissociation since dissociative symptomatology as measured by the DES has been shown to correlate with severity of abuse (Chu & Dill, 1990). Additionally, several researchers have noted higher DES scores for individuals experiencing multiple incidents of abuse as compared to single-incident victims (Chu

& Dill, 1990; Cloitre et al., 1996). The DES demonstrates high internal consistency (Cronbach alpha .96) and good test-retest reliability (.93) (Dubester & Braun, 1995). The three subscales, Amnesia (DissAmn), Derealization-Depersonalization (DissDep), and Absorption (DissAbs) were utilized for this study as manifest variables of the latent construct dissociation. They have high individual reliabilities as well as test-retest reliability (Dubester & Braun, 1995). DES total scores are the average score for the 28 items. Scale scores are the average scores across six items included in each subscale.

Coping Strategies for Sexually Charged Situations (CSSEX). While several researchers investigating coping and revictimization have used standardized measures of general coping (Proulx et al., 1995), a measure was created specifically for this study to investigate how participants think they would cope with an actual sexual threat situation. The measure was developed by generating a series of dating vignettes that seemed common among college undergraduates with increasing levels of sexual "threat". Several people familiar with typical dating sexual assault scenarios reviewed these stories and six scenarios were chosen for pilot testing. Respondents were asked to carefully read the story and then "list all the things you might do in this situation". This measure was pilot tested with a sample of 30 women. Based on their responses Story 5 was eliminated because respondents' answers were almost identical to the answers given for Story 4.

Responses from the pilot data were compiled and seven unique categories were identified that accounted for the types of responses given (see Appendix B for Coding Guide). These included Direct Verbal (DV) for statements that the participant wrote that were directed towards the man in the story that clearly stated what she did or did not want (i.e. "I'm not interested in dating anyone" or "no"). Indirect Verbal (IV) was coded for statements made to the man in the story that imply their wishes but do not state it directly (i.e. "I have a boyfriend" or "we need to get back to the party" or "I have my period"). Emotional Coping (EC) was coded when the participant indicated an emotional way of responding such as "crying" or "get angry". Aggression (A) was coded when respondents indicated physical or verbal actions of an aggressive nature such as "hit him" or "kick him in the balls" or "yell at him". Escape (E) was coded when the participant is trying to leave the situation or stop the man from his actions (i.e. "try to get out of the room" or "run" or "scream for help"). Actions designed to help prevent any unwanted event in a pre-emptive way were coded as Preventive Behavior (PB). Examples

include “try to slow things down”, “leave”, and “be sure that my friends know where I am”. Finally, responses that would clearly have no bearing on the situation in the moment were coded Irrelevant (I). Examples of Irrelevant responses include “not be as aggressive as I could because of alcohol” or “blame myself for letting it get this far”. A coding book was created that lists numerous examples in each category and provides rules for differential categorizing when questions arise. A subset of 40 participants’ questionnaires were coded by the principal investigator and a research assistant. Interrater reliability was calculated by dividing the total agreements for the five stories by agreements plus disagreements. Interrater reliability was calculated at 77% for the overall measure. Interrater reliability was also calculated for each category. For this calculation, disagreements were counted in each category such that omissions and commissions were counted as errors. Therefore, the interrater reliabilities for the seven categories will not be equivalent to the overall reliability. Highest reliabilities were found for the Direct Verbal (80%) and Aggression (78%) categories. The remaining reliabilities were as follows: Indirect Verbal (70%), Emotional Coping (57%), Escape (66%), Preventive Behavior (65%), and Irrelevant (56%).

Alcohol Use. Alcohol use was assessed by asking participants about their usual drinking behaviors including the frequency and quantity of their alcohol consumption. For analyses a frequency X quantity per month composite measure of drinking was created. This method of assessing alcohol use has been previously used by other researchers examining revictimization (Gidycz et al., 1995). Additionally, participants were asked about frequency of times they were drunk or “passed out” per month.

Sexual Experiences. Consensual sexual experiences were assessed by asking respondents how many partners they have had during the last year in four categories of sexual activity. The four categories are sexual kissing and hugging, genital contact without intercourse, oral intercourse, and sexual intercourse. A composite variable for sexual experiences was created by multiplying the number of partners by the number for the category (kissing = 1, genital contact = 2, oral intercourse = 3 and sexual intercourse = 4) and adding for each category. Participants were not double counted (i.e. if they kissed one person and had sexual intercourse with one person, they only were counted for sexual intercourse). Participants were also asked the frequency with which their intercourse experiences involved alcohol consumption on their part.

Results

Overview of Data Analysis using Structural Equation Modeling

Data were analyzed using SAS System's 8.0 CALIS procedure and the models tested were covariance structure models. Means and standard deviations as well as reliability estimates for the indicator variables are presented in Table 1. Multiple indicators were used for all latent constructs. Intercorrelations between the 15 manifest indicators are presented in Table 2.

According to the approach recommended by Anderson and Gerbing (1988), a two-step procedure was followed. The first step involved a confirmatory factor analysis to develop a measurement model that demonstrated an acceptable fit to the data. The second step involved modifying the measurement model so that it represented the proposed theoretical models that were tested and revised until a theoretically meaningful and statistically acceptable model was found.

Evaluation of Model Fit

Several statistics were used to determine fit of the measurement and theoretical models including the chi-square statistic, the root mean square error of the approximation (RMSEA), the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the parsimony ratio (PR), the normed-fit index (NFI), the parsimonious normed-fit index (PNFI), and the relative normed-fit index (RNFI).

The chi-square statistic may be used to test the null hypothesis that the model fits the data when the proper assumptions are met. However, the statistic is very sensitive to sample size and departures from multivariate normality which will very often result in rejecting a well-fitting model (Hatcher, 1994). Therefore, the model chi-square statistic was used as a goodness of fit index, with smaller chi-square values relative to degrees of freedom indicating a better model fit (Jöreskog & Sörbom, 1989).

The RMSEA was also used as a measure of goodness of fit. It yields an estimate of the average discrepancy per degree of freedom independent of the sample size. An RMSEA of zero would indicate a perfect fit but since no model is expected to fit a population perfectly the following values will be utilized: values less than .05 indicate a close fit, values around .08 indicate a reasonable and acceptable approximation, and values of .1 or above indicate a poor fit (Browne & Cudeck, 1993).

The Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI) provide an estimate of the total variance and covariance accounted for by the model (Jöreskog & Sörbom, 1996) and is similar to $\underline{R}^2$ in multiple regression analysis (Tanaka, 1993). The AGI and AGFI do not explicitly depend on sample size but rather measure how much better the model fits as compared to no model at all (Jöreskog & Sörbom, 1996). Values for GFI above .90 are considered a good fit. The AGFI is the GFI adjusted for degrees of freedom and values above .80 indicate a good fit.

Since two theoretical models were compared, it was important to be able to compare these models, not only on their relative fit, but also on their parsimony. According to Hatcher (1990) the "principal of parsimony states that, when several theoretical explanations are equally satisfactory in accounting for some phenomenon, the preferred explanation is the one that is least complicated" (p. 382). Therefore, a parsimony ratio (James, Mulaik, & Brett, 1982) was calculated for each measurement and theoretical model. The parsimony ratio (PR) is simply the degrees of freedom for the model being studied divided by the degrees of freedom for the null model. The null model is calculated by SAS and is the model where all paths and covariances between all variables are deleted, or more simply stated, it is a model that predicts no relationships between any of the variables. The PR is helpful when choosing between two nested models that display a similar fit as the more desirable model will be the one with the higher parsimony ratio (Hatcher, 1990). Alone, it merely identifies the model with the fewest degrees of freedom. However, when multiplied by the NFI (Bentler & Bonett, 1980) it produces a measure of overall fit (PNFI) that takes into account the parsimony of the model. The NFI is a measure of overall fit of a model with values ranging from 0 to 1 with higher values reflecting a better fit.

The final fit indice that was used is the relative normed-fit index (RNFI, Mulaik et al., 1989). All of the previously mentioned indices reflect the overall fit of the measurement model and structural model combined. The RNFI is not influenced by the fit of the measurement model, but rather reflects the fit in just the structural portion of the model. Similar to the NFI, higher scores indicate a better fit.

Descriptive Statistics

Abuse Variables

Child Sexual Abuse

Despite carefully worded instructions on the CSA measure, numerous respondents indicated events that occurred at or after the age of 14. Some also appeared to indicate consensual events with peers. Of the 276 participants, 91 listed at least one perpetrator on their questionnaire form. In order to determine if the sexual events with those perpetrators were valid instants of CSA, the criterion described in the Measures section was examined. Twenty-eight respondents listed sexual experiences that occurred with a friend who was an age peer and where no force was involved. An additional 23 respondents listed sexual events that occurred when they were 14 or older. These responses were not counted as CSA. However, their questionnaires were examined to make sure that these potentially abusive experiences were accounted for in the proper time period. Sixteen participants listed these sexual experiences on their Adolescent Sexual Experiences Survey (SES), one was listed on the Adult SES, and the remaining six sexual experiences were with age peers with no force involved and were not mentioned on either SES questionnaire. Nineteen participants listed a 2nd perpetrator and three of these were not included as CSA because one involved a friend with no force and two listed experiences that occurred after the age of 14 (these were also adequately accounted for on their Adolescent SES). Of three participants who listed a third perpetrator, all were counted as CSA experiences.

All together, 50 participants (18%) listed some form of child sexual abuse before the age of 14. Kissing or hugging was reported by 2% of the sample while touching the body in a sexual way was reported by 3% of the sample. Seven percent of the sample indicated that their sexual organs were touched and 6% of the sample experienced oral, anal, or vaginal intercourse.

Child Physical Abuse

Of the 276 respondents, 40% (111) experienced physical abuse. Nine percent had two perpetrators, 5% listed 3 perpetrators and 3% listed 4 perpetrators. All total, 185 separate perpetrators were listed with 101 of these abusive physical events occurring with friends, cousins, or siblings, 58 occurring with parents and 16 with other adults. The instructions for this measure read, “Have you ever been physically hurt which resulted in marks, breaks in the skin, bruises, or injury which required medical treatment even if none was received?” It is not clear from the pattern of responding that students actually attended to this instruction when they were

responding to this questionnaire. What this suggests is that some of the events listed as "physical abuse" may have been sibling or peer fighting while other events may have been partner abuse that occurred in early teen years. Several participants wrote "spanking which was deserved" next to their entry for birth father or birth mother which suggests that some of the physically abusive events endorsed by participants may not have met the definition listed above. Since there was no way to verify that physical abuse actually occurred as it was defined, any experiences endorsed that met the criterion outlined in the Measures section were counted as physical abuse.

Teen Sexual Victimization

For the teen period defined as ages 14 – 18, 117 participants (42%) experienced at least one event of unwanted sexual contact. Nine percent (25) experienced "low" contact events defined as sexual intercourse obtained through coercive means. Thirteen percent (37) experienced "moderate" sexual victimization including attempted rape or forcible sexual contact and 20% (55) experienced severe events that would constitute rape. Of these 55 students who experienced an event that would meet the legal definition of rape, 56% (31) did not acknowledge that they had been raped.

Adult Sexual Victimization

For the adult time period defined as from the beginning of their 18th birthday or the beginning of the school year (whichever came first), 33% (103) had experienced some form of unwanted sexual contact. "Low" victimization was experienced by 12% (34), "moderate" victimization by 15% (40), and "severe" victimization by 11% (29). Of the 29 students experiencing an event that would legally qualify as rape, 79% (23) did not acknowledge that they had been raped.

Relationships Among Abuse Variables

Among students reporting CSA, 54% experienced TeenSV and 44 % experienced AdultSV. Among students reporting no CSA, only 40% had TeenSV while 36% had AdultSV. Among students reporting CPA, 51% experienced TeenSV and 44% experienced AdultSV while among students with no CPA, 37% experienced TeenSV and 33% experienced AdultSV. A much more striking example of revictimization is apparent from the percentages of the co-occurrence of TeenSV and AdultSV. Among students reporting TeenSV, 66% experienced AdultSV whereas 28% of students without TeenSV experienced AdultSV. Not surprisingly, the strongest correlation between abuse variables was found between adolescent and adult

victimization. This is further demonstrated by examining the odds ratios for the dichotomous variables of adolescent and adult victimization. Table 3 provides odds ratios for the co-occurrence of the various types of abuse. Those experiencing TeenSV were 4.92 times more likely to experience AdultSV as compared to women with no TeenSV. However, women experiencing either CSA or CPA were only 1.84 times as likely to experience TeenSV and only 1.55 times as likely to experience AdultSV as compared to women without any child abuse.

Previous studies have provided mixed findings about the relationship between child physical and sexual abuse and its relationship to revictimization. In this sample, the composite scores for child physical and sexual abuse are correlated (.155, $p<.01$). Child sexual abuse is more strongly correlated with adolescent victimization (.180, $p<.01$) than with adult victimization (.126, $p<.05$). The composite child physical abuse measure was correlated with both adolescent and adult victimization weakly at .139 ($p<.05$). However, when the child abuse variables are examined as dichotomous yes/no variables, only CPA is significantly related to later victimization. Individuals with CPA are 1.74 times as likely to experienced TeenSV and 1.62 times as likely to experience AdultSV.

Previous research on revictimization has suggested that revictimization rates are higher when more restrictive definitions of CSA are used (Roodman & Clum, in press). Therefore, revictimization rates were recalculated using the two most severe definitions of CSA that included any touching of sex organs or intercourse. In this sample, 34 of 50 students with CSA experienced severe CSA. Among students with severe CSA, 73% (25 of 34 students) experienced some form of TeenSV or AdultSV. In other words, the revictimization rate for women with severe CSA was 73% while the revictimization rate for students with less severe CSA was 52%.

Coping in Sexually Charged Situations

The Coping Strategies with Sexually Charged Situations (CSSEX) was designed specifically for this study to investigate students' coping strategies when presented with various levels of sexual threat. It was hypothesized that individuals with early abuse would evidence fewer and less effective strategies in these situations. Similarly it was hypothesized that individuals with less effective coping strategies would demonstrate more adolescent and adult victimization. As described in the methods section, students' responses were coded according to

seven categories. Totals for each of these categories were computed across scenarios and these totals were correlated with the various abuse variables and each other.

Intercorrelations between the seven CSSEX categories can be found on Table 4. The Direct Verbal category was significantly correlated with Indirect Verbal indicating that respondents who used one verbal method of coping were more likely to use the other. Aggression was also significantly correlated with both Escape and Preventive Behavior strategies suggesting that students using aggressive strategies also tended to list other behavioral strategies. No other categories were significantly correlated with each other.

