DEVELOPMENTAL ANTECEDENTS OF VIOLENCE AGAINST WOMEN:

A LONGITUDINAL PERSPECTIVE

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CHAPTER 1

INTRODUCTION

The purpose of this proposed study was to investigate longitudinally the developmental antecedents of physical and sexual violence against young women, using a theoretically based multi-causal model that includes characteristics related to the victim, the perpetrator and the environment. The analyses were based on a data set from a NIH-funded five-year longitudinal study of victimization and perpetration among college students (N=2,269; over 1500 women and 800 men) demographically representative of undergraduate women and men in state-supported universities in the US. (MH45083).

Culturally influenced aggression in the relations between the sexes begins early in life, becomes patterned, repetitive, and may well escalate into seriously assaultive behavior. In recent years there has been increasing national recognition that relationship violence, largely hidden from public view, is widespread, cutting across regional, socioeconomic, ethnic and racial lines (Koss, Goodman, Browne, Fitzgerald, Keita, & Russo, 1994).

As men and women establish intimate relationships, dominance and violence also surface in the form of sexual and physical aggression. Following a brief review of data on the incidence and prevalence of sexual and physical aggression, we discuss the theoretical framework that guides our work and present a statement of our research questions.

SEXUAL AGGRESSION

Sexual assault, sexual coercion, and sexual aggression are all terms used to refer to instances in which one person engages in sexual behavior against another's will. These terms encompass acts that range from unwanted sexual contact, such as forced kissing or the fondling of breasts and/or genitals, to attempted rape and rape. Coercive tactics may range from psychological pressure (i.e., threatening to end the relationship, saying things he does not mean, such as falsely professing love), verbal persuasion ("if you loved me, you'd let me"; "you owe it to me,"), verbal threats of harm, use of alcohol and drugs, physical intimidation, mild physical force (pushing, slapping, holding down), severe physical force (beating, choking), to displaying or using a weapon.

The term rape has been shown to have different meanings for women and men, as well as different segments of the community such as police officers and mental health counselors (see White & Humphrey, 1991 for a review). Some people are hesitant to label forced sex between acquaintances as rape, particularly if any of the following circumstances are present: the man initiated the date; he spent a great deal of money;

the couple went to his place; there had been drinking, kissing and petting; the couple had been sexually intimate on previous occasions; the woman had sex with other men (Goodchilds, Zellman, Johnson, & Giarrusso, 1989; Muehlenhard & Linton, 1987); or "no" was not explicitly verbalized (Sawyer, Pinciaro, & Jessell, 1998). College students in general, and sexually aggressive men in particular, believe that sexual precedence (i.e., a past history of sexual intercourse) reduces the legitimacy of sexual refusal (Shotland & Goodstein, 1992).

Estimates of the frequency of sexual assault vary across cultures (Rozee, 1993), across ethnic groups (Marsh, 1993; Sorenson & Seigel, 1991), regions (George, Winfield, & Blazer, 1992;1, 1992) and across definitions and research methods (Fischer, 2000; Koss, 1992), as well as being affected by who reports assaults and under what circumstances. Rape is the crime least likely to be reported and, if reported, the least likely to result in a conviction, particularly if committed by an acquaintance. Not only do many women not report their assault to the authorities, many never tell anyone. Thus, crime statistics greatly under-estimate the frequency of rape by as much as 50-90% (Gise, 1988). Researchers must rely on large-scale surveys of women to obtain more accurate estimates of victimization rates. Women are asked about a number of sexual experiences that may have involved force or threat of force, some of which meet the legal criteria for rape, rather than being asked directly "Have your ever been raped?" This is important because many victimized women (73%) never label forced sexual intercourse as rape. This approach has suggested that the actual rape victimization rate is 10-15 times greater than corresponding FBI estimates (Koss, 1992). Because most of these unlabeled, unreported rape experiences are perpetrated by acquaintances, acquaintance rape has been labeled a "hidden" crime (Koss, 1985).

A comprehensive survey asked over 3,000 college women from 32 institutions of higher education across the United States about sexual experiences since the age of 14 (Koss, Gidycz, & Wisniewski, 1987). Of those surveyed, over half (53.7%) had experienced some form of sexual victimization; 15.4% had experienced acts by a man that met the legal definition of rape (though only 27% labeled the experience rape), and 12.1%, attempted rape. An additional 11.9% had been verbally pressured into sexual intercourse, and the remaining 14.4% had experienced some other form of unwanted sexual contact, such as forced kissing or fondling with no attempted penetration. More recent studies confirm these high numbers among Canadians (DeKeseredy, 1997), as well as among a probability sample of 8,000 women in the United States (Tjaden & Thoennes, 1998). Community-based surveys have found that 25% of African-American women, 20% White women (Wyatt, 1985), and 8% Hispanic women (Sorenson &

Siegel, 1991) reported at least one sexual assault experience in their lifetime. High school women also appear to be at greater risk for rape than previously thought. A recent survey of 834 entering college students found that 13% reported being raped between the ages of 14 and 18, and an additional 16% reported being victims of an attempted rape (Humphrey & White, 2000). Young women have reported most often being sexually assaulted by their boyfriends, dates or close acquaintances (Koss, 1985; Mandoki & Burkhart, 1989; Russell, 1984). Other more recent studies have confirmed these patterns, lending support to their credibility (See Koss, et al, 1994 esp. Chapter 9).

Kilpatrick's National Women's Study (Crime Victims Research and Treatment Center, 1992), using a national probability sample of 4,008 adult women has shown acquaintance rape rates strikingly higher than those officially recorded by law enforcement agencies across the country or in previous victimization surveys. He further found that the onset of rape and other sexual assaults tend to occur in childhood and early adolescence. Most rapes occurred prior to age 29, with 54% occurring between the ages of 11 and 24. And an additional 29% occurred before the age of 11.

The Koss, et al. survey (1987) also included approximately 3,000 college and university men. Of this sample, 4.4% admitted to engaging in behaviors that legally constitute forcible rape, with an additional 3.3% reporting attempting forced sexual intercourse. Other forms of sexual victimization were admitted by 17.4% of undergraduate men. Similar rates have been reported in college samples (Calhoun, Bernat, Clum, & Frame, 1997; White & Humphrey, 1993) and in a community college sample (White, Holland, Mazurek, Lyndon, et al, 1998). Some studies, have reported considerably greater involvement in attempted rape (26%) and rape (15-17%) (Kanin & Parcell, 1977; Rapaport & Burkhart, 1984; Mills & Granoff, 1992). Malamuth (1989) found that 35% of college men report a willingness to rape if they were sure they would not be apprehended. Furthermore, the FBI (1994) found that men under the age of 25 constitute 43% of all individuals arrested for rape.

Research confirms that not all women are equally likely to be sexually victimized. Numerous studies have been conducted to identify risk factors for sexual victimization, most with little success. The greatest risk factor is being female. Although men are also sexually victimized, the likelihood is less than for women. Age is also a risk factor, with adolescence being the period of greatest vulnerability; during adolescence the risk of first being victimized increases steadily from age 14 to 18 and declines thereafter (Humphrey & White, 2000). Another risk factor is being a college student; sexual victimization rates are about three times higher among college students than in the general population (Aizenman & Kelley, 1988; Koss, et al, 1987), although recently the opposite has been

found (Zweig, Barbee, & Eccles, 1997). Other risk factors have been difficult to determine. Several researchers have confirmed that the best predictor of victimization is past victimization; typically childhood victimization increases the risk of adolescent victimization, which in turn increases the risk of victimization as a young adult (Collins, 1998; Gidycz, Latham, Coble, & Layman, 1992; Mills & Granoff, 1992; Humphrey & White, 2000; Wyatt, Guthrie, & Notgrass, 1992). Additionally, childhood victimization has been related to earlier age of menarche and sexual activity (Vicary, Klingman, & Harkness, 1995), as well as alcohol use. It is likely that alcohol is implicated in several ways. Women with a history of victimization may turn to alcohol as a means of coping. Unfortunately, alcohol and other substance abuse put women at increased risks of sexual victimization (Norris, Nurius, & Graham, 1999; Richardson & Hammock, 1990).

Not only are all women not equally likely to be victims of sexual assault, all men are not equally prone to sexual assault and rape. The typical acquaintance rapist appears to be a "normal" guy. He is not a crazed psychopath, although he may display psychopathy-related traits (Kosson, Kelly, & White, 1997). Among college students, alcohol use (Koss & Gaines, 1993; White & Humphrey, 1994), athletic affiliation (Jackson, 1991; Frintner & Rubinson, 1993; Koss & Gaines, 1993), and fraternity membership (Frintner & Rubinson, 1993, but not Koss & Gaines, 1993) have been associated with sexual aggression towards women. Other significant correlates of sexual assault include a history of family violence; an early and varied sexual history, including many sexual partners; a history of delinquency; acceptance of rape myths; sexual promiscuity; hostility toward women; self-centeredness; low empathy; an impulsive personality; hedonistic and dominance motives for sex; lower than average sense of self-worth; and lower religiosity; as well as peers who condone and encourage sexual conquests (see White & Koss, 1993 for a review). Finally, sexually aggressive men are more likely to perceive a wider range of behaviors as indicative of sexual interest than do nonsexually aggressive men (Bondurant & Donat, 1999) and are attracted to sexual aggression (Calhoun, et al., 1997).

PHYSICAL ASSAULT

Courtship violence, dating violence, and premarital violence are all terms researchers have used to refer to acts of physical and verbal aggression occurring between unmarried women and men. Researchers have studied the gamut of aggression, from verbal aggression, such as screaming, yelling, name-calling, criticism and threatening, to stalking and severe physical violence involving the use of weapons. Depending on which measure of aggression one uses, rates of courtship violence range from a low of 6%, when the definition focuses exclusively on severe forms of

physical aggression, to a high of almost 90%, when the definition includes all forms of aggression.

A national survey of approximately 2600 college women and 2100 college men revealed that within the year prior to the survey 81% of the men and 88% of the women had engaged in some form of verbal aggression, either as perpetrator or victim (White & Koss, 1991). Approximately 37% of the men and 35% of the women inflicted some form of physical aggression and about 39% of the men and 32% of the women sustained some physical aggression. In this survey all types of heterosexual relationships were included from the most casual to the most serious, thus providing a comprehensive estimate of the scope of courtship violence. The measures of verbal aggression included arguing heatedly, yelling, sulking, and stomping. Physical aggression included throwing something at someone, pushing, grabbing, shoving, or hitting.

Studies also indicate that courtship violence during the teen years is pervasive, with as many as 35% of female and male students surveyed reporting at least one episode (O'Keeffe, Brickopp, & Chew, 1986), with fewer experiencing recurring violence (Burcky, Reuterman, & Kopsky, 1988). As with college students, not all high school students experience physical violence (15.7% of female students & 7.8% of male students, according to Bergman, 1992).

Comparable rates of dating violence have been observed across gender, ethnic group, and type of institution of higher learning, such as private or public, religious or secular (White & Koss, 1991; Clark, Beckett, Wells, & Dungee-Anderson, 1994). All the evidence to date suggests that it would be unusual to find a high school or college student who had not been involved in some form of verbal aggression and a substantial number who have not been involved in physical aggression. Also, it appears that the same people who report inflicting some form of violence are the same ones who report experiencing violence.

Some studies suggest women and men do not appear to differ in the frequency with which they report engaging in aggressive acts (Bookwala, Frieze, Smith, & Ryan, 1994; White & Koss, 1991; see White, Smith, Koss, & Figueredo, 2000, for a critique of studies examining sex differences in intimate partner aggression). However, this cannot be taken to mean there are no gender-related differences in aggression. On the contrary, studies have shown that the motives and consequences for such behavior are different for women and men (White, Koss, & Kissling, 1991). Most data suggest that women are more likely to engage in aggression for self-defense, whereas men report that they aggress to instill fear and to intimidate.

The underlying processes involved in courtship violence for women and for men appear different. The

results of studies are quite consistent. Although the best predictor of being aggressive is having an aggressive partner (Bookwala, et al., 1992; White, Merrill, & Koss, in press), other predictors are different for women and men. Men who are quick to react to anger, believe that violence will aid in winning an argument, and have successfully used violence in other situations are likely to do so again (Riggs & Caufield, 1997; White, et al., 1991). Similarities between men who engage in courtship violence and wife-batterers have been found (Ryan, 1995). Drug use, divorced parents, stressful life events, beliefs that violence between intimates is justifiable, and less traditional sex role attitudes also have been identified as predictors (Bookwala, et al., 1992; Mason & Blankenship, 1987; Tontodonato & Crew, 1992).

For women, on the other hand, a history of parent-child abuse (Tontodonato & Crew, 1992; Sappington, Pharr, Tunstall, & Rickert, 1997), as well as anxiety, depression (White, et al., 1991) and drug use (Tontodonato & Crew, 1992), have been related to courtship violence. It is likely that these latter factors are reactions to childhood experiences with violence, rendering women more vulnerable to being the target of a violent partner, which in turn increases the likelihood of being violent. Learning about violence in the home and associating with peers who endorse the use of violence may provide a backdrop of social norms that legitimate violence. Violence is learned as a tactic of dealing with interpersonal conflict (Gwartney-Gibbs, et al., 1983; Reuterman & Burcky, 1989; Worth, Matthews, & Coleman, 1990).

However, women may be the initiator of aggression in dating relationships (DeMaris, 1992). White and colleagues have shown that prior experience with sexual victimization (Humphrey & White, 1991), as well as physical victimization in a dating context (Smith, White, & Humphrey, 1999), during adolescence predicts being physically aggressive in dating situations during the first year of college. Prior experience with violence may disinhibit aggression, thus enabling women to overcome gender-related constraints on aggressive expression (White, et al., 1991). A recently developed theory (Hammock & Richardson, 1997) proposes that threat and perceptions of threat underlie relational violence. Past victimization experiences, including the witnessing and experiencing parental aggression, may increase women's expectations of harm from male partners. Thus, offensive aggression may actually be preemptory aggression. Feelings of isolation resulting from prior victimization (reflected in passivity) may contribute to a greater awareness of threat associated with the intimidating behaviors of their male partners, resulting in the perceived need not only for self-defensive efforts, but for offensive (or initiating acts) as

well (White & Humphrey, 1999).

Most data suggest that women are more likely to engage in aggression for self-defense, whereas men report that they aggress to instill fear and to intimidate. However, some data suggest that at least for dating relationships, women are often the initiator (DeMaris, 1992). When women do initiate courtship violence, it is clear that they are more likely than men to sustain serious injury. Men are 2-4 times more likely to use the severe forms of violence and women are 3-4 times more likely to report injuries (Makepeace, 19881, 1986, 1987, 1989; Sugarman & Hotaling, 1989).

A recently developed model of courtship aggression consists of two components (Riggs & O'Leary, 1989; 1996). The first component consists of background factors, including the observation of interparental physical aggression and the receipt of child physical abuse. These model aggression and contribute to the establishment of a pattern of aggressive behavior. These early childhood experiences also contribute to attitudes accepting of aggression, as well as to the development of an impulsive, aggressive personality style. The second component consists of situational factors associated with the relationship (such as relationship satisfaction and communication patterns), expectations about the outcome of aggression, stress, alcohol use, and partner's use of aggression. Situational factors increase the likelihood of conflict in relationships, which in turn increases the likelihood that aggression will be used to resolve the conflict. Related work suggests that personal history may be more important for women than for men, because women need more life experiences with violence to overcome the traditional socio-cultural sanctions against female violence (Malone, Tyree, & O'Leary, 1989).

CO-OCCURRENCE OF VARIOUS FORMS OF VIOLENCE AGAINST WOMEN

Evidence of co-occurrence can be found in the data from the National Violence Against Women Survey (Tjaden & Thoennes, 1998). Both sexual and physical assault may occur together in the same. Eighty-one percent of the women who were stalked by a current or former intimate partner also had been physically abused by that partner. Thirty-one percent had been sexually assaulted by that partner. Other researchers have also reported the co-occurrence of stalking with verbal and physical aggression (Coleman, 1997), as well as psychological abuse (Logan, et al, 2000), and with sexual coercion (Spitzberg & Rhea, 1999).

Finkelhor and (1987) distinguishes between raped only and raped and battered women; 48% raped women also battered. Shotland (1992) distinguishes between women who are raped and battered and those who

experience only one type of assault and developed a model for dating couples. He suggests that rape without battering is probably more common in dating than married couples; men's sense of sexual obligation may lead him to force a woman into sex, as well as his need to establish control. When rape occurs in dating couples it is less severe (Koss, et al, 1987). Battering rapists he suggest use sex and violence to prove their manhood, and they use more violence in sexual assault. Russell (1982) marital rape and battering covary; 72% of marital rpae victims had been battered by husbands; 47% of beaten wives had been raped by their husbands. Frieze (1987) 34% battered women had been raped (similalry, see Pagelow, 1980; Prescott & Letko, 1977); 46%--Shields & Hanneke, 1981; 59%, Browne, 1987). Smith, Edwards, and DeVellis (1998) also have evidence for the co-occurrence of sexual and physical assault. However, little is understood about the precursors of co-occurrence. Is co-occurrence a unique form of violence against women? That is, it is possible given the high incidence rate of both physical and sexual assault that co-occurrence is inevitable for some women, but that there is nothing unique about it. Virtually no one has examined the question of precursors or consequences of co-occurrence.

THEORETICAL CONSIDERATIONS

In recent years there has been a proliferation of analyses of sexual coercion and physical dating violence particularly among adolescents and college-aged students. These studies of sexual and physical victimization and perpetration tend to fall into one of several theoretical categories.