Next, correlations between the categories of the CSSEX and the abuse variables were examined (Table 5). The composite child sexual abuse variable was significantly positively correlated with the Irrelevant category indicating that those participants with higher levels of child sexual abuse listed more irrelevant coping strategies. TeenSV was significantly positively correlated with both Emotional Coping and the Irrelevant categories suggesting that participants employing emotional or irrelevant strategies experienced more teen sexual victimization. However, TeenSV was negatively correlated with Aggression suggesting that those individuals who listed more aggressive coping strategies experienced less teen sexual victimization. Finally, AdultSV was significantly positively correlated with Indirect Verbal and Irrelevant categories suggesting that participants who used more indirect verbal or irrelevant strategies experienced more adult sexual victimization.

Finally, the CSSEX categories were correlated with the predictor variables (Table 6). Few significant correlations were observed. The cognitive engagement coping subscale of the ACTS was significantly positively correlated with Aggression suggesting that individuals using more active cognitive styles of general coping after a stressful event were more likely to use aggressive coping in a sexually charged situation. The depersonalization/derealization subscale of the Dissociative Experiences Scale (DES) was significantly negatively related to Escape suggesting that individuals who experienced more of this type of dissociation were less likely to engage in escape behaviors. Likewise, dissociative amnesia was significantly positively correlated with Irrelevant strategies. Lastly, the alcohol composite variable was significantly positively related to the Irrelevant categories. Thus participants with higher levels of dissociative amnesia and alcohol use also endorse more irrelevant coping strategies.

During the coding of the CSSEX it became evident that Irrelevant was being coded for a specific response that was frequently given for Story 2. In particular, a considerable number of women indicated that they would "go ahead and have sex" in this particular story. This particular response was subsequently coded as a dichotomous variable (Story 2 "Have Sex"). This variable was significantly negatively correlated with Direct Verbal total (Table 4) as well as relevant coping strategies total suggesting that woman more likely to say they would have sex on Story 2 presented fewer total strategies and fewer direct verbal strategies overall. Not surprisingly, this variable was also significantly positively correlated with victimization in both adolescence and adulthood indicating that women more likely to say they would "go ahead and have sex" were more likely to have experienced sexual victimization as teens or young adults.

The CSSEX measure was included in the original latent variable model of revictimization. However, given the above findings, there does not appear to be a single measure produced from the CSSEX that captures what the measure was designed to investigate. Additionally, interrater reliability on some of the scales was very low (<.70). Therefore, it was not used as an indicator of coping strategies for the latent variable model.

Latent Variable Path Analysis

The Measurement Model

Prior to conducting the analyses, the manifest variables were examined for normality. Several variables were skewed and demonstrated significant kurtosis. Therefore, several indicator variables were transformed using log 10. This resulted in significantly improved multivariate kurtosis. All variables were then standardized.

The measurement model describes the nature of the relationships between the latent factors and the manifest indicators that measure those constructs. The model investigated in this study consisted of six latent constructs corresponding to the six constructs of the victimization model: child abuse, negative cognitive schemas, dissociation, risky behaviors, coping strategies and sexual victimization. All latent factors were measured by at least two indicator variables.

The measurement model does not include directional paths between the latent factors, but rather allows each latent factor to covary with every other latent factor. It is essentially a confirmatory factor analysis model. While this study proposed two competing theoretical models, they encompass the same six factors. Since all six factors are allowed to covary when estimating the measurement model, the measurement model for the two competing models is

identical. The measurement model was estimated using the maximum likelihood method. The chi-square value for the model was statistically significant, χ^2 (75, N=276) = 302.13, p < .0001. While this suggests that the null hypothesis that the model fits the data should be rejected, the chi-square statistic is very sensitive to sample size and departures from multivariate normality and will often result in rejection of a well-fitting model. However, the other indices also suggested a poor fit to the data: RMSEA=.10; GFI = .88; AGFI = .80.

The SAS procedure CALIS prints several modification indices that can be examined for clues as to how to improve the measurement model including the Wald test which identifies parameters that should possibly be dropped from the model (Hatcher, 1994). This test estimates the change in model chi-square that would result from fixing a given parameter at zero, which, in essence, means eliminating a specific path or covariance from the model. The indicator CopDen (Denial Coping) of the construct Coping Strategies appeared on the Wald test indicating that the variable was not doing a good job of measuring the factor to which it was assigned. Further evidence of this is found by examining the t-tests for significance of the factor loadings. CopDen only loaded .12 on the Coping Strategies construct (t = 1.65, p>.05) while all other factor loadings for Coping Strategies were significant.

Next, the Lagrange multiplier test was examined. This test estimates the reduction in model chi-square that would result if a fixed parameter was freed and allowed to be estimated. The Lagrange multiplier estimates the degree to which chi-square would be improved if a new factor loading or covariance was added to the measurement model (Hatcher, 1994). The largest change in chi-square would result from adding the variable CopDen to the factor Negative Cognitive Schemas.

Thus the two modifications indices suggest that the CopDen indicator was misspecified in this model. However, these indices merely provide suggestions on ways to improve the fit of the data to the measurement model and any changes need to be made consistent with existing theory. It does not make theoretical sense to add the denial coping variable to the Negative Cognitive Schema factor because they are measuring two theoretically different constructs. CopDen is measuring a type of coping that would be considered negative. The three other manifest indicators of the Coping Strategies factor measure positive or more effective coping. Since CopDen does such a poor job measuring the factor it was assigned to and since it does not

make theoretical sense to reassign it to any other factor, it was removed from the measurement model and the revised measurement model (Figure 2) was estimated.

Revised Measurement Model

The revised model yielded an improved fit over the original measurement model: χ^2 (62, N=276) = 137.61, p < .0001. While chi-square was still significant, the ratio of chi-square to degrees of freedom (2.2) approaches the convention of an acceptable fit ratio of 2 (Hatcher, 1994). Additionally, other fit indices suggested an acceptable fit (GFI=.94; AGFI = .89; RMSEA = .07).

Standardized factor loadings for the manifest indicators are presented in Table 8. SAS CALIS provides approximate standard errors for these coefficients which allow large-sample t tests of the null hypothesis that the coefficients are equal to zero in the population. The t scores obtained for the factor loadings have t values from 2.95 – 16.89. All factor loadings were significant (p < .01). This provides evidence of the convergent validity of the indicators (Hatcher, 1994; Anderson & Gerbing, 1988). Composite reliability for each factor is also found on Table 8. It is a measure of the internal consistency of the indicators measuring a given factor and is comparable to coefficient alpha (Hatcher, 1994). Table 8 also includes indicator reliabilities as calculated by the SAS CALIS program as the square of the factor loadings. The composite reliabilities for Dissociation and Negative Cognitive Schema are quite good (.812 and .918 respectively). Coping Strategies, Sexual Victimization and Risky Behaviors are less reliable at .674, .556, and .516 respectively. However, the composite reliability for the Child Abuse factor is quite low at .240. This suggests a problem with this factor's manifest indicators. This may be due in large part to the large number of participants who did not experience any child abuse resulting in zeros for their value for both manifest indicators of this factor. Variance extracted estimates (Fornell & Larcker, 1981) assess the amount of variance that is captured by an underlying factor in relation to the amount of variance due to measurement error (Hatcher, 1994). They are calculated by summing the reliabilities of the indicators and dividing by that sum plus the sum of the error variances of the indicators. Estimates less than .50 indicate that variance due to measurement error is larger than the variance captured by the factor. These estimates are also found on Table 8 and only two factors, Dissociation and Negative Cognitive Schema, meet this criteria. These low composite reliabilities and low variance extracted estimates would suggest that the measurement of the factors could use improvement.

Unfortunately, there were no other manifest indicators to substitute and, therefore, the analyses of the structural models were conducted with the knowledge that there were serious limitations with the indicator variables.

The Structural Models

Model A

Goodness of fit indices for structural Model A appear in Table 9. The GFI and AGFI were acceptable at .93 and .89 respectively. The chi-square/degrees of freedom ratio approached 2 (χ^2 (70, N=276) = 155.83, p < .0001). However, of the 10 causal paths between latent constructs, only four pathways were significant (Figure 4). The path between Child Abuse and Sexual victimization was significant (.56) and the path from Risky Behaviors to Sexual Victimization was significant (.69). There were also significant paths between Child Abuse and Negative Cognitive Schemas and Dissociation (.64 and .56 respectively).

A chi-square difference test was then performed between the revised measurement model and theoretical Model A to test the nomological validity of the theoretical model (Hatcher, 1994). If no significant difference is found than the theoretical model is considered to be successful in accounting for the observed relationships between the latent constructs (Anderson & Gerbing, 1988). The degrees of freedom for this test is the difference between the degrees of freedom for the two models, in this case 8 (70 – 62). The critical chi-square value with 8 df is 26.13 (p<.001). The chi-square difference between the models is 18.22. Therefore chi-square is not significant and the theoretical model gains some support.

Effects on Sexual Victimization

The direct, indirect, and total effects of the latent variables on sexual victimization are shown in Table 10. A variable's direct effect is the portion of its total effect that is independent of other variables in the model whereas the indirect effect is the portion of its total effect that is mediated by other variables in the model. Direct effects of the latent variables on sexual victimization and on each other are displayed in Figure 4. For example, the direct effect of Child Abuse on Sexual Victimization is .56. However, there are also indirect effects of Child Abuse on Sexual Victimization through its effect on Negative Cognitive Schemas, Risky Behaviors and Coping Strategies. Indirect effects were calculated by multiplying the indirect paths to sexual victimization and summing across all indirect routes. Within the model, Risky Behaviors exerted the strongest total effect on Sexual Victimization. Participants who engaged in more consensual

sexual activity and drank more alcohol were more likely to have unwanted sexual experiences in adolescence and adulthood. The only other latent variable to demonstrate a significant effect on Sexual Victimization was Child Abuse. Its total direct and indirect effect was .63. Dissociation, Negative Self Schemas, Coping Strategies and Risky Behaviors were predicted to mediate the relationship between child abuse and sexual victimization. However, the indirect effect through these latent variables was only .07 while the direct effect of CA on sexual victimization was .56. This suggests that the proposed mediational variables accounted for very little of the variance in the prediction of sexual victimization over and above that found in the direct path between sexual abuse and sexual victimization.

Model B

Goodness of fit indices for structural Model B also appear in Table 9. The GFI was .93 and AGFI was .90. The RMSEA was .07 and the chi-square/degrees of freedom ratio approached 2 (χ^2 (71, N=276) = 154.20, p < .0001). However, six of the nine pathways estimated yielded non-significant values. Similar to Model A, the paths from Child Abuse to Negative Cognitive Schema and Dissociation were significant (.80 and .48 respectively). Likewise, the path from Risky Behavior to Sexual Victimization was significant (.61). However, all other pathways were non-significant including the direct path from Child Abuse to Sexual Victimization.

Again, a chi-square difference test was performed to determine the validity of this theoretical model. The difference in degrees of freedom of the two models is 9 and the critical value is 27.87. The difference in chi-square is 16.59 thus this model also receives some support.

Comparison of Model A to Model B

Examination of the fit indices in Table 9 demonstrate that the two theoretical models are very similar with Model B having a very slight advantage over Model A as evidenced in its slightly lower Chi-square and slightly higher AGFI. Additionally, the parsimony ratio of .68 for Model B is slightly better than that for Model A (.67). Finally, the PNFI for Model A was .66 while the PNFI for Model B was .67, again suggesting a slight advantage of Model B over Model A. Lastly, the RNFI follows the above pattern with Model B having a value of .95 to .93 for Model A.

Post Hoc Analyses

Mediators

Structural equation modeling was undertaken in order to examine the theoretical model for sexual victimization incorporating numerous variables organized according to the hypothetical constructs of interest. Given the findings that these latent constructs did not mediate the effects of child abuse on adult victimization, post-hoc analyses were conducted to examine whether any individual variable mediated the effects of child abuse on sexual victimization. According to Baron and Kenny (1986) there are several steps to follow to establish mediation. First, the independent variable (CSA or CPA) must be correlated with the outcome (TeenSV or AdultSV). Second the independent variable must be correlated with the mediator. Third, it must be shown that the mediator affects the outcome. This can be shown by regressing the independent variable and the mediator onto the outcome, in that order. The mediator completely mediates the relationship if the relationship between the independent and dependent variable becomes zero. Partial mediation is considered when the relationship is significantly reduced but does not reach zero.

Both CopDen and CopSS as well as HostWorld were significantly correlated with both the independent variables (CSA and CPA) and the dependent variables (TeenSV and Adult SV). To test the role of these variables as mediators of later victimization, TeenSV and AdultSV were combined into a single variable, SV (sexual victimization), which was the highest level of victimization for the two variables. For both CSA and CPA the proposed mediators resulted in slight reductions in path beta weights but were all still significant. Therefore, none of the manifest indicators mediated the relationship between early abuse and later abuse.

Moderators

Manifest indicators were also tested as possible moderators of the relationship between child abuse and later sexual victimization. To test this relationship, logistic regressions were conducted where CSAComp was entered on the first step, the proposed moderator was entered on the second step, and the interaction was entered on the third step. None of the manifest indicators moderated the relationship between CSA and Sexual Victimization or CPA and Sexual Victimization.

Dissociation

Cloitre et al. (1994) found that retraumatized women in their sample differed from adult assault only women and a control group in their DES scores. In order to see whether similar findings regarding DES scores would be found in this sample, the sample was divided into four groups: Non-Victims, Child Abuse only, Teen/Adult Victimization Only, and Revictimized (defined as any Child Abuse and then any Teen/Adult Victimization) and subjected to analysis of variance. The Anova was significant for DES total as well as for the three subscales: Amnesia, Depersonalization/Derealization and Absorption (Table 11). Examination of the means reveals that the scores increase from Non-Victims to Revictimized. Post hoc multiple comparisons using Dunnet's C for unequal variances revealed that for total DES scores, Amnesia, and Absorption, revictimized women had significantly higher scores as compared to Non-Victims but did not differ significantly from Child Abuse only or Teen/Adult only women despite an incrementally higher score. For Depersonalization/ Derealization, Non-Victims differed from Child Only Victims which also differed from Revictimized.

Negative Cognitive Schematas

The proposed model also suggested that Negative Schemas would mediate the effect of CA on later Sexual Victimization either directly (Model B) or indirectly through Coping Strategies and Risky Behaviors (Model A). While the path from CA to Negative Cognitive Schemas was significant in both models tested, neither model demonstrated a significant path from Negative Schemas to Sexual Victimization. A post hoc Anova similar to that conducted for Dissociation was performed on the subscales of the Negative Schemas factor. A glance at the means (Table 12) shows that they increase from Non-Victim to Revictimized for both the Negative self schemata and affects (NegSelf) subscale and the Hostile World (HostWor) subscale. The Anova for both subscales was significant. Also for both scales, multiple comparisons showed that the Non-Victims group was significantly different than the Teen/Adult Victim group and the Revictimized group while the Child Abuse only group differed from the revictimized group.

Discussion

The purpose of this study was to test two models of sexual victimization using existing theory and research. Using structural equation modeling, the proposed models received some support as evidenced by the fit statistics. However, the latent constructs that were hypothesized

to mediate sexual victimization failed to demonstrate this. For Model A, two of the constructs hypothesized to be related to sexual victimization, Child Abuse and Risky Behaviors, did evidence significant pathways. However, the path from Child Abuse to Risky Behaviors was not statistically significant suggesting that Risky Behaviors (alcohol use and consensual sexual experiences) are independent risk factors for adolescent and adult sexual victimization. Likewise, the paths from Child Abuse to Negative Cognitive Schema and Dissociation were significant but paths from those two constructs to Sexual Victimization were not. For Model B, findings were similar. Paths from Child Abuse to Negative Cognitive Schemas and Dissociation were significant but paths from these two constructs to Sexual Victimization were not significant. Similarly, the path from Risky Behaviors to Sexual Victimization was again significant. However, in Model B, the path from Child Abuse to Sexual Victimization was no longer significant suggesting that when Negative Cognitive Schemas are directly mediating the relationship between Child Abuse and Sexual Victimization the relationship between Child Abuse and Sexual Victimization, seen in Model A, loses statistical significance. This is not entirely surprising given the relatively low correlation between the variables of these two factors. In order to test whether any individual indicator variable might mediate or moderate the relationship between child abuse and later victimization, several post hoc regression analyses were conducted. None of the variables tested proved to be a mediator or moderator. Given the relatively low correlation between the two child abuse variables and TeenSV and AdultSV this is not too surprising.

While the above findings could suggest that the underlying theory regarding sexual revictimization might be faulty, examination of the latent constructs and the manifest indicators of those constructs suggest significant measurement problems. While the measures used to represent the indicators demonstrated acceptable reliability as measured by Cronbach alpha, the composite reliabilities of the latent constructs were, as a whole, not very good. According to Hatcher (1994, p. 255), “it is essential that a group of indicators chosen to measure the same latent construct show a high level of convergent validity. They must all clearly be measuring the same underlying construct”. Only Dissociation and Negative Cognitive Schemas are clearly measuring the same construct with composite reliabilities above .80. However, Sexual Victimization, Coping Strategies, and Risky Behaviors were much lower (range .52 to .67) and the sole exogenous construct, Child Abuse, had a deplorably low composite reliability of .24. No

doubt, these measurement problems significantly affected the results of the analyses and should be taken into account in the conclusions about the support, or lack thereof, for the proposed model.

Child Abuse and Sexual Victimization

In Model A, the path from Child Abuse to Sexual Victimization was significant. This supports previous research that has found that CSA is the most significant predictor of further victimization (Roodman & Clum, in press). However, odds ratios suggest that child abuse is not as strong a predictor of adolescent or adult victimization as has been found in some studies. The present study found that risk for adolescent or adult victimization given the presence of CSA or CPA was 1.84 and 1.55, respectively. Merrill et al. (1999), in her sample of female Navy recruits, found that rape was significantly (4.8 times) more likely if the woman had experienced CSA. Likewise, Himelein et al. (1994) found that women with a history of CSA were 3.5 times more likely to experience attempted rape or rape as compared to women without a history of CSA. In this study the average age of participants was 19 years and the cut off for Child Abuse was 14. Previous research (Roodman & Clum, in press) has demonstrated that lower Child Abuse cut off ages are associated with lower effect sizes for revictimization. In this study revictimization is considerably more severe when examining adolescent to adult revictimization even though the adult time period is often only several months to a year or two for most participants. However, the model studied was assuming negative effects following child abuse, and therefore, isolated child abuse from adolescent victimization.

Dissociation

While the current model did show a significant path from Child Abuse to Dissociation the path from Dissociation to Sexual Victimization was not significant. Cloitre et al. (1994) found that retraumatized women in their sample differed from adult assault only women and a control group in their DES scores. Somewhat similar findings on the DES were found in this sample with Anovas for the overall score as well as the subscales demonstrating a significant difference between victim status groups. While this finding is interesting in that it suggests that the revictimized do have more dissociative symptoms as measured by the DES than non-victims and, in some cases, child-only victims, it does not tell us anything about dissociation as a risk-factor for revictimization.

Two recent studies (Kessler & Bieschke, 1999, Sandberg et al., 1999) also tested whether dissociation might mediate or moderate the link between early and later abuse. These researchers found much the same results as the current study; that dissociation as measured by currently available instruments fails to moderate or mediate the relationship between early and later abuse. Sandberg et al. (1999) concluded that the DES might not have provided an adequate test of dissociation and that dissociation itself "might have interfered with participants' accurate recall of the unpleasant or coercive nature of certain sexual experiences, thus diminishing the likelihood that they would report having been sexually victimized" (p.135). Kessler & Bieschke (1999) postulated that in their college sample of highly functioning women it is possible that dissociation might worsen "when entering an unsafe situation, as opposed to a clinical group that might function in a dissociative state" (p. 340). Thus they suggest that an instrument that retrospectively assesses dissociation might not capture the type of dissociative state that would increase a person's risk for victimization. The results of the current study in combination with these two recent studies suggest that assessing for dissociation using existing methods is not effective. However, this does not mean that dissociation should be abandoned as a possible risk factor, but rather, novel ways of assessing the type of dissociation that might lead to sexual assault need to be created and tested.

Coping Strategies

In order to address the need for measures that more specifically tap into risk factors that might lead to more sexual victimization, a measure of coping that was specific to sexually charged situations was created for this study. Unfortunately, the scales that resulted from considerable coding of these questionnaires did not yield the type of results expected. Initially the responses on this questionnaire were going to be coded as either relevant or irrelevant coping. Examination of the pilot data showed that the types of relevant responses seemed to be logically organized into several categories. It was expected that based on the numbers and types of responses in each category a profile of "good, effective coping" and "bad, ineffective coping" would emerge and that "good coping" would be coincident with less child abuse, less sexual victimization, and thus, less revictimization. As responses were coded, it seemed subjectively clear when participants were listing a comprehensively "good, effective coping" response vs. a less effective response. Good responses were characterized by a variety of statements including direct verbals such as "I don't want to", indirect verbals such as "I have a boyfriend already",

preventive behaviors such as “return to the party”, as well as aggressive or escaping strategies. Less effective coping seemed to have slightly more irrelevant responses such as “Go ahead and sleep with him”. However, the interrater reliability for the coding of participants’ responses was marginal, at best. Secondly, it is possible for two participants to end up with equal numbers of responses in each category and yet, have different qualities in terms of how effective the overall strategies might be. In an effort to make the coding purely objective, it may have lost the ability to reflect that type of coping it was to represent. Despite the disappointing results from this questionnaire, there may be other ways to analyze the data that might be helpful in isolating coping strategies that are more effective for avoiding unwanted sexual contact. While previous studies have shown that disengaged forms of coping are more often used by revictimized women (Proulx et al., 1995) and when dealing with sexual abuse as opposed to other stressors (Coffee et al., 1996), neither examined coping as it relates to situations in which unwanted sexual contact is likely to occur. If the end goal of this type of research is to assist with prevention efforts, especially for college aged women, the search for a coping instrument that is specific to the situations in which unwanted sexual victimization occurs needs to continue.

This study also utilized a measure of general coping, the ACTS, which asked participants to describe their coping to a particular stressor in their life. The path coefficients in both models tested that led to and from the general Coping Strategies factor were not significant. Two of the four variables, Denial and Social Support were significantly correlated with CSA and CPA and Sexual Victimization and could, therefore, be tested as mediators of that relationship. While regression analyses demonstrated a slight decrease in the strength of the relationship between CA and later Sexual Victimization, it was not significant enough to consider these coping strategies as mediators or risk factors for revictimization.

Risky Behaviors

The latent construct of Risky Behaviors was comprised of consensual sexual experience and alcohol consumption. In both models the path from Child Abuse to Risky Behaviors was not significant while the path from Risky Behaviors to Sexual Victimization was significant. This is not surprising given that both manifest variables were significantly correlated with both TeenSV and AdultSV while neither was correlated with CSA or CPA. For this reason, they could not be examined independently as mediators. However, greater alcohol use and greater consensual experience are related to both adolescent and adult victimization in this sample and this confirms

prior research that suggest that these two variables may be independent risk factors for sexual victimization (Merrill et al., 1999).

Negative Cognitive Schemas

It was hypothesized that the more negative one's self-views and the more negative one's views about the world, the more victimization. While both models demonstrated significant paths from Child Abuse to the latent construct Negative Cognitive Schemas, Negative Cognitive Schemas did not evidence a significant pathway to Sexual Victimization. Model A proposed that Negative Cognitive Schemas would also lead to more Risky Behaviors and less good Coping Strategies and this was also not found.

Recommendations and future directions

Ideally, this study would have been conducted exclusively with women with a history of CSA and the model could have been a test of revictimization as opposed to victimization. The current study found that 18% of the 276 participants experienced some form of CSA before the age of 14. In order to have sufficient numbers to conduct latent variable path analysis in which all participants had experienced CSA, a sample size of approximately 1500 students would have been needed. As interest in this area continues and more models are proposed, analyses of this magnitude will be needed to better understand the phenomenon. In fact, a recent paper by Gold, Sinclair and Balge (1999) proposed the first comprehensive theoretical model of sexual revictimization. In their model they also begin with CSA which they indicate leads to a specific attachment style, psychological impact, and attribution and coping. These in turn lead to hyperfemininity, number of sex partners, and delinquency and drug use. These variables then lead to revictimization.

Structural equation modeling remains a powerful tool to test such a model, but large numbers of participants would be needed and more promising results might be found if model testing proceeded after an adequate measurement model is established. Ideally, this would require using either two samples, one to develop an acceptable model and the second sample to test the structural portion, or a very large sample that could be divided in half for the same purpose. Additionally, it is recommended that all latent factors have at minimum three manifest indicators, but preferably more.

One interesting finding in this study was that many students experienced events in adolescence and adulthood that met the legal definition of rape but did not acknowledge the

event as rape. This phenomenon has been found in previous research (Koss & Dinero, 1989). It would be helpful in future studies to examine how this lack of acknowledgment may or may not place women at increased risk of additional victimization as compared to women who have acknowledged that their experiences were rape.

One unfortunate finding in this study was that 37% of the participants reported sexual victimization since they turned 18 or since the beginning of college (whichever came first). Of first year students, 23% had experienced sexual victimization. Data for this study was collected towards the end of the fall semester which means that 58 of 276 women experienced some sexual victimization in just the first three or four months of their college career. This suggests the imperative need for early and targeted intervention for 1st year students at the very beginning of the fall semester.

This study attempted to find potential risk factors for revictimization but failed to do so. Other studies attempting to isolate risk factors have also yielded scant evidence of risk factors other than CSA (Roodman & Clum, in press). Perhaps Merrill et al. (1999) had a valid point about why this search is proving so difficult when they write, "keep in mind that most – indeed, some would posit *all* – of the variance in women's sexual victimization and revictimization resides in the perpetrator and not the victim" (p. 223).

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Table 1

Means, Standard Deviations, Internal Consistency Reliability (N=276)

Variable	M	SD	α
Abuse			
Adult Victimization (AdultSV)	.73	1.06	
Adolescent Victimization (TeenSV)	.96	1.23	
Child Sexual Abuse (CSACOMP)	5.04	16.53	
Child Physical Abuse (CPACOMP)	5.47	10.89	
Trauma Constellation Id. Scale (TCIS)			.90
Negative Self Schema (NegSelf)	57.74	24.20	.93
Hostile World (HostWorld)	30.93	15.07	.91
Dissociation (DES)	16.49	11.13	.92
Amnesia (DissAmn)	7.46	8.86	.74
Derealization/Deperson. (DissDep)	5.70	8.34	.75
Absorption (DissAbsorp)	29.93	19.49	.87
Coping (ACTS)			.90
Distraction (CopDist)	21.81	10.85	.88
Cognitive Engagement (CopCog)	13.46	9.39	.85
Denial (CopDen)	17.14	9.56	.85
Social Support (CopSoSu)	14.34	7.33	.88
Risky Behaviors			
Alcohol Use (AlcComp)	26.43	32.23	
Consensual Sex (SexComp)	5.63	3.97	

Table 2

Zero-Order Correlations Between Abuse Variables, Negative Cognitive Schematas, Coping, Dissociation and Risky Behaviors

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Adult SV	---														
2. Teen SV	.385***	---													
3. Child SA	.126*	.180**	---												
4. Child PA	.139*	.139*	.155**	---											
5. Neg self view	.235***	.294***	.097	.183**	---										
6. Hostile World	.206**	.226***	.143*	.193**	.847***	---									
7. Diss Amnesia	.185**	.171**	.042	.108	.262***	.244***	---								
8. Diss Dep/Der	.115	.184**	.083	.044	.291***	.314***	.567***	---							
9. Diss Absorp.	.123*	.113	.113	.065	.300***	.286***	.600***	.584***	---						
10. Cop Distract.	.010	-.012	-.095	-.087	-.053	-.078	.019	.001	.076	----					
11. Cop Cog	-.078	-.052	-.036	-.035	-.087	.061	.041	.160**	.151*	.483***	---				
12. Cop Denial	.234***	.349***	.135*	.123*	.527***	.455***	.199**	.251***	.266***	.216***	.143*	---			
13. Cop SoSu	-.057	-.176*	-.155*	-.141*	-.307***	-.346***	-.127*	-.092	-.116	.310***	.398***	-.320***	---		
14. Alcohol	.348***	.221***	-.094	.070	.085	.061	.014	-.067	.066	.048	-.037	.070	.063	----	
15. Cons Sex	.237***	.296***	.067	-.001	.070	.057	-.006	.061	.006	.058	-.007	.149*	.037	.377***	----

Note. N = 276 for all analyses. *p < .05. **p < .01. ***p < .001. Abbreviations: SV = sexual victimization; SA = sexual abuse; PA = physical abuse; Diss = Dissociative; Cop = Coping; Cog = Cognitive Engagement; SoSu = Social Support; Cons = consensual.