The earliest theories of violence against women borrowed heavily from basic theories of aggression and may be classified best as single factor theories of aggression. These single factor approaches can be categorized as biological/evolutionary, intrapsychic, victim-precipitated, social learning, social information processing, sociological, and feminist. Each of these theories focus on one primary factor that precipitates violence against women, usually at one level of analysis. More recent theories are more independent of the earlier mainstream theories, are more complex, and have a more applied focus. In this sense they are more eclectic.

Early evolutionary theories argued that male violence was rooted in genetics and biology due to natural selection pressure. More current efforts still invoke constructs such as genetic determinism and sexual selection to account for gendered patterns of behavior (Buss, Gomes, Higgins, Lauterbach, 1987; see Smuts, 1992; Thornhill & Palmer, 1999). In contrast, intrapsychic theories focus on acts of violence as manifestations of deviations in one's personality. These personality-oriented theories search for individual difference variables that propel some men

toward violence and increase the likelihood of only certain women being victimized. Similarly, victim-precipitation models examine the behaviors of women that "caused" them to be victimized. In contrast to theories that focus on characteristics of the individual, social learning theories focus on the socialization experiences of men that lead them to be violent toward women. Work in this arena has focused on modeling influences, reinforcement for aggressive behavior, and attitudes and beliefs that mediate violence. Social information processing approaches to violence against women have focused on the cognitive processes involved in an aggressive episode. The focus is on how the perpetrator's perception of the situation, as well as preexisting schema and perceptions, result in aggression. These models give us details on how individuals' mental representations of cultural scripts develop and how they come to filter and bias the encoding and decoding of information. Perhaps one of the earliest efforts was that of McFall (1982) who examined three stages in the development of social skills: decoding, decision-making, and encoding. This basic model has been adapted in various ways, resulting in models of child abuse (Milner, 1993), sexual assault (Craig, 1990; Lipton, McDonel, & McFall, 1987) and spouse abuse (Holtzworth-Munroe, 1991). Noteworthy examples of this approach to aggression in general are Dodge's (1986) work with aggressive children and Berkowitz's (1998) cognitive neoassociationist model.

Socio-cultural theories tend to rely on macro-level analyses and examine structural features of a society that could account for differences in rates of violence against women in different social groups. Numerous studies have identified regional, racial, and/or class differences in reported incidents of all the various forms of violence against women. Explanations lie in examining the effects of racism, sexism, social disorganization, unemployment, economic inequality, and alienating conditions of urban life (for examples see Baron & Straus, 1989; Erez & Tontodonato, 1989; Hastrup & Elsass, 1988; Rozee, 1993; Stout, 1992; Yllo, 1983). These theories suggest that violence may serve a social function and/or be reflective of a culture-of-violence.

Feminist theories integrate features of social learning theory and socio-cultural analyses, by stressing the impact of socio-cultural influences on the learning process. However, feminists argue that violence against women is primarily an act of domination created by social inequalities, motivated by a need for power, and fundamentally rooted in a patriarchal value system (Brownmiller, 1975; Riger & Gordon, 1981). Thus, violence against women is seen as a social mechanism for the control of women.

Application of each of these single-factor theories to diverse types of male violence against women has

generated testable hypotheses and yielded data contributing to our understanding of the various phenomena. However, each has focused on a single contributing factor or a single level of analysis to the exclusion of alternative sources of influence. For example, understanding the personality characteristics of men who show a proclivity to commit sexual assault, or assessing biases in social information processing, ignores the cultural milieu in which these tendencies were developed and are enacted. Conversely, focusing on sociocultural factors predictive of violence against women tells us little about the mechanisms that lead these factors to affect the behavior of some men but not others.

In response to the short-comings of single factor theories, multi-factor theories have emerged that provide a more complex and integrated perspective on male violence against women. Whereas some of these multi-factor theories have examined the numerous determinants of a particular type of violence against women (i.e., Berkowitz, 1992; Finkelhor & Browne, 1985; Riggs & O'Leary, 1996; White & Koss, 1991; Worell & Remer, 1992), others have attempted to examine precipitating factors common to more than one type of violence (Malamuth, Linz, Heavey, Barnes, & Acker, 1995; Malamuth, Sockloskie, Koss, & Tanaka, 1991; Shotland, 1992). These more recent theories are more appropriately considered models. They are less tied to traditional theories, are more descriptive, and rely on complex forms of data analysis (i.e, path analysis, structural equation modeling) to derive a representation of the relationship between variables predicting some forms of violence against women.

For example, Finkelhor (1984) identified individual and social/cultural variables in his model of childhood sexual abuse. Similarly, Berkowitz (1992) examined the role of culture, social situations, early learning and experiences, and individual difference variables as antecedents of acquaintance rape and sexual assault, as did White and Koss (1991). White and Koss extended work on acquaintance sexual assault by using a levels-of-analysis approach to organize the multiple determinants of sexual aggression. Their approach was based on Dutton's (1988) analysis of domestic violence.

Although comprehensive in their coverage, these analyses focus on a single type of male violence against women. These efforts have not looked closely at the relationship between sexual assault, dating violence, and battering, although there is evidence of a connection (Feld & Straus, 1989; Roscoe & Benaske, 1985). Also using a levels of analysis approach, Bondurant and White (1994) have presented a model of men who sexually harass. Fitzgerald (1993) too adopts a multicomponent model of sexual harassment.

Furthermore, these theories still fall short on three dimensions in our effort to understand violence against women in its myriad manifestations (White & Kowalski, 1998).

First, gender is not a core construct in most multi-factor theories, nor is the gendered nature of aggression acknowledged. We suggest that aggression and violence cannot be fully understood without considering the central role gender plays in the construction of aggression. By this, we mean that aggression is seen as an inherent component of a culturally constructed masculinity; it is a characteristic associated with power and control, to be used to dominate (see Thompson, 1991; White &6, 1995; White & Kowalski, 1994). It is seen as an appropriate affective response to frustration and anger for men, but not for women. Whereas women are taught self-control, men are taught to control (Campbell, 1993). Male violence against women occurs in a social context that prescribes particular gender-based roles and patterns of cross-gender interaction. An integrative levels-of-analysis approach to male violence against women, discussed in detail below, acknowledges the gendered nature of social relationships, including family, work, and peer relationships (Unger & Crawford, 1999). In addition, such an analysis recognizes that personality and cognitive factors that contribute to the incidence of male violence against women "are embedded in gendered social structures that define and direct the gendered meaning of sexual and violent behaviors" (Koss et al., 1994, p. 6).

Second, among multi-factor theories that recognize sociocultural influences, the research focus is at the level of the individual. For example, the individual's perspective, usually obtained via self-report, is used to obtain information about dyadic factors and sociocultural variables. This focus stems, in part, from the methodological limitations imposed by traditional types of psychological research. Research has fallen short in investigating the multiple determinants of intimate male violence against women. Research focusing on intrapersonal predictors of male violence against women has ignored the situational, dyadic, social network, and social-cultural variables that interact with individual difference variables. What is needed is a more interdisciplinary research approach in which independent sources of information are acquired from sociologists, anthropologists, criminologists, and epidemiologists, as well as psychologists. Interventions designed to stop male violence against women or to aid victims of such violence similarly must be developed from information gained from more than one independent source. More research that actually examines dyads is needed (see O'Leary, 1988 & Malamuth et al., 1995 for examples). Also, exploring cultural influences on behavior requires study at the macro-level.

Third, the majority of the multi-factor theories focus on a single type of violence. This renders less visible the commonalities that underlie all types of violence toward women. We certainly recognize that, because of the complexity of each form of violence, it would be beyond the scope of individual research projects to assess all possible variables or to include all types of violence against women. However, this leads to a tradition of different researchers, journals, readers, and ultimately theories for each type of violence against women.

CURRENT THEORETICAL CONCEPTUALIZATION

The review of the research on dating violence and sexual assault as well as the review of previous intervention/prevention efforts, suggest that the most effective approach to understanding intimate partner violence is to examine factors at each level: socio-cultural (the school/community), social networks (peer relationships and teacher/student relationships), dyadic (intimate partner conflict resolution/communication patterns), situational (use of alcohol and drugs and dating patterns) and individual (student attitudes towards gender roles and violence in relationships). Hence, our work can be conceptualized in terms of White and Kowalski's (1998) integrative contextual developmental model that examines a wide range of factors across various forms of violence against women and which reveals their commonalities. The model provides a meta-theoretical framework within which to conceptualize violence against women. The model describes five levels of interacting factors: socio-cultural, social networks, dyadic, situational, and individual. This perspective examines individual behavior in context. This model suggests that individual variables are expressed within a cultural and social context, while also reflecting the influences of personality, attitudes and beliefs, cognitive processes, and learning history. Thus, certain individual variables predict violence, but only in specific situations.

The model assumes that patriarchy operating at the historical/socio-cultural level affects the power dynamics of all relationships. Shared patterns of ideas and beliefs passed down from generation to generation define one's social networks. Historical and socio-cultural factors create an environment in which the growing child learns rules and expectations, first in the family network, and later in peer, school, intimate, and work relationships. Early experiences define the context for later experiences (Huesmann & Eron, 1995; Olweus, 1993; White & Bondurant, 1996). Embedded in these social networks are characteristics of the personal relationships in which individuals act violently. Power dynamics become enacted in social networks and result in the internalization of gendered values, expectations, and behaviors. Thus, cultural norms governing the use of aggression as a tool of the more powerful to

subdue the weaker combines with gender inequalities to create a climate conducive to violence against women.

SOCIO-CULTURAL LEVEL. The socio-cultural level of analysis examines historical, cultural, social, institutional and community influences on behavior. Factors examined include sexual inequalities, gender role prescriptions (including dating and sexual scripts), and cultural norms and myths about women, men, children, family, sex and violence, as well as scripts for enacting relationships. Expectations about the appropriate roles for men and women are communicated through various institutionalized practices of a society, including those of the legal system, the church, schools, media, politics, and the military. All set the stage for the evolution of cultural myths that perpetuate male violence against women.

During adolescence, young men and women experience extreme pressure to conform to traditional gender roles. Unfortunately, part of establishing a masculine identity for young men often involves distancing oneself socially and psychologically from anything feminine (Kahn, 1984). Young men seek out companionship from other men and distance themselves from women except in social contexts involving "power-enhancing" or sexual opportunities (Lott, 1995).

It appears that dating violence and sexual assault among adolescents is so prevalent, in part, because of the overall structure and meaning of dating in our culture, which give men greater power. Adolescent dating patterns follow a fairly well-defined script that has not changed much over several decades. A dating script is a set of rules to be followed by girls and boys that affords men greater power relative to women because they are expected to initiate and pay for dates, and because relationships generally are perceived as more important to women than men (Breines & Gordon, 1983). Women are assumed to be responsible for how "far things go," and if things "get out of hand," it is their fault. Men who endorse traditional scripts are more likely than men who do not to perceive force and coercion as acceptable means of obtaining desired outcomes regardless of the circumstances.

Cultures in which less traditional gender roles are prescribed and in which male dominance and female subordination are not encouraged show fewer instances of male violence against women, supporting the idea of socio-cultural contributions to such violence (Rozee, 1993). However, although all men within a given culture are typically exposed to similar socio-cultural pressures to behave in accordance with their assigned gender roles, not all men commit violent acts against women. One reason not all men are violent towards women lies in the multiply-determined nature of male violence against women. Embedded within one's culture are situational, dyadic,

and individual influences that may either increase the likelihood of violence or mitigate against it. In this study we assess the socio-cultural context by evaluating the response of the community and the schools to dating violence; this response includes sanctions for perpetration, concern for victim safety and health, responses to victims when they report, prevention education activities, and students perceptions of school attitudes toward dating violence.

SOCIAL NETWORK LEVEL. The social network level of analysis focuses on one's history of personal experiences within various social institutions (family, peers, school, church, and work settings). The gendered norms and expectations that contribute to male violence against women are transmitted through these institutions. Witnessing and experiencing violence in the family of origin alters the likelihood of later involvement in violent episodes. Men who either witnessed or experienced violence as a child show a higher likelihood of being sexually aggressive than men who were not exposed to violence (Koss & Dinero, 1989). A similar pattern holds for perpetrating courtship violence (Kalmuss, 1984; Straus et al., 1980). As with the family unit, other social networks may promote a system of values that reflect socio-cultural understandings of gender inequality. Within these networks, adversarial sexual relationships and the acceptance of interpersonal violence may be encouraged and rewarded. For example, exposure to delinquent peer groups, whether at school, work, or in the community at large has been shown to be related to dating violence and sexual assault (Gwartney-Gibbs et al, 1983; White & Koss, 1991).

The gender-related patterns learned in childhood are played out in adolescent dating and committed relationships. Young people usually begin dating in high school, although children as young as kindergartners talk about having boyfriends and girlfriends. The idea of being paired with a member of the other sex is pervasive in our society. Traditionally, it has been assumed that children's "playing house," and later, dating provide a context for socialization into later roles, including husband, wife, lover, and confidante (Rice, 1984). Dating also offers opportunities for companionship, status, sexual experimentation, and conflict resolution. However, courtship has different meanings for young women and men (Lloyd, 1991). Whereas for men courtship involves themes of "staying in control," for women themes involve "dependence on the relationship." Violence is one of the tactics used to gain control in a relationship. In this study we are assess social network level influences by measuring peer and faculty norms regarding the use of violence in dating relationships, peer gender role attitudes, and social support. We have chosen not to assess experiences with family violence and childhood sexual abuse although they are known

risk factors for dating violence. We do because the present project is focuses on using the ecological model to change modifiable risk factors operating in the social contexts most salient during adolescence, the school and peer groups.

DYADIC LEVEL. Whereas social networks focus attention on a perpetrator's and victim's history of interpersonal relationships, particularly within the family and peer groups, the dyadic level focuses on the nature of one specific relationship, the one between the perpetrator and victim. Several researchers have found that violence is more likely to occur in serious than in casual relationships (Pedersen & Thomas, 1992), suggesting that violence in more committed relationships may reflect the acceptance of violence as a legitimate mode of conflict resolution (Billingham, 1983). On the other hand, violence in a developing relationship may be a way of "testing the relative safety of a relationship before movement to greater commitment is risked" (Billingham, 1983, p. 288). Violence is more likely in relationships plagued by problems, which include jealousy, fighting, interference from friends, lack of time together, breakdown of the relationship, and problems outside the relationship (Riggs, 1993), as well as disagreements about drinking and sexual denial (Roscoe & Kelsey, 1986). These are the conflicts young people report most frequently leading to feelings of confusion and anger and resulting in violence (Sugarman & Hotaling, 1989). Malamuth et al. (1995) have shown that relationship distress predicts verbal and physical violence.

Research on acquaintance rape has shown that the degree of acquaintanceship between the perpetrator and the victim influences whether or not a sexual assault will occur, the type of strategy the perpetrator will use, and the likelihood that the assault will end in rape (White & Koss, 1991). More sexual assaults occur among acquaintances than among strangers (Koss, 1988). Furthermore, acquaintance rape is more likely during initial dating encounters, especially first dates, than in long- term relationships (Muehlenhard & Linton, 1987).. However, this finding may be confounded by the failure of many women involved in long-term relationships to recognize that they have been raped (Goodchilds, Zellman, Johnson, & Giarrusso, 1988). Shotland (1989; 1992) has proposed that relationship characteristics in conjunction with certain gender-role attitudes predict when sexual assault will occur. In particular, many people believe that sexual intercourse, even forced, is okay in relationships with a history of sexual intercourse (Shotland & Goodstein, 1992).

Nonverbal and verbal communication patterns between the members of the dyad may set the stage for violent interactions. More specifically, men and women do not always perceive behaviors in exactly the same way. Some

men interpret women's behavior in more sexualized ways than it was intended (Abbey, 1991; Kowalski, 1992, 1993), do not take her verbal protestations seriously (Check & Malamuth, 1983), and perceive the woman's rejection of sexual advances as a threat to their manhood (Beneke, 1982). According to Kowalski (1993), men who endorse adversarial sexual beliefs and interpersonal violence are more likely to misinterpret a woman's behavior as sexually connotative than men who do not hold such beliefs. Similarly, women may enter dating relationships with a cognitive set towards trust, companionship, and having a good time, and hence be less alert to the warning signs of assault (Nurius & Norris, 1996).

Romantic relationships may become "destructive traps" for women when they feel they must put maintenance of the relationship above their own self-interests (Carey & Mongeau, 1996). Other research finds that abused women also report more traditional attitudes toward women's roles, justify their abuse, and tend to romanticize relationships and love (Follingstad, et al., 1992). Many students believe dating violence is more acceptable in serious relationships (Bethke & DeJoy, 1993), and is not sufficient grounds for ending the relationship (O'Keeffe, et al., 1986; Bethke & DeJoy, 1993). In this study we assess dyadic-level influences by measuring communication skills in intimate/dating relationships, ways individuals cope with rejection, and methods individuals use and are exposed to as they resolve conflict in intimate/dating relationships and dating patterns, especially the times and locations spent alone with an intimate partner.

SITUATIONAL LEVEL. This level of analysis focuses on situational variables that increase or decrease the likelihood of interpersonal violence. In order for sexual or physical assault to occur, the situation must be conducive to the violence. Features of the situation influence the likelihood that violence will occur by affecting the opportunity for violent acts (i.e., times when privacy is available and detection minimal) and/or by contributing to the ambiguity of the situation (White & Koss, 1991). A number of situational variables influencing interpersonal violence have been examined, including time of day, location, and the presence of social inhibitors or disinhibitors, including alcohol and drugs (White & Koss, 1991). Courtship violence is most likely to occur in private settings (Laner, 1983; Roscoe & Kelsey, 1986) and on weekends (Olday & Wesley, 1983).

Alcohol and drugs are also related to incidents of male violence against women (Pagelow, 1984). Slade, Daniel, and Heisler (1991), in an examination of a range of relationship-related homicides, found that alcohol and drug use was common and not dependent on the nature of the relationship between the suspect and victim. Alcohol acts as a

disinhibitor for the man, as an excuse for the violence after it has occurred, and as a means of reducing the victim's resistance (Richardson & Hammock, 1991). In cases of dating violence, alcohol use is common (LeJeune & Follette, 1994; Williams & Smith, 1994). In cases of acquaintance rape, alcohol may enhance ambiguity by increasing the likelihood that men may misinterpret a woman's friendly behaviors as sexual (Abbey, 1991). Some men may interpret a woman's consumption of alcohol as an indication that she is "loose." In this study we assess situational-level influences by measuring the use of alcohol in social/dating situations.

INDIVIDUAL LEVEL. The most developed theories of violence occur at the individual level. The focus at the individual level is on attitudinal, motivational, and characterological features of the individual. However, it is recognized that individual attributes typically emerge as the result of experiences in various social networks. Thus, there is a dynamic interplay between factors operating at these various levels. For example, attachment style reflects an intrapsychic characteristic that results from earlier interpersonal interactions. Similarly, the attitudinal underpinnings of male violence against women, in particular, the endorsement of traditional sex-role stereotypes and cultural myths about violence, often stem from being reared in households where violence was considered normative.

Certain individual variables have been identified that underlie instances of male violence towards women. The endorsement of traditional sex-role stereotypes and cultural myths about violence is predictive of intimate male violence against women. Relative to nonsexually aggressive men, sexually aggressive men more strongly subscribe to traditional gender stereotypes (Burt, 1980; Malamuth, 1988; Mosher & Anderson, 1986; Rapaport & Burkhart, 1984). Similar findings have been obtained in studies examining the characteristics of men who abuse their dating partners or spouses (Dutton, 1988). A history of promiscuous-impersonal sex and hostile masculinity (distrust of women combined with gratification from dominating women) represent factors associated with sexual violence toward a female partner, whereas relationship distress and verbal aggression are predictive of physical aggression (Malamuth, Linz, Heavey, Barnes, & Acker, 1995; Malamuth, 1996).

Furthermore, a man's need for power, dominance, and control over women appears to play a role in determining whether or not he will engage in violent acts against an intimate partner. A man who feels threatened by a loss of control, such as by being rejected, may attempt to regain that control by behaving aggressively. A consideration of the components of the violent acts perpetrated against women (i.e. intimidation, coercion,

belittlement) suggests that motives for power and dominance bear some relationship to the incidence of violence. Men who are quick to react to anger, believe that violence will aid in winning an argument, and have successfully used violence in other situations are likely to do so again (Riggs & Caufield, 1997; White, Koss, & Kissling, 1991). Similarities between men who engage in courtship violence and wife-batterers have been found (Ryan, 1995).

Certain personality and behavioral variables also seem to predict violence against women, including antisocial tendencies (Malamuth, 1986), nonconformity (Rapaport & Burkhart, 1987), impulsivity (Calhoun, 1990), low socialization and responsibility (Barnett & Hamberger, 1992; Rapaport & Burkhart, 1984), hypermasculinity, delinquent behavior, affective dysregulation (Hall & Hirschman, 1991; Murphy, Meyer, & O'Leary, 1991) and self-centeredness coupled with insensitivity to others (Dean & Malamuth, 1997). The extent to which these specific individual variables influence the incidence of violence against women depends on the degree to which cultural norms and the influence of social groups affect individual mental representations of the situation and the relationship with the woman. In this study we assess individual-level influences by measuring individual knowledge of various forms of violence, acceptance of various forms of violence, gender role attitudes, dating behavior and delinquency.

STATEMENT OF THE PROBLEM

There is mounting evidence that the onset of serious acquaintance violence begins in early adolescence and tends to persist into adulthood. Both victimization by and perpetration of physical and sexual assault mark the lives of a significant segment of American teenagers and young adults. Early victimization, either by a family member, other adult, or peer, tends to lead to repeated victimization later in life. Also, the younger the perpetrator of sexual or physical assault, the more likely the offender is to become a recidivist in early adulthood.

Yet, little is known about the beginnings of acquaintance violence--the formation of patterns of victimization and perpetration, the risk and protective factors which influence the trajectory of acquaintance violence, and its adverse consequences. Although the prevalence of intimate partner violence is well documented, its precipitants are less well understood. What is known about the precipitants of acquaintance violence is largely derived from cross-sectional analyses.

Investigations of the physical and sexual victimization of women have largely relied on cross-sectional designs. While these studies have identified possible risk factors associated with interpersonal violence against women, cross-sectional analyses do not permit an assessment of the predictive power of those factors. Our

understanding of violence against women are has been hampered by: (a) the largely atheoretical nature of prior investigations, (b) the inability of cross-sectional designs to discern the relative predictive power of previously identified risk factors for victimization and perpetration, (c) a lack of consideration of the change in risk factors for victimization and perpetration across developmental stages (childhood, adolescence, and early adulthood), (d) inattention to the predictors of multiple victimizations and perpetrations, and (e) lack of analyses of the co-occurrence of physical and sexual assault. The analyses conducted in the present project were designed to address these gaps in our knowledge of violence against women.

To remedy the major drawbacks of previous research, we originally undertook a comprehensive five-year longitudinal study that drew upon (1) an interactive model of intimate partner victimization that draws together the central components of several theoretical perspectives, in particular those focusing on the individual (perpetrator and victim), the situation in which the violence occurred, and the larger social context (specifically family and peer group), and (2) a longitudinal design, the optimum method for analyses of precursors and consequences of assaultive relationships.

Although previous research has drawn attention to specific risk factors, no one formulation can account for the range of partner violence. Significant deficits of previous analyses mar our understanding of sexual and physical victimization and assault. With few exceptions (Koss, et al., 1987; Koss & Dinero, 1989; and since the beginning of this project, Malamuth, Linz, Heavey, Barnes, & Acker, 1995; White & Kowalski, 1998), most theoretical perspectives have been considered separately, and previous analyses have been limited to retrospective research designs. As a consequence we do not know: (1) the causal ordering of the risk factors identified by each perspective, or (2) the main and interaction effects of these risk factors over time. Without this basic information, it is impossible to predict sexual and physical intimate partner assault and its perpetration.

The theoretical model which has guided our analyses integrates the central psychological and sociological risk factors for involvement in sexual and physical relationship violence. This model includes characteristics of the victim, characteristics of the offender, and the social context of the offense itself. The risk of assault (either as a perpetrator or victim) is influenced by the extent of convergence of a vulnerable victim, a motivated offender, and a situation that provides a suitable opportunity for an assault (see Cohen and Felson, 1979). See Exhibit 1. The risk of involvement in intimate partner violence is increased by the interaction of three components:

(1) the social contextual and psychological characteristics of the victim;

(2) the social contextual and psychological characteristics of the offender; and

(3) the social context of the offense itself, as well as the social networks of the victim and perpetrator.

In the present project we focused on experiences with interpersonal violence at three stages in the life course: childhood, adolescence, and early adulthood. Childhood and adolescent data were retrospective. Data collected across the four collegiate years were prospective. Therefore, we have been able to test the model in two ways: (1) at each life stage separately, childhood, adolescence, and early adulthood, and (2) developmentally. Developmentally, we assessed the influence of risk factors at a prior life stage on involvement in relationship violence at a later life stage.

Our design and measures lend themselves well to using a developmental model that treats early childhood experiences with witnessed and experienced family violence and coercive sex as precursors of adolescent experiences which shape values and attitudes and affect one's mental health status. These factors in turn serve as causal factors in involvement in intimate partner violence during the collegiate years. In addition to these developmental antecedents, our model proposes that the social context of the assault (e.g., nature of the relationship between the victim and perpetrator and the use of alcohol and drugs) also affects the likelihood of intimate partner violence occurring. In addition, a longitudinal design permits analysis of each of the component parts and the interaction among them. The potential causal relationships among these risk factors and subsequent sexual and nonsexual relationship violence can be assessed.

See Exhibit 1

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CHAPTER 2

HYPOTHESES TO BE TESTED

The research goals of the proposed investigation were focused on physical violence among acquaintances, paralleling the work we have already done on experiences with sexual coercion. We were also interested in the co-occurrence of sexual and physical assault. The analyses fill a gap in our knowledge about violence against women by addressing the relationship between experiences of sexual and physical violence as either victim or perpetrator: Specific goals were (1) to explore whether and how the characteristics of the agent (perpetrator), the host (victim) and the environment (situational/contextual effects) individually and in combination affect the risk of physical victimization or its perpetration during the developmental stages of adolescence and young adulthood; (2) to examine how the three types of factors evolve from one developmental stage to the next to predict (a) the onset of victimization or perpetration or (b) the occurrence of revictimization or reperpetration. The specific hypotheses are outlined below:

Hypotheses related to victimization:

I. There will be statistically significant relationships between the various forms of victimization, i.e., women who experience one form of partner violence will also experience other forms (results reported in Chapter 4).

II. Early victimization experiences are significant risk factors for further victimization. Specifically, childhood victimization will increase the risk of verbal, sexual and nonsexual partner violence during adolescence, which in turn will increase the risk of victimization during the first year in college, which then increases the risk of further victimization in subsequent collegiate years (some of these results have been reproted in Humphrey and White [2000] which is excerpted in Chapter 5).

III. An additive model of revictimization is predicted. Prior victimization during childhood and adolescence increases significantly the risk of revictimization during the collegiate years. However, indices of sexual promiscuity and alcohol and/or drug use, along with gender role attitudes, values (religiosity), and involvement in heterosexual interpersonal conflict during adolescence will account for a significant portion of the variance in victimization during the collegiate year (i.e., these factors are predictors of victimization independent of prior victimization) (results reported in Chapter 6; chapter 7 reports on the role of risk perception as a risk factor for victimization).

Hypotheses related to perpetration:

IV. There will be statistically significant relationships between the various forms of perpetration, i.e., men who commit one form of partner violence will also commit other forms (results in Chapter 9).

V. Early perpetration and victimization experiences are significant risk factors for further perpetration. Specifically, childhood victimization will increase the risk of sexual, physical or both forms of acquaintance assault as an adolescent, which in turn will increase the risk of perpetration as a young adult (results in Chapter 8).

VI. An additive model of reperpetration is predicted. In addition to the effects of childhood victimization and adolescent perpetration as predictors of collegiate perpetration indices of sexual promiscuity, alcohol/drug use, delinquency, and involvement in heterosexual interpersonal conflict, along with attitudes/values (including gender role attitudes and religiousness), hostile masculinity, and dominance/nurturance ratio (self-centeredness untempered by sensitivity to others) will be significant predictors of collegiate acquaintance assault (results in Chapter 8).

To test hypotheses 1 and 4, chi square analyses were used to examine the significant co-occurrence of various experiences. Initially, two-way contingency tables looking at the presence-absence of childhood sexual assault experiences, childhood exposure/experience of sexual, physical and witnessed family violence, adolescent sexual assault, adolescent physical assault, and subsequent collegiate sexual and physical assault were constructed. These analyses were followed by logistical regression analyses to determine the relative risk of one form of violence given the presence of other forms. These latter analyses allowed us to determine the additive and interactive effects of involvement with various forms of interpersonal violence.

To examine the time course of various forms of victimization (hypothesis 2) and perpetration (hypothesis 5), survival analyses were performed, both overall, as well as for subgroups conditioned on prior experiences (i.e., the time course of victimization from adolescence through he young adult years for those with and without childhood victimization).

For initial analyses each student were categorized as having been or not having been victimized/a perpetrator at some point during their college years. The number of students in the sample during each time period, who began the period nonvictimized/nonperpetrator and the number who were subsequently victimized (or who were perpetrators) during that period was calculated.

Based on these numbers a hazard function was estimated. A hazard function is the probability of

victimization/perpetration during a specified time interval. From the hazard function a survivorship function and a density function was also be calculated. The survivorship function is simply the probability that a person has not been victimized, or has not been a perpetrator, from the onset of the study, to a specified time interval. This is also known as a cumulative survival rate and can described graphically as a survival curve. The probability density function is, conversely, the proportion of women who have been victimized, or men who have been perpetrators, during a given time interval; this is also known as the unconditional failure rate. The hazard function is the conditional failure rate. Since there is no a priori knowledge of what these survival functions should look like nonparametric methods of estimating them will be used. These give a clear and easily interpretable picture of the likelihood of victimization and perpetration across the collegiate years. We were able to describe the nature of the hazard function: does it increase, decrease, remain constant, or change in a more complicated fashion across time?

The hazard function, and its related functions, were compared for students with and without a prior history of victimization/perpetration. In the analyses, censored data are handled readily. Censored data included both cases lost prior to the final assessment phase and cases of no victimization/perpetration by the end of the study. Since the sample sizes for those with and without a prior history of victimization and perpetration were disparate, standardized rates were obtained, using the direct method described by Lee (1980) before comparisons are made. To compare the survival distributions of the prior history and no prior history subgroups, a generalization of the Wilcoxon Test for censored data was used.

Within the prior history subgroup additional subgroups according to type of victimization/perpetration experience were identified, and separate life table analyses performed. The generalization of the Wilcoxon Test was again performed, this time followed by multiple comparison procedures to identify which subsamples have different distributions.

Finally, a number of preliminary univariate and multivariate analyses including correlation, analysis of variance, and factor analysis, were conducted. Theoretical considerations guided these analyses. These models include Malamuth, et al.'s (1995) confluence model of male violence against men, Riggs and O'Leary's (1996) model of courtship violence and Finkelhor and Browne's (1985) model of traumatic sexual victimization.

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CHAPTER 3

SAMPLE AND METHODS

In 1990, the National Institute of Mental Health awarded Drs. White and Humphrey a grant to conduct a five year longitudinal study (1990-1995) of the risk of sexual and physical assault among university students. The longitudinal study was designed to examine prospectively the relationship among the major risk factors that retrospectively have been identified as the best predictors of sexual victimization and perpetration among university undergraduates. We worked with the university administration to gain permission to survey students in groups during the first day of student orientation; we trained student orientation leaders to administer the survey, thus making participation in the study an integral part of the student orientation activities. This insured almost 100% compliance (approximately 50% of all incoming students attended orientation). Students who did not attend orientation, which is not required, were contacted by phone. The overall participation rate, given these two procedures was approximately 83%. Also, according to the Carnegie Foundation for the Advancement of Teaching (1987), this university is considered representative of state colleges, the type to which approximately 80% all college students attend.

Before the initial survey was administered its purpose and methods were explained and signed consent was obtained. Students also completed contact sheets for the purpose of follow-up. These requested information on name, local address and phone number, along with the name, address and phone number of a person who would be most likely to know where the student would be the next year, who could be contacted if we had difficulty locating the student. To ensure confidentiality and still permit the matching of surveys across time, each survey and corresponding contact sheet were assigned a randomly determined code number. Only code numbers appeared on surveys and answer sheets. Lists of codes and corresponding names were kept in a locked safe to protect the identify of participants; access was limited to the co-investigators and the data manager. To further ensure confidentiality of the data, and to bolster students' confidence in our commitment to protecting confidentiality, we obtained a federal Certificate of Confidentiality.

Toward the end of each spring semester, students were contacted and asked to complete a follow-up survey during one of several sessions held at various locations around campus (i.e., student center, dormitories, classrooms). Postcards were sent to remind students of the follow-up survey and to announce times and locations for

the sessions. These sessions were conducted by trained undergraduate psychology majors and graduate students. Students who did not attend one of these sessions were contacted by telephone and invited to participate. They were given the option to attend a session being held on campus, or of receiving the survey via mail. This was particularly useful for students who had withdrawn from the university and residing out of town. All students who participated in the follow-ups received $15 each time they participated. Students who had withdrawn from the university were also resurveyed. During the first three years of the project 300 students (150 women and 150 men) also participated in one-on-one interviews.

Two incoming classes of women were surveyed regarding a variety of social experiences. Approximately 83% of the 1990 class (n=825) and 84% of the 1991 class (n=744) provided useable surveys. The sample consisted of 25.3% African-American women, 70.9% Caucasian, and 3.8% other ethnic groups. Successive retention rates for each follow-up were, for the 1990 sample, 88.2%, 83.2%, 83.6%, and 78.1% (47.9% of the original sample participated in the entire project; this number is only slightly lower than the percentage of students who remain in the university during a five year period, 55%). For the 1991 sample, successive retention rates were 90.2%, 83.9%, 77.9%, and 77.1% (45.4% of the original sample were retained throughout the entire project).

Three incoming freshmen classes of men (1990, 1991, 1992) were also administered a survey of a range of social experiences (N=835). Of the total number of incoming men, 65% completed the first survey. Yearly retention average 71%. Twenty-two percent of the original sample completed all five phases of the study. Of the original sample, approximately 87.4% were white; 9.3% were black; and 3.3% belonged to other ethnic groups.

DESIGN. A classic longitudinal design, replicated over two cohorts (those born in 1972 and 1973), each assessed first when 18 years old, and again when 19, 20, 21, and 22 years old was used. We assumed that there would be no significant time of measurement effects. Each survey covered a non-overlapping year in the student's life. Students were given a fixed reference point that limited the recall interval to the previous year. Furthermore, the attitude and personality measures asked student to report how they feel presently.