Table 3

Odds Ratios of Childhood/Adolescent Abuse by Adolescent/Adult Victimization Comparing Dichotomous (yes/no) Variables to Each Other Using Chi-Square

	Adol. Vict.	Adult Vict.	Adol. or Adult Vict.
CSA	1.77	1.41	1.75
CPA	1.74*	1.62*	2.23**
CSA or CPA	1.84*	1.55	2.19***
Adol. Vict.	---	4.92***	---
CSA or Adol. Vict.	---	4.14***	---

Note. N = 276 for all analyses. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 4

Zero-Order Correlations Between Coping Strategies in Sexually Charged Situations Categories

Totals	Direct Verbal	Indirect Verbal	Emot. Coping	Aggres-sion	Escape	Preven. Behav.	Irrel-evant
Direct Verbal	---						
Indirect Verbal	.254***	---					
Emotional Coping	-.004	.063	---				
Aggression	.105	.080	-.070	---			
Escape	.110	-.003	.041	.213***	---		
Preventive Behavior	.110	.037	-.014	.153**	.074	---	
Irrelevant	-.058	-.047	.059	-.030	-.009	.010	---
Story 2 “Have Sex”	-.164**	-.082	-.028	-.052	-.043	-.030	.399**

Note. N = 276 for all analyses. *p < .05. **p < .01. ***p < .001.

Table 5

Zero-Order Correlations Between Coping Strategies in Sexually Charged Situations Categories and Abuse Variables

Totals	Child Physical Abuse	Child Sexual Abuse	Teen Sexual Victimiz.	Adult Sexual Victimiz.
Direct Verbal	.001	-.052	-.004	-.012
Indirect Verbal	.068	-.002	.009	.124*
Emotional Coping	.026	.054	.161**	.031
Aggression	.003	.038	-.157**	-.095
Escape	.053	.002	-.063	.025
Preventive Behavior	.084	-.044	.043	-.009
Irrelevant	-.026	.168**	.195**	.152*
Story 2 “Have Sex”	.046	-.061	.177**	.180**

Note. N = 276 for all analyses. *$p < .05$. **$p < .01$.

Table 6

Zero-Order Correlations Between Coping Strategies in Sexually Charged Situations Categories and Predictor Variables

Totals	Direct Verbal	Indirect Verbal	Emot. Coping	Aggres-sion	Escape	Preven. Behav.	Irrel-evant
Negative Self	.009	-.033	.046	-.037	.004	-.069	.077
Hostile World	-.009	.009	.021	.021	-.003	.001	.079
Diss. Amnesia	.104	.020	-.042	-.070	-.114	.033	.126*
Diss.Deper/Derealiz.	.019	.033	-.023	-.053	-.163**	.013	.089
Diss. Absorption	-.016	-.046	-.021	-.001	-.106	-.042	.083
Coping Distraction	-.063	.008	-.074	.083	-.063	.034	-.016
Coping Cog. Engage	.000	.002	-.021	.121*	-.039	-.032	-.047
Coping Denial	.037	.008	-.105	.000	.037	.057	-.114
Coping Soc. Supp.	-.056	.072	-.009	.055	.026	-.094	-.105
Alcohol Use	.026	.005	-.080	-.052	.009	.011	.148*
Consensual Sex	-.111	.075	.030	-.081	-.010	-.007	.108

Note. N = 276 for all analyses. *p < .05. **p < .01.

Table 7

Information Needed to Compute Composite Reliability and Variance Extracted Estimates

Revised Measurement Model

Construct and Indicators	Standardized Loading	Indicator Reliability[a]	Error Variance[b]
Sexual Victimization			
Adolescent	.630	.397	.603
Adult	.611	.373	.627
Coping Strategies			
Distraction	.641	.411	.589
Denial (removed)			
Cognitive Engage.	.739	.547	.453
Social Support	.529	.280	.720
Risky Behaviors			
Alcohol Use	.546	.298	.702
Consensual Sex	.633	.400	.600
Dissociation			
Amnesia	.756	.572	.428
Deperson./Derealiz.	.744	.554	.436
Absorption	.799	.638	.362
Negative Cognitive Schema			
Hostile World	.893	.797	.203
Negative Self View	.948	.899	.101
Child Abuse			
Sexual Abuse	.271	.074	.926
Physical Abuse	.464	.216	.784

[a] Calculated as the square of the standardized factor loading.
[b] Calculated as 1 minus the indicator reliability.

Table 8

Properties of the Revised Measurement Model

Construct and Indicators	Standardized Loading	t	Reliability	Variance Extracted Estimate
Sexual Victimization			.556[a]	.385
Adolescent	.630**	8.99	.397	
Adult	.611**	8.78	.373	
Coping Strategies			.674[a]	.413
Distraction	.641**	8.94	.411	
Cognitive Engage.	.739**	9.90	.547	
Social Support	.529**	7.65	.280	
Risky Behaviors			.516[a]	.349
Alcohol Use	.546**	7.08	.298	
Consensual Sex	.633**	7.71	.400	
Dissociation			.812[a]	.588
Amnesia	.756**	13.21	.572	
Deperson./Derealiz.	.744**	12.96	.554	
Absorption	.799**	14.09	.638	
Negative Cognitive Schema			.918[a]	.848
Hostile World	.893**	15.76	.797	
Negative Self View	.948**	16.89	.899	
Child Abuse			.240[a]	.145
Sexual Abuse	.271*	2.95	.074	
Physical Abuse	.464**	3.49	.216	

* $p < .01$. ** $p < .001$. [a] denotes composite reliability.

Table 9

Goodness of Fit and Parsimony Indices for the Sexual Victimization Model

	Combined Model								Structural Model
Model	Chi-Square	df	GFI	AGFI	RM-SEA	NFI	PR	PNFI	RNFI
Null Model	1290.4	105							
Uncorrelated Factors	293.56	77	.86	.81	.10	.74	.73	.63	.00
Original Measurement Model	302.13	75	.88	.80	.10	.77	.71	.55	--
Revised Measurement Model	137.61	62	.94	.89	.07	.88	.59	.60	1.00
Theoretical Model A	155.83	70	.93	.89	.07	.86	.67	.66	.93
Theoretical Model B	154.20	71	.93	.90	.07	.86	.68	.67	.95

Note: N = 276. GFI = goodness of fit index; AGFI = adjusted goodness of fit index; RMSEA = root mean square error of the approximation; NFI = normed-fit index; PR = parsimony ratio; PNFI = parsimonious normed-fit index; RNFI = relative normed-fit index.

Table 10

Direct, Indirect, and Total Effects of the Latent Variables on Sexual Victimization
Model A

	Direct	Indirect	Total
Child Abuse	.56	.07	.63
Negative Self Schemas	---	.07	.07
Coping Strategies	-.14	---	-.14
Risky Behaviors	.69	---	.69
Dissociation	-.04	---	-.04

Table 11

Post Hoc Comparison of DES Scores

Variable	Victim Group	Mean	SD	F (3, 272)
DES Total	Non Victim	13.00 $_a$	8.31	5.21**
	Child Only	15.61	11.78	
	Teen/Adult Only	17.05	11.74	
	Revictimized	19.63 $_b$	11.69	
DES Amnesia	Non Victim	4.87 $_a$	6.65	4.60**
	Child Only	6.70	7.94	
	Teen/Adult Only	7.91	10.46	
	Revictimized	9.83 $_b$	9.21	
DES Depersonalization/ Derealization	Non Victim	3.23 $_a$	5.18	4.13**
	Child Only	5.00 $_b$	8.63	
	Teen/Adult Only	6.87	9.44	
	Revictimized	7.39 $_c$	9.11	
DES Absorption	Non Victim	25.06 $_a$	16.51	2.80*
	Child Only	29.68	22.11	
	Teen/Adult Only	30.77	18.77	
	Revictimized	33.74 $_b$	20.35	

N = 276, Non Victim (N=77), Child Only (N=47), Teen/Adult Only (N=65), Revictimized (N=87); *p < .05. **p < .01. For each variable, means in the same column that do not share the same subscript differ from each other at p<.05 in the Dunnett's C multiple comparison test for unequal variance.

Table 12

Post Hoc Comparison of Negative Schemata Scores

Variable	Victim Group	Mean	SD	F(3,272)
Negative Self Schemata[1] And Affects	Non Victim	48.51 $_{a}$	18.89	9.69***
	Child Only	52.89 $_{ab}$	23.06	
	Teen/Adult Only	59.60 $_{b}$	25.08	
	Revictimized	67.13 $_{c}$	24.99	
Hostile World[2]	Non Victim	25.08 $_{a}$	12.04	8.67***
	Child Only	29.66 $_{ab}$	15.50	
	Teen/Adult Only	31.31 $_{b}$	14.72	
	Revictimized	36.53 $_{c}$	15.64	

N = 276, Non Victim (N=77), Child Only (N=47), Teen/Adult Only (N=65), Revictimized (N=87); ***$p < .001$. For each variable, means in the same column that do not share the same subscript differ from each other at $p<.05$ in the [1]Dunnett's C multiple comparison test for unequal variance or the [2]Tukey HSD multiple comparison test for equal variance.