Our design and measures lent themselves well to using a developmental model that treats early childhood experiences with witnessed and experienced violence and coercive sex as precursors of adolescent experiences which shape values and attitudes and affect one's mental health status. These factors in turn serve as causal factors in involvement in coercive experiences during the collegiate years. In addition to these developmental antecedents, our

model proposes that the social context of the assault (e.g., nature of the relationship between the victim and perpetrator and the use of alcohol and drugs) also affects the likelihood of a intimate partner assault occurring. In addition, a longitudinal design permits analysis of each of the component parts and the interaction among them. The potential causal relationships among these risk factors and subsequent sexual and nonsexual relationship violence can be analyzed.

DEFINITIONAL ISSUES AND CONTEXT of QUESTIONS. Much has been written about definitional problems in sexual assault research (Muehlenhard, Powch, Phelps, & Giusti, 1992), and mechanisms for addressing these problems (Koss, 1992, 1993). Muehlenhard, et al has suggested that definitions be clear about the type of behavior specified, and criteria for nonconsent, including presence of force and consent rendered meaningless due to alcohol/drug intoxication. Additionally, Koss (1992, 1993) has discussed the importance of context of questioning, time frame used, and confidentiality. Recently, O'Sullivan (1995) has cautioned on the need to distinguish unwanted, but noncoerced, from coerced or forced sexual activity. A solution is to use behaviorally specific definitions, combined with specification of the age of assault to establish whether the assault occurred during childhood, adolescence, or adulthood. In our research we defined sexual assault as follows.

VARIABLES ASSESSED. Given a comprehensive model, informed by psychological and sociological literatures, the options for variables to include in the survey were extensive. Therefore, based on available data, and sample size limitations, it was judged theoretically and methodologically appropriate to focus on women as targets of sexual aggression and men as perpetrators of sexual aggression, recognizing that various forms of same-sex sexual aggression and female coercion of men would not be examined. However, we did examine women and men as perpetrators and targets of non-sexual and verbal aggression in romantic relationships because of the parity suggested by the research literature.

In our research each domain of theoretical interest was defined conceptually. A review of the relevant literature pointed to the best instruments to operationally define each construct.

The survey was designed to assess various predictors, correlates, and consequences of involvement with interpersonal violence during childhood, adolescence (retrospective data), and throughout the college years (longitudinal data). Thus, the first survey included measures of experiences with sexual abuse prior to the age of 14 years old, as well as a measure of sexual assault from age 14 to the present (age 18). The subsequent surveys

included measures of sexual assault during each year of college (i.e., since the previous survey), which was used as the measures of adult experiences.

Two clusters of risk factors were identified. The first was the Individual Experiences factor. This contained variables related to one's past experiences, attitudes and personality (including mental health status). The second was the Contextual factor, which contained measures related to the immediate circumstances of the victimization and perpetration.

In the Individual Experiences cluster, three groups of items were assessed. The first dealt with early childhood experiences with sex and violence. Two questions about family violence before age 14 inquired about observing and experiencing parental aggression (from Koss, et al., 1987). The Straus (1979) Conflict Tactics Scale (CTS) was used to obtain additional details about family violence. Seven additional questions assessed early sexual experiences, including abuse, and were based on Finkelhor (1984).

Respondents were asked about three types of childhood victimization during the first survey: sexual abuse, parental physical abuse and witnessing domestic violence. Childhood sexual abuse referred to any form of a sexual act perpetrated by an adult or any coercive sexual act perpetrated by a similarly aged peer, on the respondent before the age of 14, whether or not actual contact occurred. The screening context, developed to focus the respondent on the types of incidents we were interested in, stated that "Many people have sexual experiences as children. The following questions ask about any experience you may have had before you were 14." The first question inquired as to whether, prior to the age of 14, anyone had exposed themselves to the child, fondled the child/had the child fondle them, attempted sexual intercourse, or completed sexual intercourse. The second and third questions asked about the perpetrator's age and relationship to the child. Last, the respondent was questioned about what tactics the perpetrator had used, including coercion and/or force. For purposes of data analysis, a respondent was categorized as a childhood sexual abuse victim if any kind of sexual act (contact or non-contact) was perpetrated by an adult, regardless of the inducement strategy used or if a similarly aged peer used a coercive tactic. Parental physical victimization was measured by asking respondents how often, in an average month, their parents used "physical blows" like hitting, kicking, throwing someone down, against them. Those who indicated that this occurred at all were categorized as having been physically abused. Witnessing domestic violence was assessed by asking respondents how often, during an average month, their parents or stepparents delivered physical blows to one

another. Those who indicated that this occurred at least once in an average month were classified as having witnessed domestic violence. Finally, the measure of parental physical victimization and witnessing domestic violence were combined into a family violence measure for the purpose of certain data analyses. Only respondents who reported neither witnessing nor experiencing parental aggression were classified as nonvictims.

In the second group of Individual Experiences factors, questions about high school experiences with sex and violence were asked. To measure experience with courtship violence, Straus' CTS, as it applies to a dating context, was used. The Koss, et al. (1987) Sexual Experience Survey was used to assess sexual experiences. On the first survey, students were asked about adolescent experiences since the age of 14. On follow-up surveys, they were asked the same questions regarding experiences during the prior year only.

Physical assault during adolescence and college was assessed using the Conflict Tactics Scale (CTS). For the first survey respondents were asked to indicate how many times they had used each behavior with a romantic partner and how frequently romantic partners used it with them during high school. Romantic partner was defined as someone they were dating. The were instructed "The way that people can behave when showing anger toward a romantic partner or trying to get their way are listed below. For each of the following behaviors, show how frequently YOU have used (use) it with romantic partners and then how frequently romantic partners used it with you." These items were followed by questions about dating behavior during high school (frequency of dating, number of different dating partners), a question about sexual intimacy during dating, and a question about best friends' sexual activity. On each of the subsequent four surveys respondents were asked these same questions with the reference period being the past school year. A physical abuse scale was constructed and respondents who indicated that any one of five behaviors had occurred to them at least once were classified as having experienced physical assault: threatened to be hit or have something thrown at them; having something thrown at them; being pushed, grabbed, or shoved; being hit or an attempted hit, but not with anything; being hit or an attempted hit with something hard.

CTS items were followed by the SES items. On the initial survey the questions were introduced with the phrase "For the next set of questions, answer how often each of the following has occurred from age 14 on." The first question asked, "Have you ever had sexual intercourse with a (opposite sex) when you both wanted to?" The 10 SES questions about unwanted sexual activity followed. Men responded based on what they had done to a female,

and women, based on what had been done to them. We adopted a dimensional view of sexual aggression that defines sexual aggression on a continuum of seriousness. Thus, men were placed into one of six mutually exclusive categories based on the most serious behavior they endorsed: no sexual experiences, only consensual sexual intercourse, forced contact with a woman, verbally coerced sexual intercourse, attempted rape, or rape. For women, responses were used to place respondents into one of six categories of sexual experience based on the most extreme event they experienced: None, consensual only, unwanted contact, verbal coercion, attempted rape, or rape. For all analyses, only women who had no sexual experiences or only consensual experiences were categorized as nonvictims and only men who reported no sexual experiences or only consensual experiences were categorized as nonperpetrators. For various analyses we had the option to define victim and perpetrator variously, either as women or men who had any sort of unwanted, coercive sexual experience during adolescence or as women or men who had experienced attempted or completed sexual intercourse via physical force or threat of physical force. Being able to look precisely at various types of unwanted sexual experiences that were either coerced or forced is a real strength of the SES. Also, by asking respondents to report how many times each event had occurred, we are able to calculate a continuous measure of sexual assault experiences. This method has been used successfully by Malamuth (1986). Similarly, White, Donat, and Humphrey (1996) have reported good psychometric characteristics of this measure, and Kosson, Sullivan and White (1996) have also shown that this continuous measure correlates well with various indices of psychopathy in sexually aggressive men.

On each follow-up survey the SES questions were introduced with the phrase "For the next set of questions, answer how often each of the following has occurred during the past year." Respondents were also given a list of the past twelve months and ask to indicate in which month the event occurred.

The final group of items in Individual Experiences cluster assessed attitudes and personality variables theoretically predictive of victimization and perpetration and sensitive to change as a consequence of a victimization or perpetration experience. A measure of general sex role attitudes was based on four subscales of the Multicomponent Female-Male Relations Attitude Inventory (Ashmore & DelBoca, 1987): Acceptance of Traditional Gender Stereotypes, Women Taking Initiative in Dating and Sexual Relationships, Endorsement of Chivalry, and Acceptance of Male Heterosexual Violence. As a general index of mental health, the Mental Health Index reported by Veit and Ware (1983) was used. This yields five highly reliable and valid subscale scores appropriate for

assessing mental health in the general population: Anxiety, Depression, Loss of Behavioral/Emotional Control, General Positive Affect, and Emotional Ties. Survey participants also completed the Spence, Helmreich, and Holahan (1979) Extended Personal Attributes Questionnaire to assess positive and negative aspects of masculinity and femininity. Elliott and Ageton's (1980) Self-Report Delinquency Survey was included to assess antisocial tendencies and engagement in anti-social behaviors.

The Contextual factors cluster consisted of items assessing the social climate for students. This included the immediate circumstances of a sexual assault, such as when and where the event occurred, and the interpersonal context (i.e., nature of the relationship). This cluster assessed how well the participants knew each other, whether both were students, who initiated the encounter, and whether alcohol and/or drugs were used, and if so how much. Peer group characteristics were also assessed.

Additional control variables were included in the follow-up surveys, and included changes in relationship status, (i.e., engaged, married, divorced, etc) and participation in therapy or counseling. Additionally, during the five years of study, a number of articles presenting new data, conceptual ideas and methodological issues were published. This prompted us to consider adding variables to the follow-up surveys. This necessitated a consideration of omitting some scales so as to maintain a survey of manageable length. Thus, additional measures assessing family composition, family violence and familial alcohol and drug use also added to follow-up surveys. We also added items related to physical health, additional variables to assess the status relationship between perpetrators and victims of sexual and physical aggression, post traumatic stress disorder symptoms, attitudes toward alcohol, peer group characteristics, and plans for the future. All items about childhood and high school experiences were omitted from the follow-up surveys. Several items concerning personality and attitudes were omitted.

ATTRITION AND GENERALIZABILITY. One issue concerns the potential impact of the relatively low retention rates by the final year. This retention rate raises important questions about the generalizability of the findings.

The first issue is related to the adequacy of the sample size for analyses. A number of analyses suggested that the final sample size was adequate for men and women to test the major hypotheses. The second issue has to do with the generalizability of the results. The interpretation of results will be limited to undergraduate students who entered the study immediately following high school graduation, approximately ninety percent of whom were

residents of one state in the southeastern region of the US. The university is located in a semi-urban environment within the 80th largest city in the nation. The study is further limited to a four year undergraduate career. However, certain hypotheses concerning childhood and adolescent experiences can be tested for all those who initially entered the study. Additionally, for a substantial subset of the participants analyses relating childhood and adolescent experiences to the first collegiate year are possible. Sample sizes for analyses related to the later collegiate years were necessarily be smaller.

Because of possible confounds due to students withdrawing from the university, we conducted a set of analyses to examine the course of sexual victimization for only those women who remained in the study through all survey administrations. For this group of women the pattern of sexual victimization experiences was comparable to that of the entire sample. With regard to physical victimization by a dating partner, an analysis of variance suggested a difference in mean number of assault experiences during adolescence ($p = .048$); however, a post hoc analysis of these differences revealed no significant pairwise group differences. In general, women who completed one or two surveys reported slightly more adolescent victimization ($M= 7$) than women who were in the study longer ($M = 6.5$). Given the large sample sizes these differences are trivial. We further compared those who remained in the study (i.e., completed all 5 surveys) with those who dropped out at various points in time. We selected for comparison key theoretically relevant variables. These analyses revealed no statistically significant differences as a function of time in the study for childhood experiences with family violence nor for childhood sexual experiences. Furthermore, there were no differences in dating frequency or number of different dating partners during adolescence. Length of time in the study was also not related to race or relationship status at time of entry into the study. However, these analyses did reveal that young women who dropped out of the study early were more likely to display signs of psychological distress (anxious, feeling out of control and weak emotional ties [depression was not significant]), as well as being more sexually active as an adolescent and having more experiences getting drunk (although frequency of drinking was not different). Most importantly, for the purposes of the present study for none of these variables was a statistically significant interaction between victimization and length of time in the study found.

Similar analyses were conducted on the male data. The pattern of perpetration was similar for the men who participated in the survey but dropped out at sometime during the project and for just those who participated in the entire project. Thus, we do not think these patterns are biased by those men who did or did not complete the project.

Comparisons of men who completed the project with those who did not on key theoretical variables revealed no statistically significant differences for race, adolescent relationship status, childhood sexual experiences, childhood experiences with sex or family violence, or dating history (number of dating and sexual partners). However, men who withdrew from the study at the end of the first year of college had significantly higher levels of self-reported adolescent delinquency and drank significantly more during the first year of college. However, for none of these variables was there a significant perpetration by length of time in the study interaction.

For both men and women, it appears that factors associated with withdrawal from the study are those associated with reasons why students withdraw from college. Interestingly, it does not appear that sexual victimization or perpetration status is an associated factor. Furthermore, the differences observed were between those who completed all five phases of the study and those who dropped out during the first year. No differences on any measures were found for men or women who completed two, three, four or five surveys. Importantly, because of the initial size of both samples we have been able to test hypotheses for childhood and adolescent experiences for those who did and did not drop out in order to test the generalizability of the models developed.

See Exhibits 2-10

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CHAPTER 4

A Longitudinal Perspective on Dating Violence among Adolescent and College-age Women

[excerpted from manuscript submitted by Smith, White & Holland for publication]

Intimate partner violence, including both physical and sexual victimization, is unfortunately a problem affecting even our adolescent population. White and Koss[1] in their national sample of college students found that 32% of the women were recipients of dating violence. Similarly, Sugarman and Hotaling[2] reported that almost 40% of women have reported violence in dating relationships at some point in time. Other studies report disproportionately high rates of sexual victimization among adolescents and young adults[3]. The most recent findings of the National Crime Victimization Survey indicated that half of all sexual assault victims were between the ages of 12 and 24[4]. The National Victims Center has reported that most rapes occurred prior to the age of 24[5]. A recently concluded longitudinal study of college women reported that levels of sexual victimization were higher in high school than during college[6]. This same study found that during college, prevalence was highest during the freshman year, declining each subsequent year. Coker and colleagues found, using data from South Carolina Youth Behavior Risk Survey, that 14.4% of girls in grades 9-12 reported lifetime severe physical assault dating violence and 21.3% reported lifetime forced sex experience.[7] Similarly, a recent study of high school students in one rural North Carolina county by Smith and Bibeau[8] documented that 17% of young women in grades 9-12 had experienced at least one instance of sexual assault and 20% reported being hit or physically hurt in a dating relationship.

In addition to possibly placing these young women at higher risk for subsequent victimization as adults, both physical and sexual dating violence have serious health and social consequences for young women. Health outcomes associated with dating violence include depression[9], sexual dysfunction[10], post-traumatic stress disorder[9], fear and anxiety[11], suicide ideation and suicide attempts[7,12] and relationship problems.[13] Additional health problems correlated with dating violence and particularly problematic for adolescents and young adults include substance abuse[7,14], risky sexual behavior[7], sexually transmitted infection and unplanned pregnancy[15]. Wyatt et al.[16] have reported that unintended pregnancies and abortions were also significantly higher among women who have been sexually assaulted more than once compared to women who have been victimized once. Other important repercussions may include disciplinary problems in school, lower grade averages, lower college attendance rates, and drug use[17].

Most dating violence and sexual assault research has been cross-sectional. Little is known about the natural history of physical violence and sexual assault or of the co-occurrence of physical and sexual victimization from adolescence to young adulthood. Additionally, little is known about whether, given the high incidence of both physical and sexual assault, co-occurrence is inevitable or a unique form of adolescent victimization. This paper reports findings from a longitudinal study on the prevalence of physical assault in dating relationships and its co-occurrence with sexual assault. Following Humphrey and White[6] who reported on the time course of sexual assault, we examine the time course of physical assault from adolescence through four years of college, as well as the time course of the co-occurrence of physical and sexual assault. We also report on the extent to which experiences with childhood victimization (e.g., witnessing domestic violence or being victimized by sexual or physical violence at the hands of a family member) affect the probability of physical victimization in adolescence and in college, and how being a victim of dating violence at one time affects women's probability of being victimized again.

RESULTS

Several sets of analyses were performed. First, the percentages of women experiencing adolescent and collegiate physical and/or sexual assault were computed. Chi-square analyses, followed by the computation of odds ratios, were used to determine the possible relationship between sexual and physical victimization at each point in time. Second, the prevalence odds of collegiate physical victimization were computed as a function of childhood victimization and adolescent physical victimization. We performed nominal logistical analyses, which provided both the Wald Chi Square statistic and odds ratios. Third, survival analyses were conducted to determine the risk of first physical victimization from adolescence through four years of college as a function of childhood sexual victimization and the composite measure of family violence.

For these analyses the sample was dichotomized into victim or nonvictim for each nonoverlapping time period: childhood (i.e., prior to 14 years); adolescence (14-18 years); and, each year of college ($1^{st} - 4^{th}$). In the analyses, censored data were defined as both cases lost prior to the final assessment phase and cases of no victimization by the end of the study. Standardized rates were obtained using the direct method described by Lee[20] before comparisons were made, because the sample sizes for those with and without a prior history of victimization was disparate. The probability of physical victimization during each specified time interval, a hazard function, was estimated. Since there was no *a priori* knowledge of what these survival functions should look like, nonparametric methods of estimating them were used. A

subsequent survival analysis looked at the effects of childhood victimization categorized as none, only sexual, only composite family, or both sexual and composite family and adolescent physical victimization on subsequent collegiate physical victimization. A final set of analyses examined the impact of childhood sexual victimization and family violence on the likelihood of the co-occurrence of sexual and physical assault in adolescence and in the collegiate years.

INCIDENCE AND PREVALENCE OF PHYSICAL VICTIMIZATION. By the end of four years of college, 88% of the young women had experienced at least one incident of physical or sexual victimization and 63.5% had experienced both at some point during high school or college. Only 12% of the women indicated having not been physically or sexually victimized between age 14 and the end of the fourth year of college. The proportion of women experiencing any physical victimization (77.8%) and any sexual victimization (79.2%) was nearly identical (see Table 1).

By definition, all of the perpetrators of physical assault were "romantic partners" of the women. Most of the perpetrators of sexual victimization were identified by the women victims as a "boyfriend." In adolescence 62.4% were identified as boyfriends; the percentage of offenders identified as a boyfriend rose each year in college (67.7; 72.6; 75.4; 77.5). The combined percentage of offenders identified as boyfriend, friend, or casual acquaintance was at or over 95% across the five assessment periods (94.6; 96.6; 97.8; 97.5; and 97.3).

As indicated in Table 2 by the end of the fourth year, 76.6% of the white women and 81.1% of the African-American women had been physically victimized, whereas 78.4% of the white women and 81.5% of the African-American women had been sexually victimized; neither of these differences were significant. However, African-American women were significantly more likely than white women to be physically victimized during the 3rd year of college. African-American women were also more likely than white women to experience co-occurrence (both physical and sexual victimization during the same year) during the 2nd , 3rd and 4th years of college; race differences in co-occurrence overall (having experienced both at any point) was not significant ($p = .089$).

PREVALENCE ODDS OF CO-OCCURRENCE AND REVICTIMIZATION. Analyses indicated that the prevalence odds of being physically victimized in one year was significantly higher for women who were physically victimized the prior year than for women who were not. As shown in Table 2, even though the overall proportion of women being physically victimized decreased over time (from 49.2% in high school to 18.6% in the 4th year of college) the risk of being physically victimized rose across the four years for those women who had been physically victimized by a romantic partner the previous year (respective odds = 4.5 for adolescence to 1st year of college; 4.2 for 1st to 2nd year of college; 6.8 for 2nd to 3rd

year of college; and 7.0 for 3rd to 4th year of college). Hence, although women's overall risk of being physically victimized decreased overtime, the risk for those women with a history of physical dating violence increased each year.

Furthermore, the prevalence odds of experiencing one type of victimization given exposure to the other in the same year (i.e., co-occurrence) during adolescence and during each of the four years of college were significant (Table 2). This suggests that one type of victimization increases the risk of the other type. For example, during adolescence, women who were physically victimized were 2.2 times more likely experience sexual victimization than were women who were not physically assaulted and visa-versa. Over the time period studied, there was a trend of increasing odds. Hence, even though prevalence was going down over time women who experienced one type of dating violence were at increasing risk of experiencing the other. Overall, by the end of the 4th year of college, young women who experienced one type of victimization at any point in adolescence or college were 5.1 times more likely to experience the other type at least once by the end of college than were women who were never victimized.

SURVIVAL ANALYSES. The initial hazard analysis showed that adolescence (14 -18 years) was associated with the greatest risk of first physical victimization by a romantic partner (hazard rate, HR = .18), with the risk of first victimization declining substantially thereafter (HR's = .01, <.01, < .01 for collegiate years 1, 2, 3; hazard rates for the last time period are indeterminate). A subsequent survival analysis, examining hazard functions for groups defined by prior history of childhood sexual abuse and composite family violence (experienced and witnessed parental physical aggression), revealed significant differences in the hazard functions based on type of childhood victimization ($p < .001$) at adolescence only. During the collegiate years the risk of being physically victimized for the first time was quite low and not different for any of the groups. During adolescence, the hazard function for those with no childhood experiences (sexual abuse or composite family violence) was not different from those with only a childhood sexual assault history. However, the hazard rates were significantly greater for those who had experienced physical abuse as a child (with or without childhood sexual abuse). That is, childhood experiences with composite family violence (experienced parental physical assault and/or witnessed domestic violence), but not childhood sexual abuse, were associated with an increased risk of adolescent physical aggression by a romantic partner.

With regard to the impact of adolescent experiences on the risk of being physically assaulted in college, survival analyses indicated that adolescent physical victimization significantly increased the risk of subsequent physical victimization across the collegiate years (hazard rates given no adolescent victimization = .09, .03, >.01; with

victimization, HR's = .25, .10, .03 at years 1, 2, and 3, respectively. Similarly, adolescent sexual assault experiences also increased the risk of subsequent physical assault experiences (HR's = .18, .06, < .01) relative to no sexual assault in adolescence (HR's = .05, .02, .02).

When examined in combination, the impact of both sexual and physical victimization during adolescence on collegiate physical assault was dramatic (HR's = .34, .14, <.01). Whereas sexual assault in the absence of physical assault in adolescence did not increase the risk of physical victimization during the 1st year of college above base line, physical assault, without sexual assault in adolescence did, although not as much as when both physical and sexual assault have occurred (HR's = .14, .07, .06). An analysis that examined the impact of any kind of childhood victimization revealed that in the absence of adolescent physical victimization, there was no increase in the risk of collegiate physical victimization over base line. However, any adolescent physical victimization increased the risk (with or without the childhood experiences), but the risk was greatest for those who experienced both childhood sexual victimization and composite family violence (hr'S = .44, .13, <.01).

CHILDHOOD VICTIMIZATION AS PREDICTORS OF DATING VICTIMIZATION. Whereas the survival analyses inform us about the time course of physical dating violence and the point of peak risk, we used logistic regression analyses to examine the simultaneous effects of witnessing domestic violence, experiencing childhood physical abuse, and childhood sexual abuse on the odds of adolescent physical victimization. These analyses revealed only a significant effect for witnessing domestic violence (Wald statistic = 7.4, p = .006; odds = 1.7). A similar analysis assessing the effects of these three types of childhood victimization plus high school dating physical victimization on victimization during the first year of college found that only high school dating violence was significant (Wald statistic = 112.6, p < .0001; odds = 4.5) and that experiencing childhood physical abuse approached significance (Wald statistic = 3.9, p = .047). Additionally, analyses of variance indicated the impact of family violence on high school victimization varied by type of family violence and type of high school victimization. Women who were physically assaulted by a parent/guardian as a child were significantly more likely than women who were not to experience physical victimization only or co-occurrence but not more likely to experience only sexual victimization. Women who witnessed domestic violence were more likely than those who did not to experience co-occurrence but not either physical or sexual victimization alone. Finally, women who were sexually abused as a child were more likely than those were not to experience sexual victimization or co-occurrence but not physical victimization. Having experienced sexual or physical victimization in high school increased women's risk of all

forms of victimization the first year in college (physical only, sexual only, and co-occurrence).

DISCUSSION

This longitudinal study of college women found that physical and sexual dating violence are normative—fully 88% of the women indicated having experienced at least one incident of physical or sexual victimization between adolescence and their 4th year of college. Indeed it was rare for women to have not experienced one form or the other. These analyses indicated that young women were at greatest risk for physical dating violence victimization in high school, paralleling Humphrey and White's[6] finding that sexual assault was also greater during adolescence than college. For young women not victimized in high school, the risk of first victimization in college was low.

Our study further indicated that the co-occurrence of physical and sexual victimization was common and exceeds the rates expected given the base rate of each. By the end of their 4th year in college, 63% of the women had experienced both physical and sexual victimization. Not surprisingly, co-occurrence was highest in high school; however, it is important to note that the time frame covered by "high school" was four years whereas the time frame covered by each of the four years in college was one year. For all time periods, women who experienced one form of dating victimization were at much greater risk for experiencing the other form. This risk increased over time so that by the 4th year of college, women who experienced one form were 4.5 times more likely to also experience the other.

The time course of victimization revealed in this study indicated that childhood victimization increased women's risk of high school victimization, and that the different types of childhood victimization may place women at risk for different types of dating violence. Being physically abused as a child and witnessing domestic violence in the home, but not childhood sexual abuse, were associated with an increased risk of adolescent physical victimization in a dating relationship. In contrast, childhood sexual abuse increased young women's risk of sexual victimization in adolescence.

Further, young women who experienced physical victimization alone or physical and sexual victimization together, but not sexual victimization alone, in high school were at increased risk for physical victimization in college. Earlier analyses of these same data found that young women who experienced adolescent sexual victimization alone were also at risk for sexual victimization in college.[6] Importantly, we found that in the absence

of experiencing dating violence victimization in high school, young women who experienced composite family violence or child sexual abuse are not at increased risk for dating violence in college. Hence, although young adults who experienced childhood victimization were, in general, at greater risk for dating violence victimization in high school, those who experienced childhood victimization but were not victimized in high school were not more likely than those not abused as children to experience physical or sexual victimization in college.

Our findings suggest that adolescence is a time of critical importance for dating violence prevention. If we are able to prevent the occurrence of dating violence victimization during adolescence we can also prevent much college dating violence and possibly, adult domestic violence. Since the majority of young women who are victims of physical and/or sexual victimization in college are revictimized, early intervention and treatment for young women who are victimized in adolescence is also critical. Our findings, which are consistent with findings on the relationship between child abuse, juvenile delinquency, and adult criminal behavior[21], add to the growing body of literature pointing to the importance of addressing all forms of violence prevention in this population.

A positive trend is the increasing incorporation of dating violence prevention education and response into middle schools and high schools. Curriculum-based anti-violence education has been shown to be effective in improving cognitive knowledge of dating violence[22-23], knowledge of existing resources[23], conflict resolution strategies[24-25]. Such programs have also shown short-term attitude change of condoning dating violence as a means of resolving conflict[26]. These programs, however, have had only limited success in changing attitudes (consistency) and little to no effect in changing behavior[27].

Pediatricians and other health care providers who work with children and adolescents offer another important avenue to child abuse and dating violence prevention. They can incorporate dating violence screening and intervention into routine practice, building on the current interest in screening and identification of adult women who experience domestic violence[28-29].

See exhibits 11-12

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CHAPTER 5

ADDITIONAL RESULTS RELATED TO CO-OCCURRENCE

CO-OCCURRRENCE OF CHILDHOOD SEXUAL AND PHYSICAL ABUSE AND ADOLESCENT OUTCOMES

Childhood physical and sexual abuse have both been shown to have potentially detrimental effects on the developmental outcomes of women. Negative childhood experiences set the stage for adolescent development and later adult outcomes that may prove harmful in a wide array of interpersonal and intrapersonal factors. Most studies, however, have failed to assess how these outcomes differ when comparing women with no abuse, physical or sexual abuse, or the co-occurrence of these forms of abuse. One or both forms of abuse may produce different trajectories of development when considering these different types of outcomes. These analyses assess whether such differences exist when considering abuse occurring before age 14 and subsequent outcomes during ages 14-18.

Within our sample, 62% of women reported no forms of abuse before age 14, 7% co-occurrence of physical and sexual abuse, 18% only physical abuse, and 12% only sexual abuse. Analysis of variance and chi-square analyses were conducted to assess differences among these abuse groups on various outcomes in adolescence years (ages 14-18). These outcomes were considered under three basic domains: risky behaviors which included number of sex partners, frequency of unprotected sex and alcohol use during adolescence; interpersonal factors which included sexual revictimization and injuries from a romantic partner during adolescence; and individual characteristics which included psychological stress and eating disorders during adolescence.

Preliminary analyses indicated significant group differences in varying patterns on all outcome variables. Women experiencing both or either form of abuse had significantly more psychological distress, unprotected sex, eating disorders, alcohol use and adolescent sexual victimization than those with no history of abuse. Post-hoc analyses indicated further group differences among the different abuse groups. Women with co-occurrence of abuse reported significantly more sex partners and sexual victimization than those women with only physical abuse. These findings will be discussed along with intervention/prevention

CONSEQUENCES OF CO-OCCURRENCE OF SEXUAL AND PHYSICAL VICTIMIZATION DURING ADOLESCENCE

Four clusters of conceptually-grouped outcome variables (domains of dysfunction) were identified based on a review of the literature (primarily Beitchman et al., 1992; Hennaing et al., 1996; Malinosky-Rummell & Hansen, 1993; Neumann et al., 1996).

1. Traumatic experiences (revictimization)
2. Problem behaviors: suicidality, sexual behaviors/problems, alcohol/drug/delinquency, interpersonal aggression
3. Psychological health

SEXUAL AND PHYSICAL REVICTIMIZATION. Results of repeated measures analyses of variance revealed a significant effect for the type of adolescent experience (sexual only, physical only, both, none) on the total number of sexual victimizations across the four years of college, $F(1, 723) = 19.1$, $p < .001$, as well as the total number of physical assaults, $F(1, 698) = 21.7$, $p < .001$. There were also significant time by type of assault interaction for sexual victimization, $F(9, 2169) = 2.6$, $p = .006$, and for physical assault, $F(9, 2094) = 3.5$, $p < .001$.

Post hoc examination of sexual victimization across time revealed that adolescent co-occurrence resulted in significantly more sexual victimizations, followed by adolescent sexual victimization. Physical victimization in the absence of sexual victimization in adolescence, did not result in any more future sexual victimization than for women with no adolescent victimization experiences. The time x type interaction was due to no change across time in victimization for women with no or only physical victimization whereas those who had experienced only seuxal victimization or both types showed a decline in total number of victimizations across time. Post hoc examination of physical victimization across time revealed a similar pattern except that it was adolescent sexual victimization that did not differ from none, whereas both produced the highest levels of further physical victimization followed by physical only.

INJURY BY ROMANTIC PARTNER. Although injury reports declined across time, women who had experienced co-occurrence during adolescence and the first year of college remained at higher risk for further injury in the subsequent years of college relative women who had experienced no victimization or only sexual victimization.

MENTAL HEALTH. Women who experience no victimization reported the lowest levels of psychological distress (a composite score based on measures of anxiety, depression and loss of control). Women who experienced co-occurrence reported the highest levels of psychological distress, with other women reporting intermediate levels. Additionally, these differences were maintained across time. By the 4th year in college, women who had experienced co-occurrence in both

adolescence and the first year of college or had been sexually assaulted remained at higher levels of psychological distress than other women.

PHYSICAL HEALTH. Analyses of variance on women's ratings of their overall physical health during the fourth year of college, as well as reports of the number of visits to a medical doctor in the past six months (rating provided during the fourth year of college) indicated a significant effect for the cumulative co-occurrence of sexual and physical assault during adolescence and the first year of college. Women you experienced co-occurrence at both points in time reported more visits to the doctor than women with no assault experiences ($p = .10$). In general, women who had repeatedly experienced only physical assault rated their overall general health lower than other women.

PROBLEM BEHAVIORS: SUICIDALITY, SEXUAL BEHAVIORS, AND ALCOHOL USE. Women who experienced co-occurrence during adolescence were more likely to report sucidal thoughts during adolescence, more than other women, but suicidal thoughts in subsequent years were not related to co-occurrence in adolescence. With regard to sexual behaviors, an increased number of sex partners was associated with all types of victimization. During adolescence, the women who had experienced co-occurrence and those who had been only sexually victimized had the greatest number of sex partners, followed by those who had been only physically assaulted. These patterns did not change across time. Also, by the end of the fourth year of college, women who had been victimized in adolescence or the first year of college were more likely to have engaged in unprotected sex at sometime during college. The likelihood was greatest for those you had experienced co-occurrence. Finally, co-oocurrence had a significant effect of alcohol use. Alcohol use was highest for women who experienced co-occurrence in adolescence and the first year of college, whereas women with no victimization were the lowest, and other victimized women were intermediate. Although alcohol use decline across time this same ordering persisted.

See exhibits 13-24

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CHAPTER 6

WOMEN'S VULNERABILITY TO SEXUAL ASSAULT FROM ADOLESCENCE TO YOUNG ADULTHOOD

(excerpted from Humphrey & White, Journal of Adolescent Health, Dec., 2000)

INTRODUCTION

Sexual victimization, particularly of adolescents and young adults, is endemic in American culture. In a national probability sample of 4,008 adult women, it was found that 1 in 8 women reported being the victim of rape sometime in her lifetime, resulting in 12.1 million victims.[1] Approximately 4 in 10 of these women were victimized more than once.[1] The U.S. Department of Justice estimates that the number of sexual assaults occurring each year is well over 700,000.[2]

Victims of sexual assault are disproportionately adolescents and young adults. The most recent findings of the National Crime Victimization Survey indicated that half of all sexual assault victims were between the ages of 12 and 24.[2] The National Victims Center has reported that most rapes occurred prior to the age of 24, with 54% between the ages of 11 and 24, and an additional 29% prior to the age of 11.[1] Similarly, Koss and her colleagues,[3] in the only national survey of sexual and physical assault among college and university students, found that 27.5% of undergraduate women reported a physically coercive sexual experience (rape or attempted rape); 11.9% were verbally coerced into sexual intercourse; and 14.4% were verbally intimidated into other forms of unwanted sexual contact.