Figure 1. Proposed Model A of Sexual Victimization

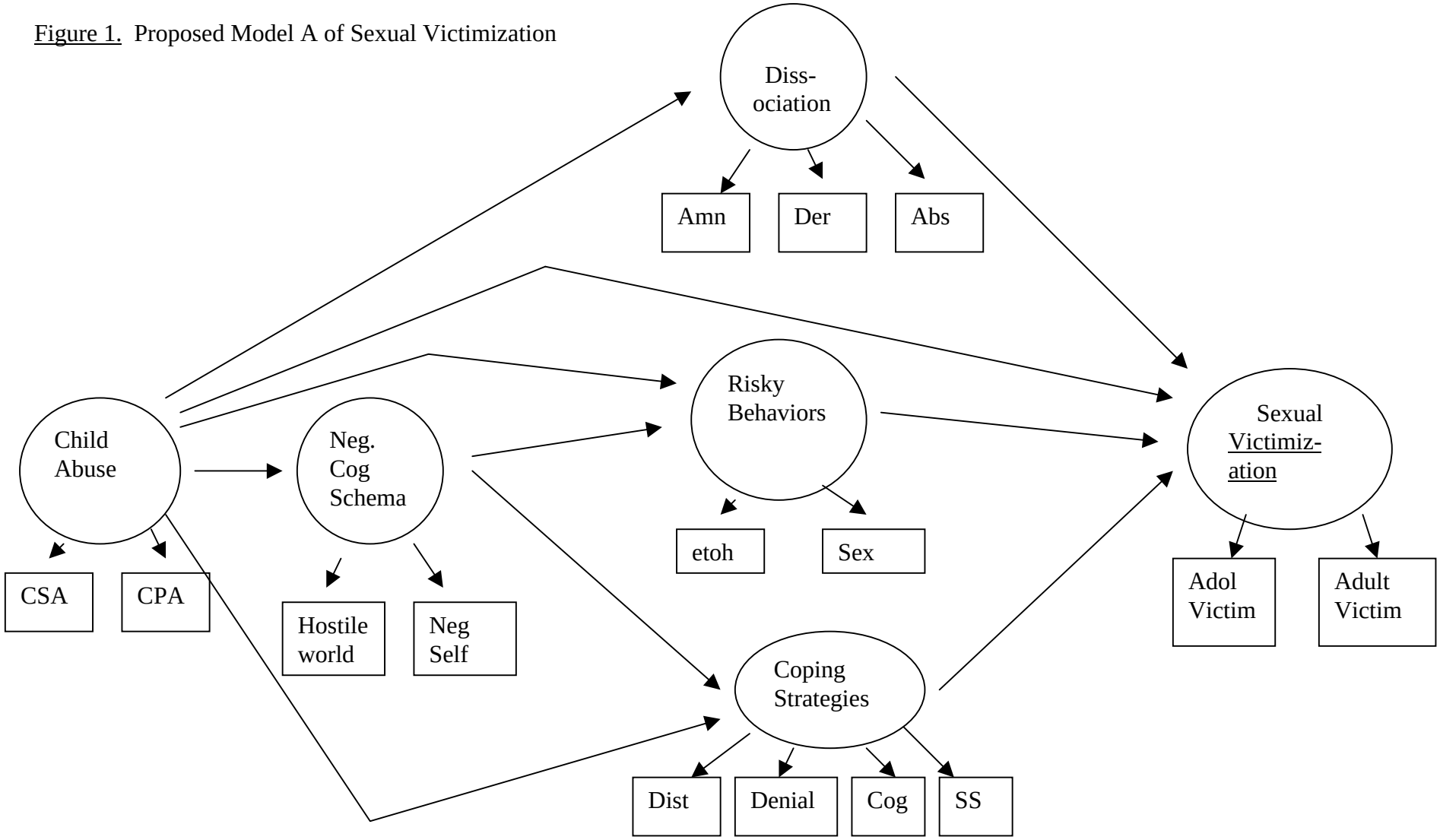


Figure 2. Revised Model A of Sexual Victimization

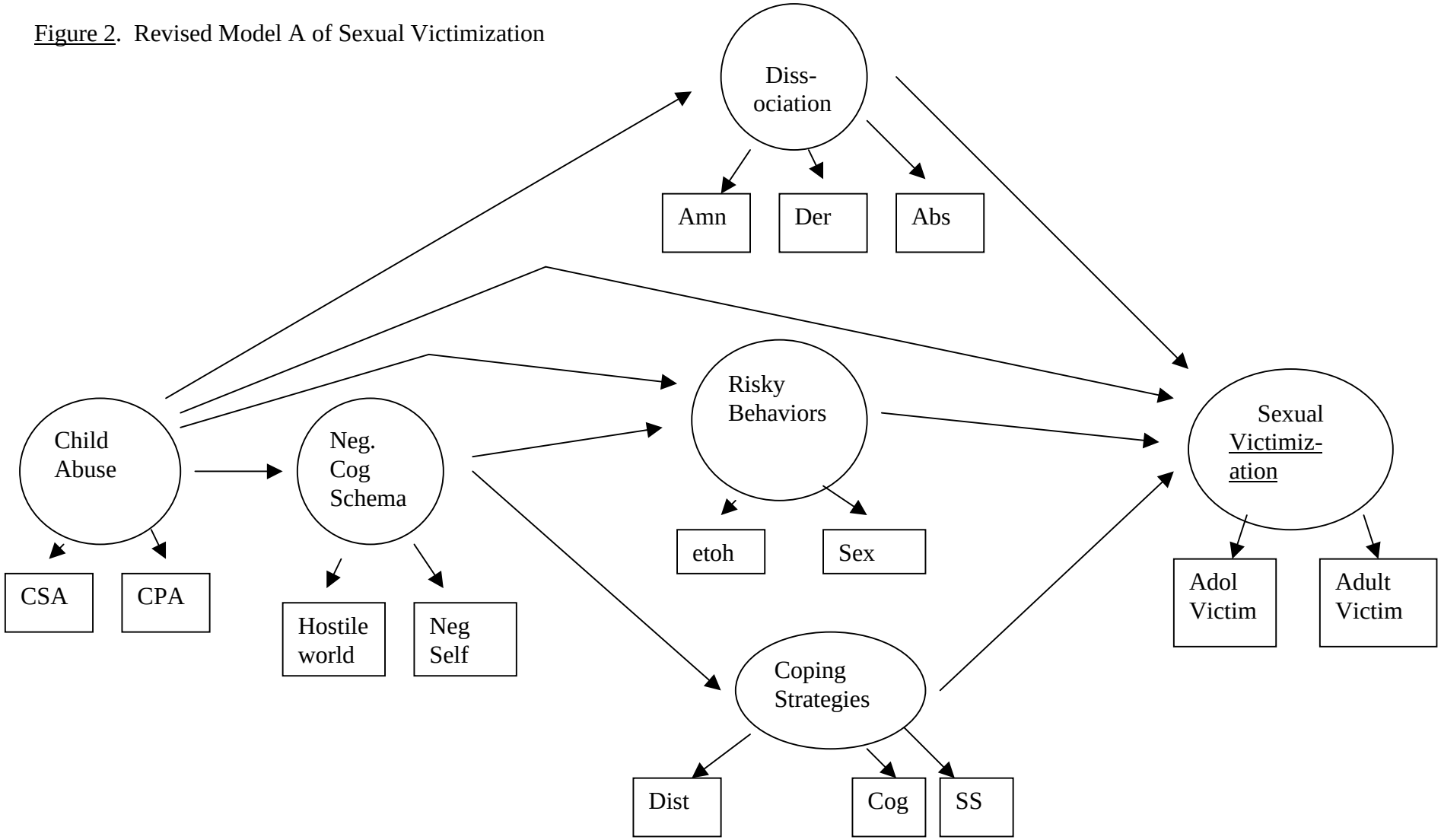


Figure 3. Alternative Model B of Sexual Victimization

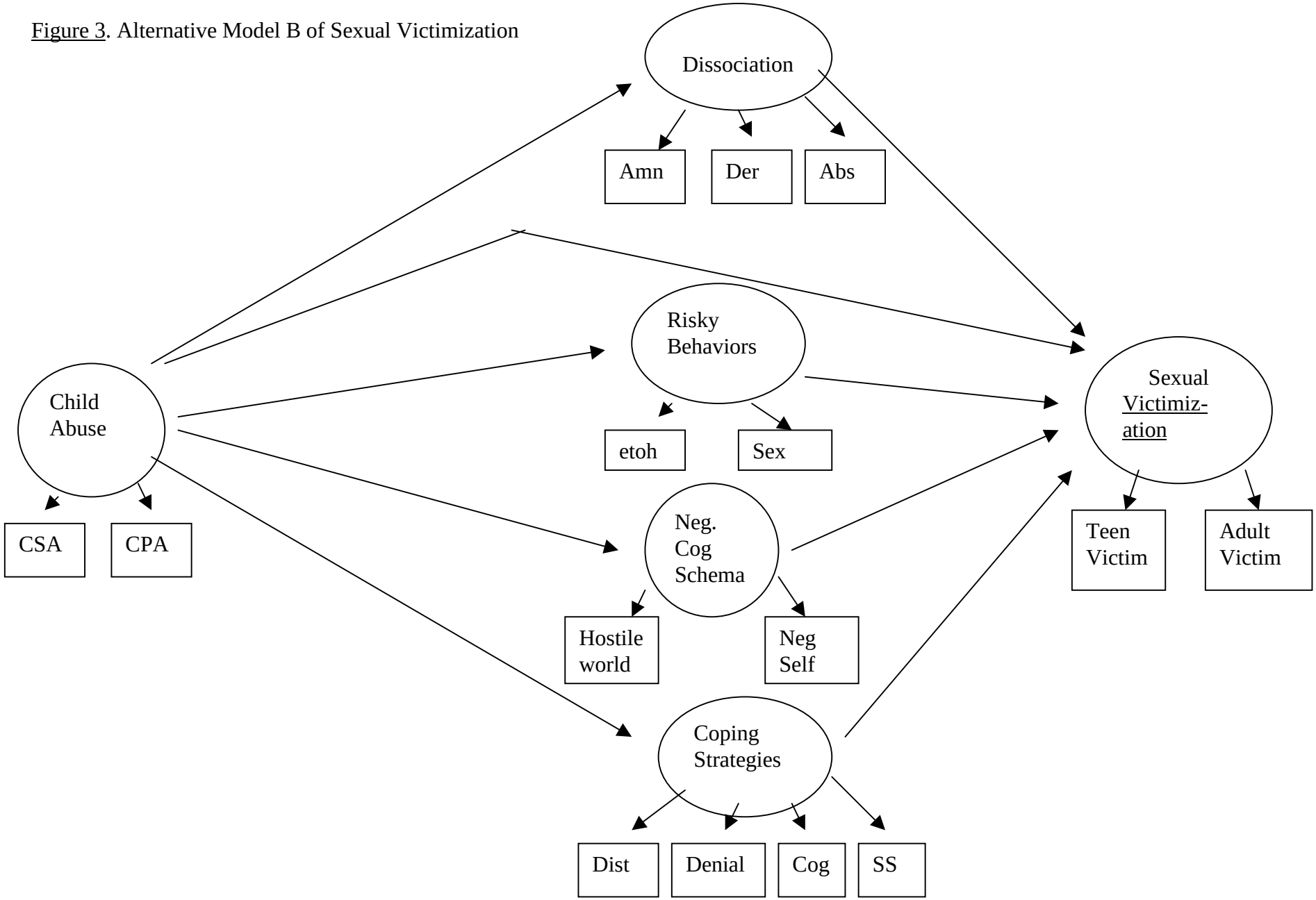
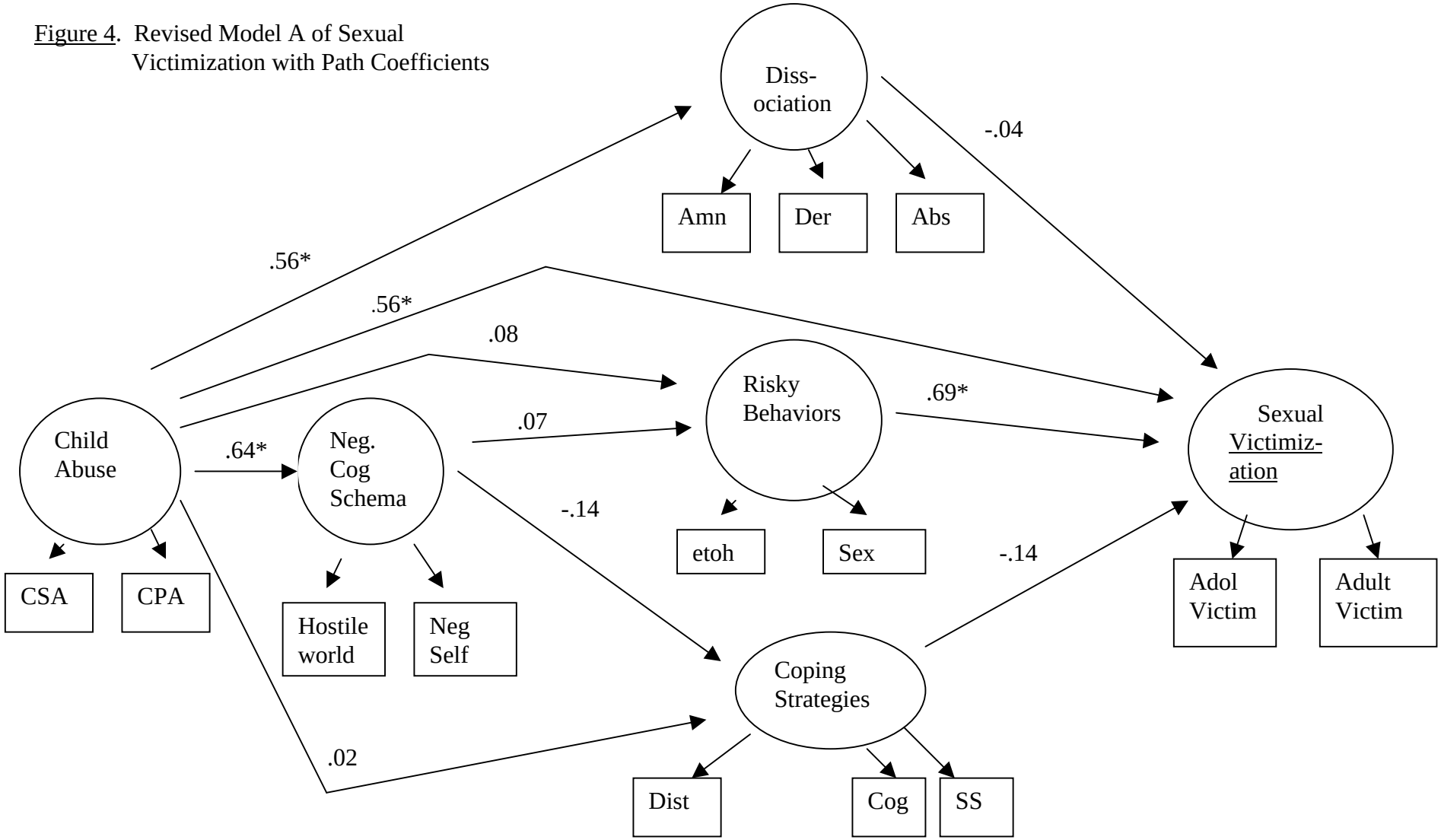
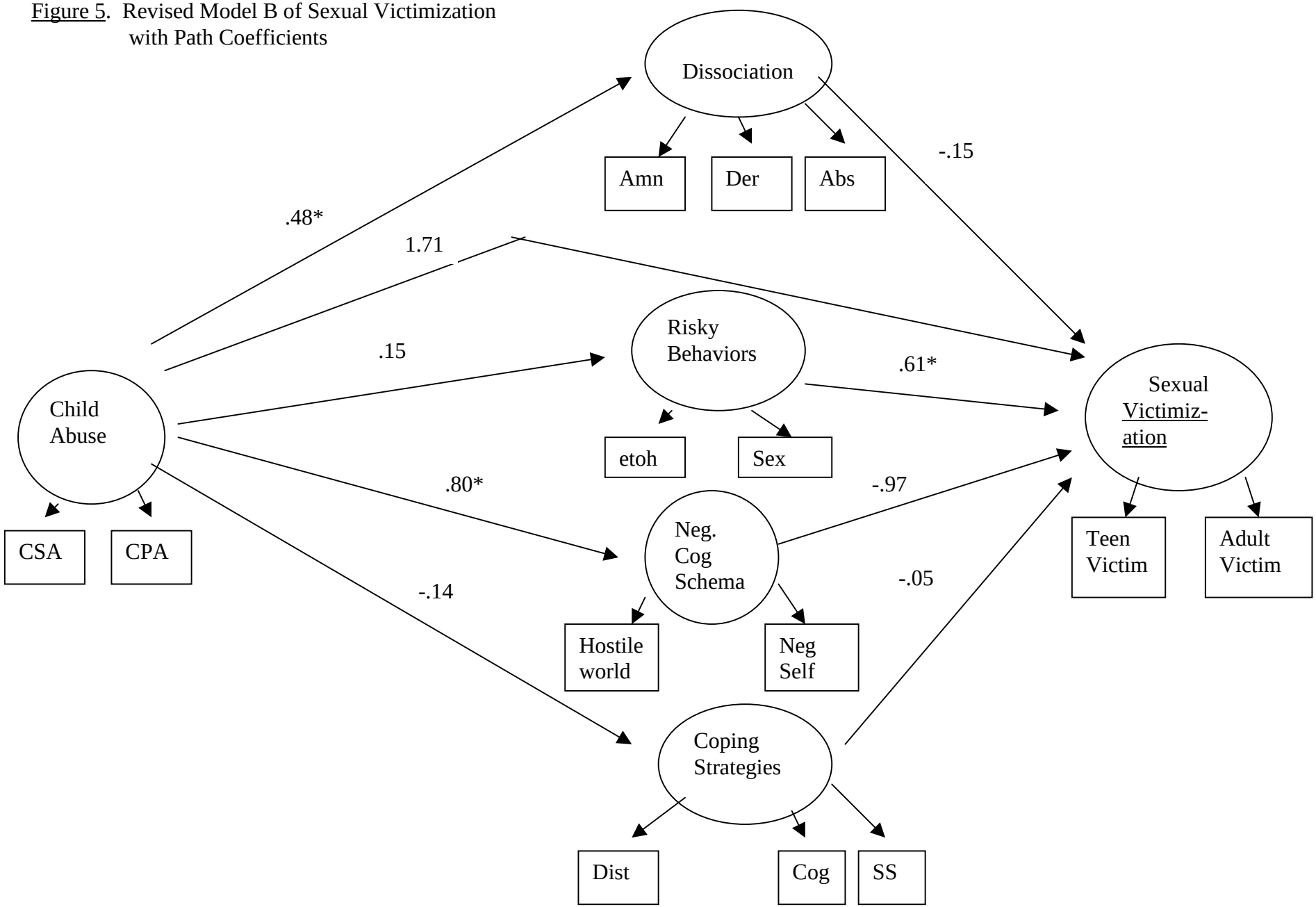


Figure 4. Revised Model A of Sexual Victimization with Path Coefficients



* denotes pathway is significant at p<.05.

Figure 5. Revised Model B of Sexual Victimization with Path Coefficients



Appendix A

Introduction to the Study*

Thank you for participating in this study on lifetime experiences. We want you to feel very comfortable in answering the questionnaires in this study as honestly as possible. Therefore, this study is not only confidential, but anonymous. There is an identification number on your questionnaires, but it is not matched to anything that has your name on it. Therefore, you can feel comfortable that no one, including the investigator, will know the identity of any of the participants.

As you are filling out the questionnaires, please keep in mind that your answers are very important to us. Please answer honestly and completely. You may find that not all of the questions pertain to you personally. However, there is almost always a "not applicable" or "never" response that you can give, so please answer EVERY QUESTION..

If you have any questions I will be happy to answer them. I will be right outside the room so that you can ask your questions without being overheard by other participants. Also, if you feel the need to leave the room for a break or feel unwilling to finish the questionnaires at any time you are allowed to do so. If you do leave the room before completing the questionnaires, the investigator will check with you privately to determine your reasons for leaving.

The first sheet after this one is a consent form that describes the study further. This is yours to take with you. The 2nd questionnaire involves some writing and will probably take the longest to complete. Please right clearly. The remaining questionnaires only involve circling a number to correspond with your answer. The pages in this study have not been stapled so that you can turn the pages more easily. The pages are numbered consecutively on the bottom so that you can put them in order if necessary.

When you are finished please check your packet to be sure that you have completed all questionnaires. The last three sheets in the packet marked "Please Take this with You" are also for you to take. The first two sheets are the debriefing material for the study and the third sheet is a list of referral information should you want to seek any kind of help following the completion of this study. There is a box by the door for you to place your packet of questionnaires in. Please put them face down in the box.