Sexually assaultive acts typically involve an offender acquainted with the victim. Approximately, three of every four female victims were sexually assaulted by a friend, acquaintance, intimate partner or family.[1, 2, 4] Moreover, physical injury is more likely when the assault is perpetrated by someone known to the victim rather than a stranger.[2] Sexual assault has emerged as the costliest criminal offense, resulting in an estimated loss of $86,500 per victim.[5]

Equally well-documented are the serious health consequences--both mental and physical-- of sexual victimization.[6] Among the mental health sequelae of coercive sexual relations are an increased risk of depression[7-10] sexual dysfunction[11-12], post-traumatic stress disorder[13-14], fear and anxiety[8], suicide ideation and suicide attempts[15-

[16], substance abuse[6], and relationship problems.[17-18]

In addition to the mental health consequences of sexual victimization, Koss and her colleagues have found that Avictims of rape and physical aggression reported twice as many outpatient medical visits and incurred medical costs that were 2 to 5 times as great as those reported by nonvictims.[19-20] Golding et al.[21], also found that female victims of sexual assault were more likely than nonvictims to seek medical services and mental health care. Waigandt et al.[22] found that victims of sexual assault visited their physicians approximately 35% more often than nonvictims, and were more likely to have high blood pressure, colds, headaches, and pains in the stomach, back, and chest. In addition, victims of sexual assault were twice as likely to experience disorders related to their reproductive physiology, and were three times more likely to have painful menstrual periods. Wyatt et al.[23] have reported that unintended pregnancies and abortions are significantly higher among women who have been sexual assaulted more than once compared to women who have been victimized once. Waigandt et al.[22] concluded that: Athere is sufficient evidence to indicate that many rape victims suffer not only long-lasting psychological difficulties, but long-term physical disturbances as well.

However, little is known about the risk factors for sexual victimization from childhood through the early adult years. We report here on the results of a five-year longitudinal study of sexual assault among undergraduate students--a population at exceedingly high risk for acquaintance victimization. We focused on patterns of vulnerability to victimization from childhood through four years of undergraduate education. Two central questions are addressed in the present analysis: (1) How do experiences with childhood victimization, e.g., witnessing domestic violence, or being victimized by sexual or physical violence at the hands of a family member, affect the probability of sexual victimization in adolescence? and (2) How do childhood and adolescent experiences with sexual victimization affect the probability of coercive sexual encounters during the undergraduate years?

RESULTS

Three sets of analyses were performed. First, the percentages of women experiencing childhood sexual victimization and childhood witnessed and experienced violence were calculated. Additionally, the percentage of women experiencing no sexual victimization, as well as each type of sexual victimization, during adolescence and during each year of college was determined. Chi-Square analysis was used to determine the possible relationship

between childhood and adolescent victimization. Second, survival analyses were conducted to determine the risk of first collegiate victimization as a function of childhood sexual victimization, witnessed and experienced family violence, and adolescent victimization. Third, the odds of collegiate victimization were computed given the main and interactive effects of childhood and adolescent victimization.

Frequency of childhood victimization. Initial analyses indicated no significant differences as a function of cohort or race in the frequency of the victimization experiences investigated; therefore, all analyses reported were collapsed across the two classes of students and race. For the 1,404 women who initially completed all the questions about childhood victimization, 36.03% reported that they had some form of childhood sexual experience: 16.6% reported sexual contact with a similar-aged peer or relative that was non coercive in nature; 5.12% reported some form of coercive sexual experience that involved a similar-aged peer or relative (3.0% involved exposure and/or fondling; 2.2% involved attempted and/or completed sexual intercourse); and 14.3% experienced some sexual contact with an adult (9.1% experienced exposure and/or fondling by an adult; and 5.2% experienced attempted and/or completed sexual intercourse by an adult).

Frequency sexual victimization during adolescence and across the four collegiate years. Based on responses to the Sexual Experiences Survey the incidence of each form of sexual assault was determined for adolescence and each collegiate year. A woman was classified according to most severe experience she reported. Table 2 reports the percentage of women falling into each of six mutually exclusive categories. Table 2 also gives the prevalence rates for victimization by the end of the fourth year. Evidence of a decline in victimization across time is clear. The annual incidence of victimization peaked during adolescence (49.5%) and declined during the subsequent four years of college: 31.3%, 26.6%, 25.5%, to 24.0%. However, by the end of the fourth year of college 69.8% of the women had reported at least one victimization experience.

For the purpose of a Chi-square analysis, childhood victimization was dichotomized as none (60.4%) or some (witnessed, experienced and/or childhood sexual abuse, 39.6%) and adolescent victimization was trichotomized as none (51%), moderate (unwanted or verbal coercion, 29%), or severe (attempted and completed rape, 20%). The Chi-square analysis $X^2(2)=73.45$, $p < .00001$, indicated that victims of childhood assault were significantly more likely to experience either moderate or severe adolescent victimization than nonvictims.

Survival analyses. The sample was dichotomized into victim or nonvictim for each nonoverlapping time

period (childhood, adolescence, each year of college). In the analyses, censored data were defined as both cases lost prior to the final assessment phase and cases of no victimization by the end of the study. Since the sample sizes for those with and without a prior history of victimization was disparate, standardized rates were obtained, using the direct method described by Lee[27] before comparisons were made. The probability of victimization during each specified time interval, a hazard function, was estimated. Since there was no *a priori* knowledge of what these survival functions should look like, nonparametric methods of estimating them were used.

The initial hazard analysis showed that adolescence was associated with the greatest risk of first victimization (hazard rate = .65), with the risk of first victimization declining substantially thereafter. A subsequent survival analysis, examining hazard functions for groups defined by the interaction of prior history of childhood victimization and adolescent victimization, revealed that in the absence of adolescent victimization, childhood experiences with sexual abuse did not elevate the risk of assault during the first year of college or subsequently relative to women with no childhood or adolescent experiences. Therefore, in a subsequent survival analysis, women were coded into one of three categories: no adolescent victimization, no childhood victimization + adolescent victimization, or childhood victimization + adolescent victimization. All three hazard functions were significantly different from each other (Lee-Desu statistic, $p < .005$). Furthermore, at each age there was no overlap of functions within one standard error. Additionally, within each hazard function there was no overlap within one standard error from one age to the next. In general, the risk of being victimized during college is greatest during the first year and declines thereafter for women in all three groups, with the risk remaining highest for women with childhood and adolescent victimization experiences and next highest for women with only adolescent victimization experiences.

Odds analyses. Nominal logistical analyses, which provided both the Wald Chi Square statistic and an odds ratio for each component in the model, were performed. The initial model examined the main and interactive effects of childhood and adolescent victimization on first year college victimization. Similar analyses were performed to examine the relationship between specific types of adolescent victimization on specific subsequent forms of victimization. Table 3 summarizes these odds analyses for the first year of college.

Analyses revealed that adolescent victimization more than quadrupled (4.6) the likelihood of first year collegiate sexual victimization, Wald X^2 (1)=69.4, $p<.0001$, whereas childhood victimization had no significant

effect, Wald X^2 (1)=.16, p>.60. Furthermore, childhood victimization in interaction with adolescent victimization did not increase the risk of collegiate victimization beyond that accounted for by adolescent victimization experiences. When these analyses were repeated examining the risk of attempted and completed rape specifically, the results were even more dramatic. An adolescent experience that meets the legal definition of rape or attempted rape increased by a factor of 13.7 the likelihood of being a victim of rape or attempted rape again during the first year of college, Wald X^2 (1)=56.4, p< .0001; adding childhood sexual victimization to the model did not alter the chances of being victimized again during the first year of college. Subanalyses revealed a significant relationship between the type of initial adolescent victimization (unwanted contact, verbal coercion, or attempted/completed rape) and subsequent victimization.

Finally, a model examining the effects of childhood, adolescent, and first year college victimization on subsequent college victimization (years 2-4) was also tested. The full model found significant effects for childhood, Wald X^2 (1)=4.8, p<.03, adolescent, Wald X^2 (1)=16.8, p<.0001, and first year victimization, Wald X^2 (1)=38.1, p<.0001. None of the interactions were significant. The corresponding odds ratios for subsequent collegiate revictimization were 1.6, 2.0, and 3.0.

Because of the possibility that victimization prior to entry into the study might be related to likelihood of attrition from the study, we determined that there were no significant differences in the proportion of students with no prior history of victimization (either childhood or adolescent) among the research participants who attrited from the study at different points in time, X^2 (4) = 3.68. There were also no significant differences among the various groups of students in the proportion who had been victimized during both childhood and adolescence, $X^2(4) = 3.67$. These similar patterns of victimization among those who participated in the study for different lengths of time suggested that the obtained patterns of revictimization were not due to confounds related to attrition. These results also suggested that victimization experiences did not differentially affect likelihood of withdrawing from the university.

DISCUSSION

The present analysis of the vulnerability of young women to sexual assault was limited to undergraduate students who entered the study immediately following high school graduation, approximately ninety percent of whom were residents of one state in the southeastern region of the US. The university is located in a

semi-urban environment within the 80th largest city in the nation. The study is further limited to a four year undergraduate career. The transition from an undergraduate student to the post-collegiate years and subsequent experiences during those years following graduation are beyond the scope of the present study.

The findings of our longitudinal investigation of sexual assault of college women nonetheless show a clear pattern of victimization. The highest risk for first victimization occurs in adolescence and consistently declines over time. Childhood sexual victimization appears to elevate the risk of victimization for adolescents.

The results suggest a simple linear path model. Childhood victimization predicts adolescent victimization, which in turn predicts first year collegiate victimization. First year victimization in turn predicts further victimization in subsequent collegiate years. This pattern occurs in spite of a lower incidence of sexual assault at each subsequent year of college. Given that the risk of first victimization (after age 13) occurred during adolescence, the results point to the importance of attending to adolescent experiences. Furthermore, given that childhood victimization increases the risk of adolescent victimization, the results also point to the importance of childhood experiences.

College women who have been sexually assaulted in adolescence are much more likely to be the victim of some form of sexual coercion during their college years. If the adolescent victimization took the form of an attempted or completed rape the risk of a further attempted or completed rape experience is exceedingly high.

Victims of sexual assault perpetrated by their acquaintances are not likely to report their victimization to the police. It is far more probable that these victims will seek medical attention for physical symptoms related to their assaultive experiences. The results of our longitudinal investigation are clear: unless primary care physicians and nursing personnel are aware that various medical problems in children and adolescents may be precipitated by sexually assaultive experiences, their victimization may well continue into adulthood. To avert the long term physical and psychological consequences of sexual assault of young women, it is imperative that early detection during childhood and adolescence by the medical community be improved. Training of primary care physicians, their assistants, and nursing personnel must include techniques for assessing the possibility of sexual victimization as an underlying precipitant of psychosomatic symptomatology. Sexual coercion experienced early in life, if left undetected, may well provide the foundation for a pattern of repeated victimizations with increasingly deleterious physical and psychological consequences.

See exhibits 25-26

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CHAPTER 7

RESULTS: PREDICTORS OF SEXUAL REVICTIMIZATION

Victimologists have noted that patterns of recurrent rape victimization are common (Cohen & Roth, 1987; Fromuth, 1986; Koss & Dinero, 1989; Sorenson, Siegel, Golding, & Stein, 1991; Wyatt, Guthrie, & Notgrass, 1992). Studies have found differences between single- and multiple-incident rape victims (Atkeson., Calhoun, Resick, & Ellis, 1982) as well as between victims and nonvictims (Burnam, Stein, Golding, Seigel, Sorenson, Forsythe, & Telles, 1988).

Estimates of recurrent sexual victimization range from 21% (Atkeson, et al., 1982) to 79% (Kanin & Parcell, 1977). Estimates are lower when definitions of sexual victimization are limited to completed or attempted rape; they are higher when sexual victimization includes a variety of unwanted sexual experiences. Interpretation of these estimates is difficult for two reasons. First, researchers have relied on retrospective reports of victimization taken from cross-sectional samples. Second, a variety of different, and frequently vague, definitions of sexual victimization have been used.

Using retrospective reports, Wyatt, et al (1992) interviewed 248 African- American and white women 18 to 36 years old about incidents of sexual abuse before and after age 18. They found that among women who had experienced contact sexual abuse before the age of 18[1], 30% experienced some form of contact sexual abuse in adulthood. Similarly, in Burnam, et al (1988) 3,131 women and men age 18 and older (predominantly Hispanic and non-Hispanic whites) reported on lifetime assaults, including age of first assault (6% reported an age of 5 or younger; 32% between 6 and 15 years old). Of the women, 16.7% reported at least one sexual assault, and two-thirds of these reported two or more lifetime assaults.

Two lines of arguments have been used to account for revictimization. The first set of accounts focuses on psychological consequences of the initial victimization that render victims more vulnerable to subsequent victimizations. For example, Finkelhor and Browne (1985) analyzed the effects of child sexual abuse in terms of four trauma-causing factors: traumatic sexualization, stigmatization, betrayal, and powerless.

The second set of explanations suggest that revictimization is more apparent than real, as a result of different cognitive processes involved in those who have and have not had prior victimization experiences. For example, an adult victimization experience may trigger memories of a childhood experience (a process of

"unrepression") or memory of a prior victimization may enhance memory for subsequent incidents and/or increase the willingness to admit to a subsequent experience.

One solution to problems of retrospective recall over long periods of time is use of a longitudinal design. A prospective approach also helps eliminate some of the confounds associated with cohort effects in cross-sectional studies that look at age factors. However, in spite of the merits of the longitudinal approach, few studies have been done. A number of prospective studies have followed the course of symptom development and amelioration in samples of identified sexual assault victims (Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992; Widom & Ames, 1994). On the other hand, Gidycz, Coble, Latham and Layman (1994) actually followed a sample of women, with and without a victimization history, to assess the impact of prior victimization on the likelihood of subsequent victimization. They substantiated in a group of college women (n=425; mean age=approximately 18.8) that those victimized early in life (childhood: prior to age 14; adolescent: age 14 to time of first survey) were at increased risk for subsequent victimization during a 3-month period in college. They first retrospectively assessed child and adolescent victimization experiences prior to the students' most recent victimization experience. These young women were then reassessed at 3 months later. Of those victimized during childhood or adolescence, 63.6% had been revictimized at the time of follow-up, compared to 26.6% of those with no prior early experience. Gidycz, Hanson, and Layman (1993) reported on a subsequent follow-up of these same students at 6 and 9 months following the initial assessment. They found that between the second and third assessment periods, 50% of those victimized at time two were revictimized at time three, compared to 2.4% of those not victimized at time two. Importantly, a path analysis demonstrated that victimization in each time period significantly predicted victimization in the subsequent time period. An added strength of their study was the distinction between moderate and severe victimization. These researchers used the Koss Sexual Experiences Survey (Koss, Gidycz, & Wisniewski, 1987) and defined moderate victimization as unwanted contact (i.e., kissing and fondling, subsequent to the use of verbal pressure, misuse of authority, threat of harm, or physical harm, or verbally coerced sexual intercourse, or intercourse subsequent to misuse of authority). Severe victimization was defined as rape and/or attempted rape (i.e., use of, or threatened use of, physical force).

A longitudinal design permits the assessment of psychosocial and behavioral characteristics at time one and time two, as well as the occurrence of sexual victimization status between these two points in time. Since such a design is premised on the assumption that all women are "the same" at time one, an assumption that is not

justifiable, the design needs elaboration. Built into it must be a consideration of experiences that occurred prior to the first assessment, and to control for pre-existing differences, especially earlier victimization experiences. If the victimized and non-victimized women do not differ at time one (prior to the victimization), after controlling for all pre-existing differences, but do differ on certain characteristics at time two following a victimization, then these characteristics may be considered outcomes rather than predictors/causes of the victimization.

Our previous analyses (see Chapter 5) have suggested that the single best predictor of first year college sexual assault is adolescent sexual assault, and that the best predictor of adolescent victimization was childhood victimization. This raises the possibility that the psychosocial and behavioral measures assessed at time one, while predictors of sexual assault during the next year, were themselves outcomes of earlier victimization. To control for this possibility analyses of covariance using time two measures as dependent variables and victimization status at time two (based on the Koss SES,categories) as the independent variable, with victimization status at time one (no prior history, only childhood victimization, only adolescent victimization, both childhood and adolescent victimization) and the time one measures of the dependent variables as covariates.

An additive model of revictimization was predicted. Prior victimization during childhood and adolescence increases significantly the risk of revictimization during the collegiate years. However, indices of sexual promiscuity and alcohol and/or drug use, along with gender role attitudes, values (religiosity), and involvement in heterosexual interpersonal conflict during adolescence will account for a significant portion of the variance in victimization during the collegiate year (i.e., these factors are predictors of victimization independent of prior victimization).

Results will be discussed for the categories of mental health, self-image, attitudes, interpersonal violence, and peer relationships.

For the mental health measures (based on Veit and Ware's Mental Health Index), after controlling for prior victimization and initial scores on each subscale, victims of first year college sexual assault were more depressed and lower on general psychological well-being than non-victims. Additionally, victims reported greater use of intoxicants than non-victims.

Additionally, victims appear to have a more negative self-image than non-victims, especially seeing themselves as more compliant and less instrumental.

With regard to acceptance of traditional gender role attitudes and chivalry, victims of rape and attempted rape were the most rejecting of traditional attitudes, whereas victims of verbal coercion and non-victims were the most accepting. For attitudes towards chivalry, victims of rape and women with no sexual experiences were most rejecting, and women with only consensual experiences and victims of verbal coercion were most accepting. Victims of rape and women with only consensual experiences were more accepting of casual sex between acquaintances that were sexually inactive women or women who had experiences unwanted sexual contact. Victims also tended to score lower on a measure of religiosity than women with no sexual experiences. Women with only consensual sexual experiences were lowest in religiosity. On the other hand, victimization status during college did not seem to affect acceptance of male violence towards women.

Turning to indices of interpersonal violence, victims of sexual assault reported higher levels of using and receiving verbal and physical aggression in their romantic relationships (see White & Humphrey, 1994).