After you have turned in your questionnaires, I will sign your card so that you will receive credit for this experiment. Thank you for your participation.

*This script to be read to participants and a copy will appear at the beginning of their questionnaire packet.

Demographics and Drinking

1. Age _____

2. Current year in school
   a. 1st year
   b. 2nd year
   c. 3rd year
   d. 4th year
   e. other: _____

3. Are you from the US?

   a. yes
   b. no; if no, where are you from? _____

4. Race

   a. Caucasian
   b. African-american
   c. Hispanic
   d. Asian-american
   e. Other: _____

5. Would you consider yourself to be primarily:

   a. straight
   b. gay
   c. bisexual

6. Where do you live?

   a. all women residence hall
   b. co-ed residence hall
   c. sorority house
   d. apartment
   e. other: _____

7. Are you…

   a. single/never married
   b. cohabitating
   c. married
   d. divorced/separated

8. If single, are you….
   a. not currently dating
   b. dating casually
   c. dating exclusively

9. How often do you drink alcohol? (circle one)
   a. everyday
   b. 5 -6 days a week
   c. 3 -4 days a week
   d. 1 - 2 days a week
   e. 2 - 3 times a month
   f. once a month
   g. rarely (once every 6 months)
   h. never (Go on to the next page)

10. When you drink alcohol, how much do you normally drink? **Remember: 1 drink = 1 beer or 1 glass of wine or 1 shot**
    a. 1 - 2 drinks
    b. 3 - 4 drinks
    c. 5 - 6 drinks
    d. 7 - 8 drinks
    e. 9 - 10 drinks
    f. more than 10

11. When you drink the amount specified above, over how much time do you consume those drinks?
    a. 1 hour
    b. 2 hours
    c. 3 hours
    d. 4 hours
    e. 5 hours
    f. 6 or more

12. My weight is approximately: _____

13. In the last month, how many times have you been drunk? ____ passed out? ___

Coping Strategies

Read each story below. The story is told as though the woman in the story is you[1]. After you read story #1, you are asked to rate how anxious you would be. Then you are asked to list all the things you might do in this situation. Please take your time to list all of the things you can possibly think of that you might do. After you have finished story #1 go on to the next story until you have completed all of the stories.

Story #1

You are at a bar and meet a guy you know from class. You talk to him for awhile and are enjoying yourself. It gets late and you say you are going to leave. He offers to walk you home and you accept. You think he may be interested in more than just walking you home. You really are tired and just want to go home.

How anxious would you be in this situation? (circle one number)

0	**1**	**2**	**3**	**4**	**5**	**6**
not at all anxious			some-what anxious			extre-mely anxious

List all the things you might do in this situation.

____ 1. _____

_____

____ 2. _____

_____

____ 3. _____

_____

____ 4. _____

_____

____ 5. _____

_____

____ 6. _____

_____

[*] If you are not involved in heterosexual dating, please answer the questions as though the situation were happening with a dating partner of the same sex.

Story #2

You have just gone out on a date with a guy you have been seeing for awhile who you really like. You haven't had sex with him and still aren't sure you are ready to. However, you do like kissing him and have fooled around a lot in the past. Tonight after your date you are making out on his bed and he starts removing your clothes. He tells you that he is so "hot" that he just has to have you now.

How anxious would you be in this situation? (circle one number)

0	**1**	**2**	**3**	**4**	**5**	**6**
not at all anxious			some-what anxious			extre-mely anxious

List all the things you might do in this situation.

____ 1. _____

_____

____ 2. _____

_____

____ 3. _____

_____

____ 4. _____

_____

____ 5. _____

_____

____ 6. _____

_____

Story # 3

You are at a party with your friends. A guy you are sort of friends with is paying a lot of attention to you which you are enjoying. You are attracted to him and he kisses you and you kiss him back. He invites you to go into one of the back bedrooms and you agree. However, when you get into the room he becomes very aggressive and starts to remove your clothes immediately. You are starting to feel unsure about your decision to be alone with him.

How anxious would you be in this situation? (circle one number)

0	**1**	**2**	**3**	**4**	**5**	**6**
not at all anxious			some-what anxious			extre-mely anxious

List all the things you might do in this situation

____ 1. _____

_____

____ 2. _____

_____

____ 3. _____

_____

____ 4. _____

_____

____ 5. _____

_____

____ 6. _____

_____

Story #4

You are at a party and have been drinking. A guy you have had a crush on is paying a lot of attention to you which you are enjoying. He suggests leaving the party together and you agree. He takes you back to his deserted apartment and you begin making out. You think he is being a bit too aggressive and ask him to slow down. He says it is "too late" to slow down and continues to undress you. You tell him to "stop" and that you want to go home and that you don't want to have sex with him. He says "too bad" and continues.

How anxious would you be in this situation? (circle one number)

0	**1**	**2**	**3**	**4**	**5**	**6**
not at all anxious			some-what anxious			extre-mely anxious

List all the things you might do in this situation:

____ 1. _____

_____

____ 2. _____

_____

____ 3. _____

_____

____ 4. _____

_____

____ 5. _____

_____

____ 6. _____

_____

Story #5

You are at a party with some friends and it is getting late. You look for your friends but can't find them and someone says they probably left. Everyone starts leaving and soon you are alone with a guy that lives there that you don't know very well. You start to feel uncomfortable and get up to leave but he blocks your path and pushes you down on the couch. You try to get up but he says you "must" stay and begins undressing you. You tell him to stop and begin yelling. He tells you no one will hear you and keeps going.

How anxious would you be in this situation? (circle one number)

0	**1**	**2**	**3**	**4**	**5**	**6**
not at all anxious			some-what anxious			extre-mely anxious

List all the things you might do in this situation:

____ 1. _____

_____

____ 2. _____

_____

____ 3. _____

_____

____ 4. _____

_____

____ 5. _____

_____

____ 6. _____

_____

Story #6

You are alone in your apartment reading for a class. You start to have a strange feeling and you look up from your book and a young man you don't know is standing in the doorway. He tells you to take your clothes off.

How anxious would you be in this situation? (circle one number)

0	**1**	**2**	**3**	**4**	**5**	**6**
not at all anxious			some-what anxious			extre-mely anxious

List all the things you might do in this situation:

____ 1. _____

_____

____ 2. _____

_____

____ 3. _____

_____

____ 4. _____

_____

____ 5. _____

_____

____ 6. _____

_____

Confidence Questionnaire

If you look on the previous pages, you will notice that before each number there is a small space.

____ 1. _____

_____

____ 2. _____

_____

Please go back through each story and indicate in the space before the number, how confident you are that you could do the thing you wrote about. Use the following scale to indicate how confident you feel. You can use any number from 0 to 10 to indicate your level of confidence.

0	1	2	3	4	5	6	7	8	9	10
not at all confident										very confident

DES

See reference for this scale in Reference section (Bernstein & Putnam, 1986).

Child Physical Abuse Survey

This questionnaire has to do with any experiences of physical abuse you had until the age of 18. For each person listed in the chart below please answer the following questions:

1. What happened? (Use code below)
2. How many times did it happen? (Use code below)
3. How old were you when it first happened?
4. How old were you when it ended?
5. How old was the other person when it first happened? (Guess if you are not sure)

Code for what happened

0 = nothing ever happened
1 = hit you really hard
2 = kicked you
3 = punched you
4 = threw you down
5 = stabbed you
6 = other physical act

Code for how many times

0 = never
a = 1 time
b = 2 times
c = 3 - 4 times
d = 5 - 10 times
e = 11-20 times
f = more than 20

Have you ever been physically hurt which resulted in marks, breaks in the skin, bruises, or injury which required medical treatment even if none was received?

If more than one thing happened circle all numbers that apply.

Person	What Happened	How many times	How old were you when it began	How old were you when it ended	How old was the other person
stranger	0 1 2 3 4 5 6	0 a b c d e f			
friend	0 1 2 3 4 5 6	0 a b c d e f			
cousin	0 1 2 3 4 5 6	0 a b c d e f			
brother	0 1 2 3 4 5 6	0 a b c d e f			
sister	0 1 2 3 4 5 6	0 a b c d e f			
birth father	0 1 2 3 4 5 6	0 a b c d e f			
birth mother	0 1 2 3 4 5 6	0 a b c d e f			
step-father	0 1 2 3 4 5 6	0 a b c d e f			
step-mother	0 1 2 3 4 5 6	0 a b c d e f			
foster father	0 1 2 3 4 5 6	0 a b c d e f			
foster mother	0 1 2 3 4 5 6	0 a b c d e f			
grandfather	0 1 2 3 4 5 6	0 a b c d e f			
grandmother	0 1 2 3 4 5 6	0 a b c d e f			
uncle	0 1 2 3 4 5 6	0 a b c d e f			
aunt	0 1 2 3 4 5 6	0 a b c d e f			
other _____	0 1 2 3 4 5 6	0 a b c d e f			

Child Sexual Abuse Survey

This questionnaire has to do with any sexual experiences you had with other people **before the age of 14**. For each person listed in chart below please answer the following questions:

1. What happened? (Use code below)
2. How many times did it happen? (Use code below)
3. Whether any force was used? (Use code below)
3. How old were you when it first happened?
4. How old were you when it ended?
5. How old was the other person when it first happened? (Guess if you are not sure)

Code for what happened	Code for how many times	Code for force
0 = nothing	0 = never	0 = none used
1 = kissing and hugging in sexual way	a = 1 time	1 = psychological coercion
2 = touching parts of body except sex organs in sexual way	b = 2 times	2 = verbal threats
3 = touching sex organs in sexual way	c = 3 - 4 times	3 = physical threats
4 = putting sex organs in the mouth	d = 5 - 10 times	4 = physical force
5 = having sexual intercourse	e = 11-20 times	5 = other
6 = having anal intercourse	f = more than 20	

If more than one thing happened circle all numbers that apply.

Person	What Happened	How many times	Force	How old were you when it began	How old were you when it ended	How old was the other person
stranger	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
friend	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
cousin	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
brother	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
sister	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
birth father	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
birth mother	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
step-father	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
step-mother	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
foster father	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
foster mother	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
grandfather	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
grandmother	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
uncle	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
aunt	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			
other	0 1 2 3 4 5 6	0 a b c d e f	0 1 2 3 4 5			

Sexual Experiences Survey - **Adolescent**

For the following questions, please circle Y for Yes and N for No to indicate whether each item has ever happened to you from the time your **turned 14 until your 18th birthday or the beginning of your first year of college** (whichever came first). If you answer yes to any question, please indicate how many times it has happened.

Between the time you turned 14 until your 18th birthday or the beginning of college (whichever came first), have you ever...		Yes/No	Number of Times
1.	Been in a situation where a man became so sexually aroused that you felt it was useless to stop him even though you did not want to have sexual intercourse?	Y N	
2.	Had sexual intercourse with a man even though you didn't really want to because he threatened to end your relationship otherwise?	Y N	
3.	Had sexual intercourse with a man when you didn't really want to because you felt pressured by his continual arguments?	Y N	
4.	Found out that man had obtained sexual intercourse with you by saying things he didn't really mean?	Y N	
5.	Been in a situation where a man used some degree of physical force (twisting your arm, holding you down, etc.) to try to make you engage in kissing or petting when you didn't want to?	Y N	
6.	Been in a situation where a man tried to have sexual intercourse with you when you didn't want to by threatening to use physical force (twisting your arm, holding you down, etc.) if you didn't cooperate, but for various reason sexual intercourse did not occur?	Y N	
7.	Had sexual intercourse with a man when you didn't want to because he threatened to use physical force (twisting your arm, holding you down, etc.) if you didn't cooperate?	Y N	
8.	Had sexual intercourse with a man when you didn't want to because he used some degree of physical force (twisting your arm, holding you down, etc.)?	Y N	
9.	Been in a situation where a man engaged in sexual acts with you such as anal or oral intercourse when you didn't want to by using threats or physical force (twisting your arm, holding you down, etc.)?	Y N	
10.	Been in a situation where a man tried to have sexual intercourse with you when you were too drunk or under the influence of a drug to stop him. Did sexual intercourse occur?	Y N Y N	
11.	Been raped?	Y N	

Sexual Experiences Survey - **Adult**

For the following questions, please circle Y for Yes and N for No to indicate whether each item has ever happened to you from the time you began college or turned 18 (whichever happened most recently). If you answer yes to any question, please indicate how many times it has happened.

After turning 18 <u>or</u> starting college (whichever happened most recently), have you ever...		Yes/No	Number of Times
1.	Been in a situation where a man became so sexually aroused that you felt it was useless to stop him even though you did not want to have sexual intercourse?	Y N	
2.	Had sexual intercourse with a man even though you didn't really want to because he threatened to end your relationship otherwise?	Y N	
3.	Had sexual intercourse with a man when you didn't really want to because you felt pressured by his continual arguments?	Y N	
4.	Found out that man had obtained sexual intercourse with you by saying things he didn't really mean?	Y N	
5.	Been in a situation where a man used some degree of physical force (twisting your arm, holding you down, etc.) to try to make you engage in kissing or petting when you didn't want to?	Y N	
6.	Been in a situation where a man tried to have sexual intercourse with you when you didn't want to by threatening to use physical force (twisting your arm, holding you down, etc.) if you didn't cooperate, but for various reason sexual intercourse did not occur?	Y N	
7.	Had sexual intercourse with a man when you didn't want to because he threatened to use physical force (twisting your arm, holding you down, etc.) if you didn't cooperate?	Y N	
8.	Had sexual intercourse with a man when you didn't want to because he used some degree of physical force (twisting your arm, holding you down, etc.)?	Y N	
9.	Been in a situation where a man engaged in sexual acts with you such as anal or oral intercourse when you didn't want to by using threats or physical force (twisting your arm, holding you down, etc.)?	Y N	
10.	Been in a situation where a man tried to have sexual intercourse with you when you were too drunk or under the influence of a drug to stop him. Did sexual intercourse occur?	Y N Y N	
11.	Been raped?	Y N	

ACTS

Instructions: Please briefly describe the most stressful event that you have encountered (this should be the same as you identified earlier):

_____

_____

_____

People use a variety of coping strategies to help them deal with stressful events. Thinking of your *most stressful event*, please indicate how often you have used the coping strategies listed below. Using the following scale, please rate how frequently, for the time periods listed, you have practiced or used each strategy. Evaluate your use of all strategies for the first time period before going on to the next time period. When you have finished, you should have placed a number *in all three boxes* following each question.

0 = Never
1 = Seldom
2 = Occasionally
3 = Frequently

	During or Immediately After	Ever	Currently
1. When I felt myself begin to get anxious, I tried to identify triggers in the environment for my anxiety.			
2. When I was bothered by my memories, I engaged in activities around the house.			
3. I didn't let it get to me emotionally.			
4. I reminded myself that the event was not my fault.			
5. I read about the feelings I was having after the event.			
6. I did deep belly breathing to help calm my nerves.			
7. I tried to forget the whole thing			
8. I talked to friends, family, or others about my feelings.			
9. I chose times to think about the details of the event.			
10. I pretended it never really happened.			
11. I listened to radio programs or viewed television programs about people who have gone through events like mine.			
12. I drank to help me forget			
13. I hoped the problem would just go away.			
14. I replaced thoughts of the event with a more pleasant picture in my mind.			
15. I informed friends, family, or others about the event.			
16. When I felt like I was reliving the event, I told myself that though it feels awful, it is not real.			

	During or Immediately After	Ever	Currently
17. When reminded of the event, I focused my energy on my work.			
18. I pushed any reminders of it out of my mind			
19. When the event came into my mind, I let myself think about it.			
20. I talked to others who have experienced similar events to learn how they dealt with it.			
21. I kept my thoughts about it to myself			
22. I engaged in activities that helped me relax.			
23. I tried to look on the bright side of things			
24. I confided in others about the nature of my problem.			
25. I stopped thinking about it so I wouldn't get upset.			
26. When I felt anxious, I looked inside to see how my thoughts related to my anxiety.			
27. I told myself it didn't really happen.			
28. I replaced the bad feelings with good feelings			
29. I chose to enter situations that reminded me of the event.			
30. I found myself wishing for a miracle			
31. I punished myself for letting it happen			
32. I tried to learn about different ways to deal with my responses to the event.			
33. I practiced ways to relax while I was in situations that reminded me of the event.			
34. I asked others for support and encouragement.			
35. I allowed myself set time periods to think about the event.			
36. When upset by my thoughts, I took part in fun activities.			
37. I found myself repeating the same behavior that led to the event			
38. When I had feelings similar to those during the event, I let myself continue to feel them.			
39. I kept my feelings to myself			
40. I actively thought about the event to understand it better.			
41. I practiced ways to relax before entering situations that remind me of the event.			
42. I informed friends, family, or others about how I'm doing with the traumatic event.			
43. I used exercise to help myself forget.			
44. I blamed myself for letting it happen.			
45. I tried to remember the feelings I had during the event.			

	During or Immediately After	Ever	Currently
46. I let myself fall asleep knowing I would probably dream of the event.			
47. I wished someone or something had intervened so the event never happened.			
48. If I found myself feeling bad, I'd just try to think about something pleasant.			
49. I used my imagination to help me relax when something reminded me of the event.			
50. When feeling like the event was happening again, I let people around me know what was happening.			
51. I wished I had the foresight to have avoided the whole thing.			
52. I'd do things to myself that I knew would only make things worse.			
53. When I was fearful, I asked myself what scared me and tried to determine how dangerous that thing really was.			
54. I convinced myself that it really wasn't so bad			
55. I read, watched television, or listened to music when bothered by thoughts of the event.			
56. I tried to remember parts of the event where I had blank spots.			
57. I injured myself to relieve the bad feelings and memories			
58. I didn't let anyone know my true feelings			
59. I actively thought about the event and practiced relaxation at the same time.			
60. I told people how to take care of me while I was reexperiencing the event			
61. I told myself it didn't really happen.			
62. I replaced bad thoughts about the event with good thoughts.			
63. When I felt guilty about the event, I thought about other reasons it happened that were out of my control.			
64. I ate to relieve the bad feelings and memories			
65. I tried to remember details of dreams I've had about the event.			
66. I had fantasies that turned the whole situation around			
67. I talked to people who may have information about my event.			
68. I put a lid on my feelings about it.			
69. I did something with other people to keep my mind off the event.			

TCIS

See reference in Reference section for this questionnaire (Dansky, Roth & Kronenberger, 1990).

Consensual Sexual Experiences Survey

On this questionnaire we are interested in sexual experiences you have had that were consensual. Consensual means that the contact occurred with your consent.

Have you engaged in ...

check whichever box applies *circle the number*

	in past month	in past 6 months	in past 1 year	In the past year, how many different partners did you engage in this behavior with?
1. sexual kissing or hugging				0 1-2 3-4 5-6 7-8 9-12 >13
2. genital contact without intercourse				0 1-2 3-4 5-6 7-8 9-12 >13
3. oral sex				0 1-2 3-4 5-6 7-8 9-12 >13
4. sexual intercourse				0 1-2 3-4 5-6 7-8 9-12 >13

If you had oral, vaginal, or anal sex, how many times was your consumption of alcohol a part of these experiences? 0 1-2 3-4 5-6 7-8 9-12 >13

Appendix B

Coping Strategies Coding Guide

General Rules

Participants are asked to write down "all the things they might do" in 5 different situations. In general, students write down:

Things they would say to the man in the story
Things they would do
Things they would say in general
Things they might think or feel

Students are given 6 blank lines to write on but frequently will write everything they would do in one or two lines. Your job is to determine what category their statements fit into. The following 7 categories will be coded:

Direct Verbal (DV)
Indirect Verbal (IV)
Emotional Coping (EC)
Aggression (A)
Escape (E)
Preventive Behavior (PB)
Irrelevant (I)

If the participant says something directly to the man you will code it either as DV, IV, or A. To determine which one to code read the specific rules for each one. In general DV or IV will be coded when the participant is saying something to the man. Aggression (A) will be coded when the participant is saying something to the man in an aggressive manner such as yelling or screaming at him.

If the participant is yelling or screaming in general, you would not code DV, IV, or A, but rather Escape (E) since the purpose of their vocalizations is to get away by attracting attention or frightening the man by the noise.

Participants who write that they would take some action will be coded as either A, E or PB. Sometimes what participants say they would do actually involves saying something to the man, and if so, it should be coded DV, IV, or A. Aggression involves actions that indicate fighting, hitting, or yelling directed towards the man. Escape involves actions designed to allow the woman to leave the situation when it appears that her exit is blocked. This is an important distinction between Escape (E) and Preventive Behavior (PB). If a participant writes that they would "leave the situation" that suggests that they anticipate some problem and want to leave as prevention so PB would be coded. However, if they write "try to leave" it will be coded Escape

(E) because it suggests they feel that their exit may be blocked. Look to the Specific Rules for further differentiation of these categories.

There are two additional categories, Emotional Coping (EC) and Irrelevant (I). EC is for when participants write that they would do something involving an emotional expression such as crying. Irrelevant (I) is for behaviors or verbalizations that occur after the participant is no longer in any danger such as "go to the hospital". It is also coded when they write down something that is an action or verbal statement that has no bearing on the situation.

Code each question separately on the Coding Sheet. If a participant writes that they would do two things that are really the same only code it once per question. For example if a participant wrote "yell at him to stop" and "yell at him that what he is doing is rape" you would code "yell at him" as A for aggression and "him to stop" as DV. You would also code "what he is doing is rape" as an additional DV but you would not code "yell at him" as an additional A since you have already coded the identical thing for the same question.

Direct Verbal Reasoning (DV)

General Rules: DV is used when the participant is saying something to the man in the story and it is a direct statement of what they do or do not want.

Questions to ask:

1. Is the participant saying something to the man in the story. Often times the participant will use words like "tell him…", "say…" "explain that…", or "make sure he understands that…". These phrases are also used for IV so you must differentiate.

2. Is the statement direct; that is, is the participant saying something definitive about their wishes? For example clearly saying "no" or clearly stating "no interest" or "I don't need to be walked home". If the participant seems to be implying their wishes indirectly then consider coding IV. For example, "tell him I don't need a walk home" is direct but "tell him I'm tired" is indirect because it merely implies that the participant isn't interested but doesn't directly say their wishes.

Examples:

Explain to him that I am not interested in anything besides friendship
Tell him… I'm not interested in dating anyone right now
I don't need him to walk me home
I'm not ready – I want to wait until marriage
I don't want to do this because I don't know him well enough
I don't want to rush things
I would never have agreed to going to the room knowing that might happen
I want a relationship before sex
I'm not ready to lose my virginity
if he really likes me he won't pressure me
we better stop fooling around all together before something happens
I will be fine, catch a cab and go home
I thought we came to the bedroom to talk privately
I made a mistake, I'm not ready for this
I'll still love you if we don't have sex
I will press rape charges
There are other things we could do to satisfy each other
Politely say no thank you
Explain that I'm not interested in more
Keep emphasizing "no, I don't want to have sex with you
Be sure he understand that NO we are not going to have sex
If I wasn't ready I would probably tell him to stop before it got more heated
Talk to him after I've left the room about not being quite so eager

Indirect Verbal Reasoning (IV)

General: IV is used when the participant is saying something to the man in the story and it is implying their wishes rather than stating it directly.

Questions to Ask:

1. Is the participant saying something to the man in the story. Often times the participant will use words like "tell him…", "say…" "explain that…", or "make sure he understands that…". These phrases are also used for DV so you must differentiate.

2. Is the participant saying something indirectly or implying their intention but not actually stating it outright. For example, "say goodbye" implies that the evening is over but is different than saying "I'm not continuing this".

Examples:

Tell him…goodbye
- I have a boyfriend
- I have a shotgun and have called the police
- that I need to get home
- that we need to get back to the party
- my boyfriend is sleeping in next room
- you will call later
- I had a nice time

Drop pretty obvious hints that I'm tired and want to sleep alone
Talk endlessly about a guy I'm interested in on the walk home
Remind him of STD's, pregnancy and the like
Subtly let him know I'm not interested in him
Threaten to call the police
Talk to him about the situation
Ask him for a raincheck if I'm interested
Ask if he would like to go out again
Say that I'm tired
Try to keep the subject on class
Ask his intentions
Ask who he is? (Question #5)
Convince him it might happen later.

Emotional Coping (EC)

General: EC is coded when the participant writes that they would be responding in an emotional way that could be influential in the situation. For example "be totally out of my senses" could just refer to how they would feel at the time, but it is possible that it is a coping strategy and that being out ones senses could influence the situation.

Examples:

Cry a lot
Be totally out of my senses
Try to act as if there isn't anything to worry about
Remain calm
Be very cold to him
Get really upset
Get angry
Be turned off
I'd get afraid

Aggression (A)

General: Aggression is coded when there is either physical or verbal actions of an aggressive nature. Verbalizations directed at the man that are loud, are yelling, or are screaming are coded A. If the participant says they would "scream" that would be coded E because they are making noise to try to get out of situation. If they write that they would "scream at him to stop" that would be coded A for the screaming and DV for the "to stop".

Examples:

Hit him
Punch him
Scratch, bite, kick, whatever (code this as 3 separate A's)
Try to fight him off
Kicking and trying to get away (This would be A and E)
Fight back
Fight him off
Get very aggressive myself
Yell at him
Shut the door in his face (Just "shut the door" would be PB for Question #5)
Slam the door

Escape (E)

General: Escape is coded when the participant is trying to leave the situation or stop the man from his actions. Yelling or calling out to a friend is coded Escape since the purpose of the vocalizations are to get out of the situation. "Trying to leave" the situation is coded E whereas "leave" is coded Preventive Behavior because it suggests that the participant does not feel that her exit will be blocked and sees leaving as prevention. Statements that use the word "try" will often be coded E because it suggests that there is an attempt to escape the situation.

Examples:
Continue screaming
Make noise (i.e. yell for help) to get other's attention
Make lots of noise to get someone's attention (i.e. a neighbor)
Call out to a friend
Continue yelling
Scream for help
Make lots of noise so that neighbors can hear and maybe help
Try my best to get out from under him
Try to get out of the apartment
Try to get out of the room
Create a diversion and try to call someone to help you
Lock myself in a room alone and call 911 if I can get away
Create diversion try to leave or call someone
Create a diversion and try to leave
Run
Try to leave
Maybe try to run ahead and get inside the house
I would most likely leave if it was at all possible
Get out any way possible

Preventive Behavior (PB)

General: Preventive Behavior is coded whenever the statement indicates an action that is designed to help prevent any unwanted event. Many DV and IV statements will be preventive in nature, but they are coded as verbal whenever they involve something the participant is saying to the man. If it is an action then it can be coded PB. If the participant indicates that they plan to "leave" code it PB whereas if they write "try to leave" code it E for escape since it suggests that they feel that their exit might be blocked. If the statement indicates calling the police while the threat is still imminent (as in Story 5) that would be coded PB since it is designed to prevent further action by the man.

Examples:
Don't walk close to him
Try to slow things down
Ask someone else to walk with us
Ask my roommate or another male friend to meet us halfway
Allow him to walk me home, but don't let him in the door
Stand up and close the door and lock him out of my room
Get out of situation
Try putting my clothes back on
Leave if the situation gets too intense
Call a designated driver to come get us and drop him off first
I might stop cold turkey and leave the room (this is 2 PB's)
Lay off the messing around so he doesn't get so "hot"
Be sure that my friends know where I am
Not let him in if he insists on walking me home
Just leave
Call police or 911
Introduce family or friends.
Act like I am reaching for weapon
Look for anything to use against him
Go along but stop him at any time.
Stay if he agreed to cool down and go slow
Don't listen to him
Shut the door
Do other things to satisfy him

Irrelevant (I)

General: Irrelevant gets coded whenever the statement has no bearing on the situation. It is for statements about what the person would do after getting away or it is for an action or statement that would not likely have any influence on the situation.

Examples:
If I could not get away, I would go to the nearest hospital right away
Feel very confused and not know what to do I know it's wrong, but I would want to please him
Not be as aggressive as could because of alcohol
I wouldn't have gone back there in the first place
If I don't want sex don't have sex
Pray
I would tell others about him, maybe it could help another
If this situation did escalate to rape, I would call the police right away
Wonder if I'm reading too much into it – is he really interested in more
Let him caress me but no sex.
Blame myself for letting it get this far
If I got away I would run to the nearest neighbor and call 911
Walk home and see what happens.
Let him walk me home and talk on the way.
Look for protection before making a final decision
Give him a kiss
Get his phone number
He shouldn't take advantage of me if he is a friend

Additional Examples

Talk to him after I've left the room about not being quite so eager

This statement has "talk to him" so probably an IV or DV will be coded. The message is "don't be so eager" so that will be coded DV. However, it also says "after I've left the room" which is an action that would be coded PB because the person is "leaving" and doesn't seem to think her exit is blocked.

If I got away I would run to the nearest neighbor and call 911

"If I got away" would be coded E because it suggests this action will be attempted.
"I would run to the nearest …" would be coded I since it is after the fact.

Feel very confused and not know what to do I know it's wrong, but I would want to please him

Although "feel very confused" sounds like an emotion, it does not seem to be directed towards any outward display designed to accomplish anything within the situation so it would be coded I and not EC.

Let him caress me but no sex.