Finally, the data regarding peer interactions suggest that victims reported a greater number of dating partners than non-victims, and that victims have more sexually active friends and friends who have been sexually victimized than nonvictims.

These various factors associated with first year college sexual revictimization were put into a regression analysis, with childhood victimization and adolescent sexual victimization entered first. Even after controlling for prio victimization experiences, the results revealed significant contributions associated with religiousity, endorsement of chivalrous attitudes, loss of control, having verbally aggressive personality style, and being physically aggressive toward dating partners. Other variables that were univariately associated with revictimization were no longer significant.

These results suggest: First year college victimization appears to have an impact in several areas of young women's functioning, even when pre-existing victimizations and level of functioning are controlled for. Women's values and attitudes, sense of self--as reflected in self-image and general psychological well-being, behaviors (use of intoxicants and dating patterns), and knowledge of peer sexual experiences are altered. Furthermore, other analyses indicated that childhood experiences with family violence and sexual abuse contribute to increased psychological distress (i.e., anxiety, depression, loss of

control, lack of emotional ties), increased use of intoxicants, a negative self-image, acceptance of male violence, and a tendency to engage in interpersonal physical aggression in dating relationships as an adolescent. Additionally, even when controlling for the impact of early childhood sexual and non-sexual aggression, adolescent sexual victimization is associated with significant increases in psychological distress, negative self-image, involvement in interpersonal aggression, increased use of intoxicants, and higher levels of dating a larger number of different people

Thus, in the context of early childhood experiences with family violence and sexual abuse, combined with further adolescent sexual victimization, it becomes easier to conclude that some women are at greater risk than others for further sexual victimization as a young adult. Most importantly, the contributors to this vulnerability were factors outside a young woman's control--things that happened to her as a child. As young girls, they probably learned a presentational style that perpetrators identify as an "easy target." Thus, women who are at risk for victimization are not to be blamed for the vulnerability-enhancing characteristics they possess. Rather, these attributes should serve as an aid in the prevention of further victimization. These results also suggest that the experiences of young girls and adolescents deserve much more research and intervention attention. If we wait till college to begin "date rape prevention" programs, it's too late for significant numbers of young women. The problem of violence against women is a developmental issue that must be addressed early on. Our data suggest that if adolescent victimization can be avoided childhood victimization alone does not increase the risk of assault during the first year in college.

Finally, a number of consequences of childhood and adolescent sexual victimization appear to become predictors of further victimization in the first year of college, even when childhood and adolescent sexual vicitmizations are controlled for. These include religiousity, endorsement of chivalrous attitudes, loss of control, having verbally aggressive personality style, and being physically aggressive toward dating partners.

See exhibits 27-35

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CHAPTER 8

RESULTS: PERCEPTIONS OF RISK

(excerpted from White, Smith & Humphrey, in press in M. Martinez (Ed.) Proceedings of the International Society for Research on Aggression, London: Kluwer Academic/Plenm Publishing)

Much effort has been directed toward developing effective rape prevention programs. Lonsway (1996) has argued that genuine prevention programs must be directed toward men; programs directed toward women are really deterrence programs. However, until effective programs for men are developed, there is a continuing need to find strategies for empowering women to reduce their chances of victimization. Recent research has begun to address the question of how women recognize cues associated with the risk of an assault. One aspect of this work has been a focus on cognitive processes related to risk perception (Norris, Nuriuss, & Dimeff, 1996). However, unless a woman believes that she is at risk it is unlikely that she will engage in vigilance strategies that alert her to danger cues in a particular situation. Many sexual assaults are committed by acquaintances often in contexts where women's past experiences indicate they are in safe situations, i.e., dates. Thus, the present study takes examines women's general belief that they are at risk for sexual assault, premised on the assumption that if they do not believe they are at risk they will not engage in risk-reducing behaviors.

The present paper examines several questions about fear of stranger and acquaintance assault, the relationship between perceived vulnerability to assault and risk-taking behaviors, and the impact of perceived vulnerability on the likelihood of a future assault. The study is unique in providing a longitudinal perspective on these relationships.

Previous research on women's perceptions of crime suggest that fear of stranger rape is greater than fear of acquaintance assault (Furby, Fischhoff, & Morgan, 1992; Hickman & Muehlenhard, 19957, in spite of the actual risk of assault by an acquaintance being greater than by a stranger (Koss, Dinero, Seibel, & Cox, 1988). In the present study we hypothesized that perceived risk for stranger assault will be greater than for acquaintance assault. We also hypothesized that prior sexual victimization would increase a woman's perceived vulnerability to future victimization, based on the finding that personal experience with misfortune lowers perceptions of invulnerability (Weinstein, 1989), whereas optimism for avoiding events not yet experienced is high (Weinstein, 1987).

Research has suggested that a perceived risk of victimization should lead to engaging in behaviors that would reduce the risk of future victimization. In turn, avoiding high risk behaviors should actually reduce the likelihood of a further victimization. The two behaviors most consistently associated with an increased risk of sexual assault are alcohol consumption (White & Humphrey, 1998) and a number of different sexual partners (White & Humphrey, 1997). Hence, a higher perceived risk of victimization at one point in time should be associated with a lower number of sex partners and lowered use of alcohol at a later point in time. Furthermore, a relationship between higher perceived risk of assault and lower risk of future victimization should be mediated by number of sex partners and alcohol use.

Measures of perceived risk of assault. On each of the four follow-up surveys, respondents rated their "chances that the following will happen to you at some point in the future?" for the items "sexual assault by an acquaintance/date" and "sexual assault by a stranger." These items were embedded in a list of 12 other events.

Measures of high risk behaviors. For the behavior number of sexual partners on each follow-up survey respondents answered the question "Consider your sexual experience with the opposite sex. With approximately how many different people have you had sexual intercourse during the past school year?" (taken from Koss, et al, 1987). For the behavior alcohol use an index score was computed by multiplying responses to three questions: How often do you drink? In an average month, how may times do you have five or more drinks in a row? How many times do you become drunk or pretty high in an average month during the past school year?

Results

Perceptions of stranger and acquaintance assault. Overall, and at each of the four time periods, the perception of risk for stranger assault was greater than for acquaintance assault, pairwise t values ranged from 7.6 to 9.6, $p < .001$. Also, the perceived risk of assault declined significantly across time for both stranger assault, $F(3, 339) = 5.2$, $p = .002$, and acquaintance assault, $F(3, 1035) = 3.6$, $p = .014$.

Risk perception as function of victimization history. An analysis of variance ,with victimization status as a between subjects factor and risk perceptions across time as the within subjects factor, revealed that risk perceptions for acquaintance assault was tempered by a significant time x victimization interaction, $F(3, 343) = 2.31$, $p = .077$. Only women with a victimization history showed a significant decline across time,

whereas the perceptions of women without a sexual victimization during adolescence showed no change across time. Adolescent victimization status had no significant effect on perceptions of stranger assault across time.

Risk perception and subsequent high risk behavior. The bivariate correlations between risk perception at one point in time and risk behaviors at a subsequent point in time did not support the hypothesis of an inverse relationship; rather positive associations were found. The correlations between risk perception and the alcohol index were consistently low but statistically significant (1^{st} year perceptions-2^{nd} year alcohol index, $r = .08$, $p = .067$; 2^{nd}-3^{rd}, $r = .12$, $p < .001$; 3^{rd}-4^{th}, $r = .14$, $p < .001$). A similar pattern was obtained for the relationship between perceptions in one year and number of sex partners the next (1^{st}-2^{nd}, $r = .05$, ns; 2^{nd}-3^{rd}, $r = .14$, $p < .001$; 3^{rd}-4^{th}, $r = .14$, $p < .001$. When the alcohol index and number of sex partners were entered as dependent variables into a multivariate analysis of covariance, with prior year's perception of risk entered as a predictor, and prior victimization and prior year's risk perception as covariates, only prior victimization was associated with higher levels of risky behaviors, from each year to the next.

Risk perception as a predictor of further victimization. Again, contrary to the hypothesis, bivariate correlations indicated that risk perception in one year was associated with an elevated risk of victimization in the subsequent year (except for the $1^{st\text{-}2nd}$ year relationship). Risk perception in the 2^{nd} year was associated with victimization in the 3^{rd} year ($r = .11$, $p = .001$) and perception in year 3 was associated with victimization in year 4 ($r = .14$, $p < .001$). However, when the effects of prior victimization were accounted for these relationships disappeared. Because there was no support for the hypothesis that perceived risk is inversely related to future victimization, the analysis to test the hypothesis that this relationship would be mediated by number of sex partners and alcohol use was not tested.

Results suggest that, as expected, perceptions of the risk of stranger assault were higher than for acquaintance assault. Additionally, higher levels of risk perception were found for women with a prior victimization than for those without a victimization history, but across time perceptions for these women declined. However, the results indicate that perceived risk of future assault is not a protective factor; that is, it was not associated with either an actual reduction in the risk of a future victimization, nor was it associated with a reduction in engagement in risky behaviors. Although, contrary to expectation, a positive

relationship between perceptions of future victimization and the increased likelihood of engaging in high risk behaviors, as well as increased risk of victimization, was found, these disappeared when prior victimization was accounted for. This result is consistent with previous research documenting the powerful effect of prior victimization. Once victimized, the risk of engaging in the risky behaviors of alcohol use and of having multiple sex partners, as well as the risk of revictimization, increases.

The results indicate that a general awareness of risk does not lead to a reduction in risky behaviors for women. There are several reasons for these counterintuitive findings. First, the overall perception of risk was quite low to begin with, so there was little margin for relationships between risk perception, risky behaviors, and future victimization to show up. Second, women may not realize that alcohol use and multiple sex partners increase their risk of assault; hence, they don't know to focus on changing these behaviors. Norris, Nurius, and Dimoff (1996) have found that women are good at detecting when other women are at risk of assault but are not as able to apply this awareness to themselves. Additionally, as Norris, Nurius, and Graham (1999) have noted, drinking and being alone with a man are not obvious risk factors. These are commonly accepted as being a normal part of socializing with a man. Thus, "it is difficult for a woman to make a judgment that these constitute a clear risk to her safety because in her experience most of the time they have not" (p. 13). Third, given the relatively low risk perception, women may not have felt enough fear associated with an acquaintance assault to engage in precautionary behaviors. Prior research has shown that there must be both fear and a belief that one can control outcomes before engaging in precautionary behaviors. Engaging in precautionary behaviors is more likely when one believes she has control over the outcomes.

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See exhibits 27-34.

CHAPTER 9

RESULTS: HYPOTHESES RELATED TO PERPETRATION

In the mid-1980's the phenomenon of acquaintance or date rape began to receive attention. The research suggested that as many of 85% of all rapes were committed by men known to the victims. Furthermore, these rapes often occurred in a dating context. Thus, some researchers concluded that date rapes were committed by relatively normal young men who had simply misunderstood their partners' intentions. Such reasoning suggests that sexually assaultive actions could be committed by almost any man given the right circumstances. This logic suggests that a date rapist is not likely to be a "repeat offender." However, this is an empirical question.

In the only national survey of date and acquaintance sexual assault, Koss and her colleagues (1987) found that 24.4% of college men admitted that since the age of 14 they had been sexually aggressive toward a female. About 7.8% admitted to engaging in behaviors which legally constitute rape or attempted rape. The remaining 16.7% admitted to other forms of sexually coercive actions. Other estimates of rape perpetrated by college men range from 4 to 7%, and estimates of attempted rape are consistently approximately 4%. In addition, Malamuth (1988) reported that approximately 35% of male undergraduate students stated they would commit rape if they were sure they would not get caught. Data such as these suggest that sexually assaultive acts by young men are not uncommon, but that not all men are involved in such acts. When the magnitude of these numbers are contrasted with the high percentage of young women who report being victims of sexual assault, a discrepancy becomes apparent. Either women are over-reporting and men are under-reporting their involvement in sexual assault, or a relatively small proportion of men are responsible for sexual assaults. This latter possibility suggests that a sexually aggressive man probably has multiple victims. There are two approaches to answering this question. One is to ask men how many times, with how many different women, they have engaged in each behavior. The second approach is to reassess men on multiple occasions across time. Unfortunately, neither of these methods are typically used.

To date most research on the perpetration of sexual assault has been retrospective in nature, relying on a one-time assessment of men's involvement in sexual aggression, without asking about numbers of victims. The only longitudinal investigation of sexual assault among adolescents to date did not examine

the question of perpetration and reperpetration (Ageton, 1983). Rather, Ageton examined engagement in delinquent behaviors in general as a predictor of later sexual aggression among adolescent boys. And, indeed, she found that compared to their nonviolent peers, sexually assaultive adolescent boys were significantly more likely to engage in index offenses, particularly felonious assault, other crimes against the person, larceny, and public disorder.

It has become a well-established finding that aggressive behavior at a younger age is one of the best predictors of later aggressive behavior (Huesmann & Eron, 1992; Olweus, 1993). Most of this work on the stability of aggression has focused on acts of physical aggression directed towards peers during childhood as predictors of later involvement with the criminal justice system. However, this work has not looked at sexual aggression. Little is known about the stability of heterosexual aggression in general, and sexual aggression in particular.

In the following analyses we report on patterns of perpetration across time in young men.

RESULTS

The pattern of responding across time indicated that during adolescence, 22.3% of the men admitted to some form of sexually aggressive behavior during adolescence; 10.8% reported unwanted contact as their most serious sexually aggressive behavior; 3.1% admitted to using verbally coercive tactics to obtain sexual intercourse, while 8.5% reported actions meeting the legal definition of rape or attempted rape.

Results also show a decline across time for each form of sexually aggressive behavior. For unwanted sexual contact the biggest decline occurred from adolescence to the first year in college (48%), with an overall decline of 51% by the end of the fourth year of college. For rape and attempted rape, on the other hand, the largest decline occurred between the third and fourth years (70% decline, from 4.7% to 1.4%), followed by a decline of 48% (8.5% to 4.7%) from adolescence to the first year in college, with an overall decline of 84%. For verbal coercion, on the other hand, a decline is apparent until the end of the third year of college, with an overall decline of 55%. These declines in sexual aggression do not appear to be due to a general disengagement from sexual activities with women in general. We also found a steady increase in the percentage of men reporting involvement with only consensual sexual activities, with a 19% increase from 77.6% to 92.9%).

These patterns of results hold for both the men who participated in the survey but dropped out at sometime during the project, as well as for just those who participated in the entire project. Thus, we do not think these patterns are biased by those men who did or did not complete the project.

Related to this pattern is the question of whether the same men are repeatedly offending across time. To begin to answer this question, we first categorized men as having engaged in pre-college sexual assault or not. Second, based on responses to the first follow-up survey, at the end of the first year in college, men were classified as having engaged in sexual assault or not. An analysis revealed a ratio of 4:1. Men who had engaged in adolescent sexual assault were 4 times more likely to sexually assault during the first year of college than men without a prior self-reported history of sexually assault.

DISCUSSION

These results are consistent with the literature on the development of aggression that finds stability in aggressive behavior across time. This suggests the need for a developmental approach to identifying the predictors of sexually aggressive behavior. Theoretical explanations for male violence against women have, until recently, typically focused on one type of violence at one level of analysis. Consistent with this, policies designed to prevent male violence against women have been implemented with a focus on identifying and reducing single factors contributing to a specific form of violence against women, such as characteristics of the offender or behaviors of the victim that put her at risk. For example, child abuse prevention has been considered separately from wife-battering, neither of which were considered in conjunction with sexual assault.

However, as proposed in the integrative contextual developmental model of violence against women, male violence against women is multiply-determined. Socio-cultural variables, situational constraints, the nature of dyadic interactions, as well as intrapersonal characteristics collectively play a role in determining which men will aggress against which women in which situations. In light of this, policies oriented toward reducing male violence against women must take a more systematic, integrative and multi-leveled approach with program interventions at the community and institutional levels as well as specific programs designed for individual victims and perpetrators. These policies should recognize that, although individual men perpetrate violence against individual female victims, social and cultural values and norms help maintain an atmosphere in which violence against women is condoned (Koss, et al., 1994). In addition,

the developmental perspective of the model suggests that the best intervention is prevention, which should begin at an early age.

See exhibits 36-39

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See exhibits 35-44.

CHAPTER 10

RESULTS: CO-OCCURRENCE OF PERPETRATION AMONG MEN

To date most research on the perpetration of sexual assault has been retrospective in nature, relying on a one-time assessment of men's involvement in sexual aggression, without asking about numbers of victims. The only longitudinal investigation of sexual assault among adolescents to date did not examine the question of perpetration and reperpetration (Ageton, 1983). Rather, Ageton examined engagement in delinquent behaviors in general as a predictor of later sexual aggression among adolescent boys. And, indeed, she found that compared to their nonviolent peers, sexually assaultive adolescent boys were significantly more likely to engage in index offenses, particularly felonious assault, other crimes against the person, larceny, and public disorder.

It has become a well-established finding that aggressive behavior at a younger age is one of the best predictors of later aggressive behavior (Huesmann & Eron, 1992; Olweus, 1993). Most of this work on the stability of aggression has focused on acts of physical aggression directed towards peers during childhood as predictors of later involvement with the criminal justice system. However, this work has not looked at sexual aggression. Little is known about the stability of heterosexual aggression in general, and the co-coocurrence of sexual aggression in particular. However, Malamuth and colleagues (Malamuth, et al., 1995) in their confluence model of sexual aggression suggests several common factors than can lead to both sexual and physical aggression. In a longitudinal study they also suggested tht men with a history of sexual coercion in college were likely to have conflictual relationships with females partners ten years later.