Although this implies that the person doesn't want sex it does not involve any verbal statements or any actions so it would be coded I.

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EDUCATION

Ph.D. **Dec, 2000, Clinical Psychology (APA Accredited), Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, Virginia**
Dissertation: A test of a model of sexual victimization: A latent variable path analysis
Chair: George A. Clum

Preliminary Examination, April, 1997, Project Title: Child sexual abuse and adult sexual revictimization: A meta-analysis of prevalence rates and causes of revictimization.
Chair: George A. Clum, Ph.D.

M.S. **May, 1996, Clinical Psychology, Virginia Tech, Blacksburg, Virginia**
Thesis: A test of the effects of assessment and feedback on individuals with panic attacks.
Chair: George A. Clum, Ph.D.

B.S. **September, 1988, Psychology, Duke University, Durham, North Carolina**

CLINICAL TRAINING

Post-Doctoral Fellowship

Counseling and Psychological Services Center, Purdue University, West Lafayette, IN
August 1999 - Present. Provide short term individual, couples, and group psychotherapy for university students. Teach 8-week "Life Skills" course for freshman college athletes. Conduct drug/alcohol screenings and teach 4-week, "Alcohol Education Class" for court-referred students. Serve as liaison for a residence hall and provide outreach programming as requested. Provide therapy, consultation, and outreach two nights a week at Purdue Village (married student housing). Provide crisis intervention. Supervision of practicum student.

APA Accredited Predoctoral Internship

Counseling Center**,** University of Illinois at Urbana-Champaign, Urbana, IL
August 1998 - July 1999. Provided short-term (1-5 session) and longer term (8 - 16 session) therapy for university students. Conducted 3-4 intake interviews each week and made disposition. Presented outreach programming for student and staff groups on stress management, eating disorders, anger management, handling students in crisis, and relaxation training. Mentored two paraprofessional undergraduate students and supervised one master's level counseling student for one semester. Participated in eating disorder and sexual abuse and assault treatment teams. Served on the Intern Training Committee. Co-facilitated women's psychotherapy group and support group for individuals affected by their partner's sexual assault or abuse.

Graduate Clinician

Psychological Services Center, Virginia Tech, Blacksburg, VA
August, 1993 - May, 1994; Sept., 1995 - August, 1996; August, 1997 - May, 1998. During three academic years and one summer, provided individual and couples counseling in the clinical psychology department clinic that operated as a primary mental health provider in this Appalachian mountain community. Clients included university students as well as child, adolescent and adult community members. Conducted several ADHD and intellectual assessment batteries for both children and adults. Received both group and individual supervision.

Psychology Trainee

Salem Veterans Administration Medical Center, Salem, VA
Summer 1997. Worked in the Inpatient Substance Abuse Treatment Program and led a daily behaviorally-oriented skills acquisition group, conducted individual therapy, and provided psychoeducational lectures.

Advanced Practicum

University Counseling Center, Virginia Tech, Blacksburg, VA
Fall, 1996 - Spring 1997. Provided individual psychotherapy to 20 students over the course of the academic year for a range of problems including posttraumatic stress disorder, test anxiety, depression, study skills, grief, relationship difficulties, eating disorders, and ADHD. Co-led a process therapy group.

Psychology Trainee

Salem Veterans Administration Medical Center, Salem, VA
Fall, 1995. Participated in all aspects of therapeutic community on inpatient posttraumatic stress disorder unit including psychodrama, experiential education (high and low ropes course), and community meetings.

Psychology Trainee

Durham Veterans Administration Medical Center, Durham, NC
Summer, 1994. Co-led posttraumatic stress disorder (PTSD) veterans group and initiated and co-led Spouse's of PTSD veteran group. Conducted psychotherapy with three outpatient veterans with PTSD and conducted several intake assessments.

CLINICAL EXPERIENCE

Psychology Technician

Durham Veterans Administration Medical, Durham, NC
February, 1992 - July, 1993. Conducted diagnostic clinical interviewing, co-led PTSD group, led stress management group, individual biofeedback, and relaxation training for veterans with PTSD.

Research Assistant

Duke University Medical Center, Pain Management Clinic, Durham, NC
1988 - 1990. Conducted clinical interviewing with arthritis patients.

Counselor/Coordinator

Durham County Advocates for the Mentally Ill, Threshold Clubhouse, Durham, NC
1987-1988. Facilitated daily group meetings, case managed for 15 members, and facilitated problem solving group and recreation night.

Volunteer Phone Hotline

ACCESS**,** Duke University, Durham, NC 1987-1988.
Peer counselor for telephone hot-line which provided support and information on problems and questions of sexual orientation.

SUPERVISION EXPERIENCE

Primary Supervisor

Counseling and Psychological Services, Purdue University, West Lafayette, IN
Fall Semester, 2000. Supervised a Ph.D. candidate from Counseling Psychology seeing a diverse clientele of between 5 - 7 students.

Primary Supervisor

The Counseling Center, The University of Illinois at Urbana-Champaign, Urbana, IL
Spring Semester, 1999. Supervised a Ph.D. candidate from Counseling Psychology seeing a diverse clientele of between 5 - 7 students.

Primary Supervisor

Psychology Services Center, Virginia Tech, Blacksburg, VA
Sept., 1997 - May, 1998. Supervised two masters level students each seeing one client.

TEACHING/LEADERSHIP EXPERIENCE

Instructor

Educational Psychology at Purdue University, West Lafayette, IN
August, 1999 - October, 2000. Taught three sections of "Life Skills: Strategies for Success" for Purdue college first year student athletes.

Graduate Assistant

The Department of Psychology, Virginia Tech, Blacksburg, VA
January, 1997 - May, 1997. Conducted independent projects for the psychology department head including the creation of a comprehensive set of Internet web pages.

Graduate Assistant

The Women's Center at Virginia Tech, Blacksburg, VA
January, 1996 - December, 1996. Coordinated service-learning program, organized the Women's Center Advisory Committee, provided crisis management services, co-wrote two small grants, planned the graduate women's gatherings, and co-coordinated mini gender equity conference "Growing Up Female Around the World".

Teaching Assistant

The Department of Psychology, Virginia Tech, Blacksburg, VA
1994 -1995. Taught the Advanced Social Psychology Laboratory including lesson planning, leading discussions, and supervision of social psychology research projects.

Teaching Assistant

The Department of Psychology, Virginia Tech, Blacksburg, VA
1993 -1994. Taught two sections of Introductory Psychology Lab for three semesters including lesson planning, leading discussions, and grading essays and quizzes.

Study Skills Instructor

Upward Bound, Virginia Tech, Blacksburg, VA
1993-1994. Taught study skills to high school and junior high students enrolled in weekend program designed to aid first generation college-bound students in rural Southwest Virginia in their educational pursuits.

Teacher/Facilitator

Echo Hill Outdoor School, Worton, MD
1990. Facilitated individual and group experiences on high and low initiatives course with special populations including inner city youth, welfare mothers, at-risk high school students, and learning disabled children. Taught variety of experiential based courses on the Chesapeake Bay, swamp and pond life, and survival.

Ropes Course Co-Director,

Project W.I.L.D. (Wilderness Initiatives for Learning at Duke), Durham, NC
1987-1989. Team-taught university course on experiential education based on the Outward Bound model including weekly classes on group dynamics and experiential education. Directed operations on a high and low ropes course including training staff, facilitating groups, fund-raising, and scheduling. Co-wrote organization's first ropes course safety manual.

Tour Leader

Bikecentennial (renamed Adventure Cycling in 1994) Touring Company, Missoula, MT
Summer, 1991. Facilitated all aspects of 90 day, 5,000 mile, self-contained, cross-country bicycle trip with 12 international participants.

RESEARCH EXPERIENCE

Project Coordinator

Center for Research in Health Behaviors, Virginia Tech, Blacksburg, VA
July, 1997 - July, 1998. Coordinated a grant by the Virginia Health Care Foundation designed to improve the nutrition and health habits of adolescent girls in a medically underserved community using an interactive internet based nutrition intervention. Conducted focus groups, developed computer modules, collected data at a local high school, and managed large database and analysis.

Psychology Technician

Durham Veterans Affairs Medical Center, Durham, NC
1992 - 1993. Coordinated six clinical research studies which included subject recruitment, diagnostic clinical interviewing, psychophysiological assessment, composition of trauma scripts, collection of patient data, data management, SAS programming and manuscript preparation.

Research Assistant

Duke University Medical Center, Pain Management Unit, Durham, NC
1988-1990. Coordinated ten research studies including subject recruitment, behavioral coding of videotapes, data collection, creating data files and programming in SAS statistical programming language. Conducted psychophysiological assessment and treatment protocols including EMG recordings. Supervised two student assistants.

OTHER EXPERIENCES

Web Page Creator

Association for Advancement of Behavior Therapy (AABT), New York, NY
Feb. - May, 1997. Designed and created AABT's first web pages.

Guest Reviewer,

Journal of Gender, Culture and Health, 1998.

OUTREACH PRESENTATIONS

Eating Disorders

Eating Disorders among Adolescent Girls, an invited workshop for a counseling psychology class, University of Illinois at Urbana-Champaign, April, 1999

Eating Disorders Awareness Week Presentation, an invited workshop for a residence hall, Purdue University, March, 2000

Study Skills

Improving Study Skills, an invited workshop for a residence hall, Virginia Tech November, 1996

Preparing for Exams, an invited workshop for an engineering class, Virginia Tech March, 1997

Stress Management and Relaxation Training

Stress Management, an invited workshop for Community Assistants at Purdue Village (married student housing), Purdue University, September, 1999

Relaxing in Mind and Body, an invited workshop for International Students, University of Illinois at Urbana-Champaign, April, 1999

Learning how to relax, an invited workshop for Women in Engineering Conference, University of Illinois at Urbana-Champaign, March, 1999

Controlling Anger in the Workplace and Stress Management, an invited workshop by the FOCUS group (non-academic student affairs staff), University of Illinois at Urbana-Champaign, February, 1999

Stress Management and Relaxation, an invited workshop by the Admissions Staff, University of Illinois at Urbana-Champaign, February, 1999

Creative Ways to Manage Stress, an invited workshop for Women in Engineering Mentorship Program, University of Illinois at Urbana-Champaign, December, 1998

Gay, Lesbian, Bisexual, Transgender

Ally Training for Staff/Faculty, University of Illinois at Urbana-Champaign December, 1998

Ally Training for Resident Advisors**,** University of Illinois at Urbana-Champaign January, 1999

Counseling Center Services

Orientation to Counseling and Psychological Services, Purdue University August, 1999 and January, 2000

Diversity

Resolving Jewish Conflicts and Promoting Jewish Pluralism, an invited workshop for Hillel, University of Illinois at Urbana-Champaign, January, 1999

Career

The Guide to Choosing College Majors and Careers, a workshop conducted through the career center, University of Illinois at Urbana-Champaign
November, 1998 and March, 1999

Communication

Cross-Cultural Communication, an invited workshop for International Students, University of Illinois at Urbana-Champaign, April, 1999

Sexual Assault Prevention

Mock Trial, a re-enacted sexual assault trial with discussion, Purdue University October, 1999

Other

Helping the Student in Crisis, an invited workshop by the Liberal Arts and Sciences faculty, University of Illinois at Urbana-Champaign, March, 1999

Staff Training: Making Referrals, an invited workshop for residence hall counselors, Purdue, University, January, 2000

PUBLICATIONS

Beckham, J.C., Keefe, F.J., Caldwell, D.S., & Roodman, A.A. (1991). Pain coping strategies in rheumatoid arthritis: Relationships to pain, disability, depression and daily hassles. Behavior Therapy, 22, 113-124.

Beckham, J.C., Roodman, A.A., Barefoot, J.C., Haney, T.L., Helms, M.J., Fairbank, J.A., Hertzberg, M.A., & Kudler, H.S. (1996). Interpersonal and self-reported hostility among combat veterans with and without posttraumatic stress disorder. Journal of Traumatic Stress, 9, 335-342.

Beckham, J.C., Roodman, A.A., Shipley, R.H., Hertzberg, M.A., Cunha, G.H., Kudler, H.S., Levin, E.D., Rose, J.E., & Fairbank, J.A. (1995). Smoking in Vietnam combat veterans with posttraumatic stress disorder. Journal of Traumatic Stress, 8, 461-472.

Febbraro, G.A.R., Clum, G.A., Roodman, A.A., & Wright, J.H. The limits of bibliotherapy: A study of the differential effectiveness of self-administered interventions in individuals with panic attacks. Manuscript accepted in Behavior Therapy.

Roodman, A.A. & Clum, G.A. Revictimization rates and method variance: A meta-analysis. Manuscript accepted Clinical Psychology Review.

Vrana, S.R., Roodman, A.A., & Beckham, J.C. (1995). Selective processing of trauma-relevant words in posttraumatic stress disorder. Journal of Anxiety Disorders, 9, 515-530.

Wright, J.H., Clum, G.A., Febbraro, G.A.R. & Roodman, A.A. (2000). A bibliotherapy approach to relapse prevention in individuals with panic attacks. Journal of Anxiety Disorders, 14.

PRESENTATIONS AND POSTERS

Clum, G.A., Febbraro, G.A.R, Roodman, A.A., Wright, J.H. Factors underlying change in self-help treatment program. Paper presented as part of symposium on "Self-directed treatment of panic disorder" at the Association for Advancement of Behavior Therapy (AABT) 31st Annual Convention. Miami Beach, Florida, November, 1997.

Roodman, A.A., Clum, G.A., Febbraro, G.A.R., Wright, J.H. A test of the effects of assessment and feedback on process measures for individuals with panic attacks. Paper presented at the Association for Advancement of Behavior Therapy (AABT) 30th Annual Convention. New York, New York, November, 1996.

Clum, G.A., Roodman, A.A., Febbraro, G.A.R., Wright, J.H. Comprehensive Self-Help Treatment for Panic Attack Sufferers. Symposium presented at the Southeastern Psychological Association. Norfolk, VA., April, 1996.

Febbraro, G.A.R., Clum, G.A., Wright, J.H., Roodman, A.A., Graves, M.A., & Campe, D.E. An investigation of the differential effectiveness of bibliotherapy and self-regulatory components in the treatment of panickers. Paper presented at the Association for Advancement of Behavior Therapy (AABT) 29th Annual Convention. Washington, D.C., November, 1995.

Beckham, J.C., Roodman, A.A., Haney, T. L., Barefoot, J.C., Hertzberg, M.A., Cunha, G.H., & Kudler, H.S. Assessment of interpersonal hostility and health in Vietnam combat veterans with posttraumatic stress disorder. Paper presented at the 9th Annual Meeting of the International Society for Traumatic Stress Studies. San Antonio, TX, October, 1993.

REFERENCES

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