RESULTS

For adolescence and each of the four years of college, the co-occurrence of sexual and physical assault is common, although the percentage declines across time from 9.2% in adolescence to 4.5%, 4.0%, 4.4%, during the first three years of college, to 2.1% in the fourth year.

Chi-square analyses of co-occurrence during adolescence and during each of the four years of college indicate a significant relationship between sexual and physical assault that exceeds that predicted by the marginal totals. This suggests that one type of perpetration increases the risk of the other type. Overall, a young man who commits one type of assault is 5 times more likely to commit the other type during adolescence (these odds vary somewhat from year 1 to year 4, 5.3, 2.8, 5.8, 4.5, respectively).

THE EFFECTS OF WITNESSED AND EXPERIENCED FAMILY VIOLENCE. Analyses of variance indicate a significant relationship between type of perpetration and indices of both witnessing family violence, $F(3, 799) = 24.8$, $p < .001$, and experiencing family violence, $F(3, 8021) = 18.7$, $p < .001$. Post hoc tests based on Bonferroni t's indicate that young men who commit both sexual and physical assault witnessed significantly more family violence and experienced more family violence than an men who committed either none or just one type of assault.

THE EFFECTS OF CHILDHOOD SEXUAL ABUSE. A significant relationship was found between childhood sexual victimization and the co-occurrence of sexual and physical assault in adolescence, $F(3, 621) = 3.14$, $p < .03$. Although men who were sexually assaultive or who showed co-occurrence reported more childhood sexual abuse than the men with no assault history or who were only physically assaultive, only en who were only sexually aggressive experienced more childhood sexual abuse than men with no perpetration history during adolescence.

CORRELATES OF CO-OCCURRENCE. A series of analyses of variance revealed that co-occurrence of sexual and physical assault was significantly related to alcohol and drug use, number of sexual partners, engaging in delinquent behavior, and attitudes towards women, specifically, approval of women taking the initiative in relationships and male use of violence toward women. In all cases men who had engaged in sexual and physical assault had the highest mean on each of these measures and men committing neither had the lowest means on each. However, in some cases there were no differences among men who were assaultive in some way (alcohol and drug use, delinquency, number of sex partners, and acceptance of male violence).

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CHAPTER 11

IMPLICATIONS FOR RESEARCH, PRACTICE AND POLICY

The research discussed here focused on three research areas:

a) The prevalence and incidence of dating violence longitudinally

b) The relationships between victimizations in childhood, adolescence, and college, particularly the extent to which one form of victimization places women at risk for later victimization (re-victimization)

c) The co-occurrence of physical victimization and sexual victimization.

Our findings in these areas have significant implications further research, practice and policy, which are discussed below.

1. Prevalence and incidence longitudinally

A key finding of this study is the fact that, by the end of high school 66.7% of women had experienced either physical or sexual victimization, and 26.1% had experienced both. By the end of the 4th year of college 88% of the women studied had experienced either sexual or physical victimization and 63.5% had experienced both. The data indicate that dating violence victimization is normative, affecting many women who have no identifiable risk factors (e.g., exposure to violence in the home, risky sexual behavior etc.). These finding have the following implications for research and practice:

a) We need less research that seeks to identify individual-level risk factors in women and more research that seeks to identity factors in the broader social ecology that place women at risk for victimization.

b) In terms of primary prevention strategies, we need strategies that: target the general population of young men and women in high school and college, as well as others that are in positions to help (e.g., parents, teachers, churches); and that seek to modify actors at the dyadic, situational, social network and socio-cultural levels that support/condone physical and sexual violence against women.

c) Additional prevention strategies that grow from our findings of the pervasiveness of dating violence include: the importance of building gender-based violence prevention activities into other programs that target adolescent boys and girls, such as substance abuse and pregnancy prevention programs; evaluating the impact that non-dating violence specific programs for adolescents have on gender-based violence; and incorporating; educate professionals who have contact with adolescents (including those in schools, churches, social groups) as well as parents about the importance of taking seriously

violence that occurs during adolescence

2. Revictimization

A key finding of this study is that women who were physically or sexually abused or who witnessed domestic violence in childhood are at greater risk for physical and/or sexual victimization in high school, that women who were victimized in high school are at much greater risk for physical and/or sexual victimization in college, and that after controlling for victimization in high school, those who were abused or witnessed violence in childhood were not at greater risk for college victimization. The findings have the following implications for research and practice:

a) In addition to universal education, we need to identify high-risk populations and direct more targeted interventions toward them. These groups include: those who witness or experience abuse as a child; young men who perpetrate violence in adolescence; and young women who experience violence in adolescence; It is not clear, therefore, how effective educational-only approaches are for preventing dating violence in high risk populations. The limited evaluation literature to date suggests that the interventions currently being implemented to prevent dating violence are, by and large, school-based educational programs targeted at the general population and designed to change norms and attitudes regarding the use of violence in relationships. Although these studies indicate that these interventions do result in some changes in attitudes and beliefs, at least in the short-term, only one study has reported short- term changes in victimization and/or perpetration and even these changes were not sustained.

b) Our study highlights the importance of early detection of, and intervention with, children who have witnessed family violence or who have been victimized by child sexual abuse or child physical abuse as strategies for the primary prevention of adolescent/college dating violence victimization. It is important, however, for interventions with abused children to incorporate issues related gender-based violence perpetration and victimization to further our ability to prevent re-victimization and perpetration of violence against women in young adulthood.

c) We need additional research to identify the factors that mediate the relationship between childhood experiences with different types of violence and later adolescent victimization and perpetration.

d) We need to develop secondary prevention strategies for young women who have been victimized in adolescence that: encourage them to report the violence the violence; support them when they report;

promote better psychological healing and social resolution; help women reduce their risk for revictimization in college.

e) We need additional research to identify the factors that mediate the relationship between women's experiences with adolescence victimization and re-victimization in college, and between young men's perpetration in adolescence and re-perpetration in college.

f) We need to develop better high-school, college and community-based punishments and sanctions for young offenders

g) We found that even when prior victimization (childhood and adolescent) and initial differences are controlled for, college victimization still results in detrimental effects in major areas of young women's lives. These include psychological well being, self-perceptions, attitudes, interpersonal functioning, and peer group relationships. These findings suggest that we need better community and school-based services that address the physical and psychological health consequences of cumulative and episodic victimization.

2. Co-occurrence

A key finding of our study is that women who experience one form of victimization are at elevated risk for experiencing another form both in a later year and during the same year. Our data could not tell us whether the different types of victimization occur in the same relationship, perpetrated by the same person of occur in different relationships perpetrated by different partners. These findings suggest the following

a) We need additional research that focuses on the co-occurrence of different types of victimization in the same relationship and that investigates battering in addition to physical and sexual assault.

b) We need additional research that recognizes that sexual victimization and physical victimization by dating partners co-occur in women's lives and which attempts to bring together the often-distinct literatures on these two forms of victimization.

c) We need additional research that investigates the factors that place women who are victimized by one type of violence at greater risk for another type, by different perpetrators, in the same year.

d) We need intervention strategies for women who have been victimized by one type that also address these women's greater risk for another type of victimization

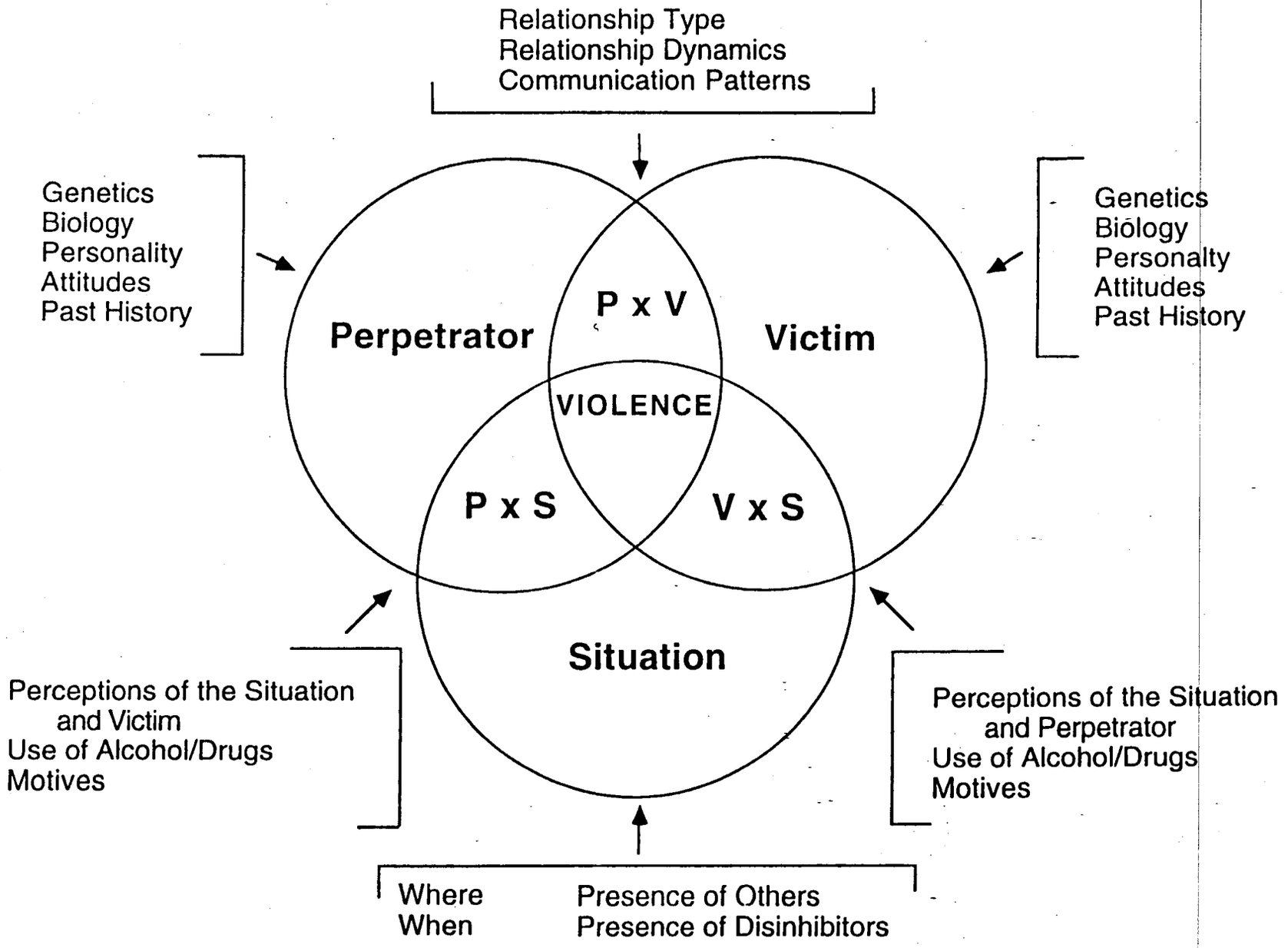
e) We need intervention strategies for men who perpetrate one type of victimization that also address these men's greater risk for perpetration another type of victimization.

Overall our research supports a multi-pronged approach to primary, secondary and tertiary prevention that includes programs that target the general population as well as high risk populations and that seek to change the social environments that support this violence, improve social supports for young victims, and sanctions for young perpetrators.

CHAPTER 12

EXHIBITS

Proximal Confluence Model



Purpose

- Examine the time course of sexual and physical partner victimization
- Examine the impact of childhood victimization o subsequent victimization and perpetration
- Examine the co-occurrence of sexual and physica victimization and perpetration
- Examine other risk factors

Other Risk Factors

- High risk behaviors
  - alcohol/substance use
  - delinquent behaviors
- Mental health status
- Personality
- Attitudes
- Interpersonal relationships
  - dating patterns/number of sexual partners
  - peer group characteristics

Participants

- **Two incoming classes of women , classes of 1995 & 1996**
  - **N=1569**
  - 1990, 1991 high school graduates
  - 25.3% African-American
  - 70.9% Caucasian
  - 3.8% other ethnic groups
  - 47% completed all surveys
- **Three incoming classes of men , classes of 1995, 1996 & 1997**
  - **N=835**
  - 1990, 1991, 1992 high school graduates
  - 9.3% African-American
  - 87.4% Caucasian
  - 3.3% other ethnic groups
  - 22% completed all surveys

Methods

- All students invited to complete survey during first day of student orientation
- Students not attending orientation were contacted by mail and phone
- Follow-up surveys administered at the end of subsequent 4 spring semesters
- Students paid $15 for each followo-up survey

Survey

- Demographics
- Family History
- Victimization/Perpetration Experiences
- Contextual Factors
- Intrapersonal Characteristics

Demographics

- Race/Ethnicity
- Relationship status
  - single
  - engaged
  - married/divorced/widowed
- Religious affiliation
- Year graduated from high school
- Birth date

Family History--Prior to Age 14

(based on Finkelhor)

- Experienced family violence
  - # physical blows/mo. from parents
- Witnessed family violence
  - # physical blows/mo. observed between parents
- Childhood sexual abuse
  - type: exposed, fondled, attempted/completed sexual intercourse
  - who: adult or similarly-aged
  - why: coercive or non-coercive

Sexual Assault Experiences

- Sexual Experiences Survey (Koss, et al., 1989)
  - Categories
    - No sexual experiences
    - Consensual experiences
    - Unwanted contact
    - Verbal coercion
    - Attempted rape
    - Rape
- Assessed for adolescent experiences, 14-18 years
- Assessed for each collegiate year
- Examine men as perpetrators/women as victims

Physical Assault Experiences

- Conflict Tactics Scale (Straus, 1970)
  - Categories
    - Rational strategies
    - Verbal (symbolic) aggression
    - Physical aggression (severe items omitted)
- Assessed for adolescent experiences, 14-18 years
- Assessed for each collegiate year
- Examined men & women as perpetrators/victims

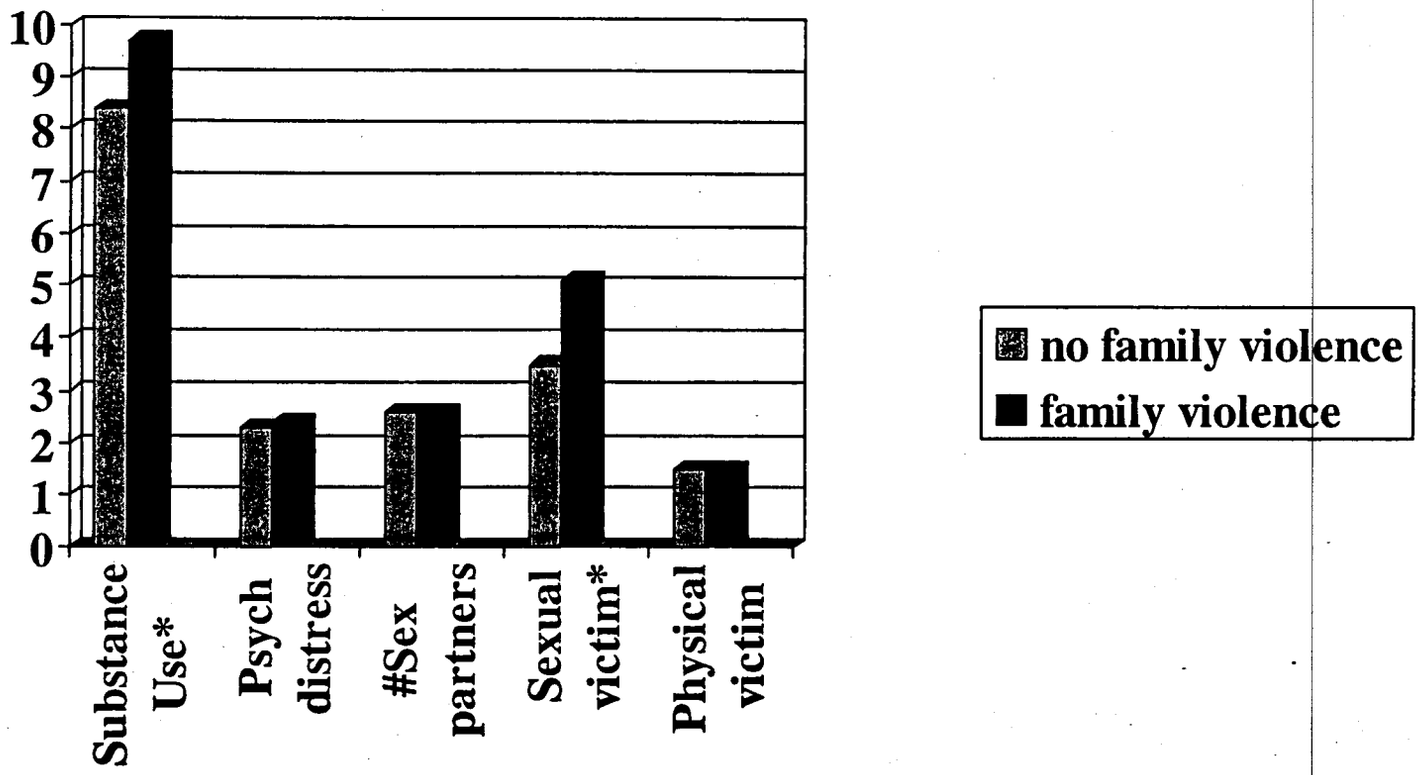
Risk Factors

- Childhood Trauma
  - Experiencing family violence
  - Witnessing family violence
  - Childhood sexual abuse
- Adolescent Experiences
  - Lifestyle
    - alcohol/substance use
    - number of sex partners
    - adolescent sexual victimization
    - adolescent physical victimization
  - Psychological distress+

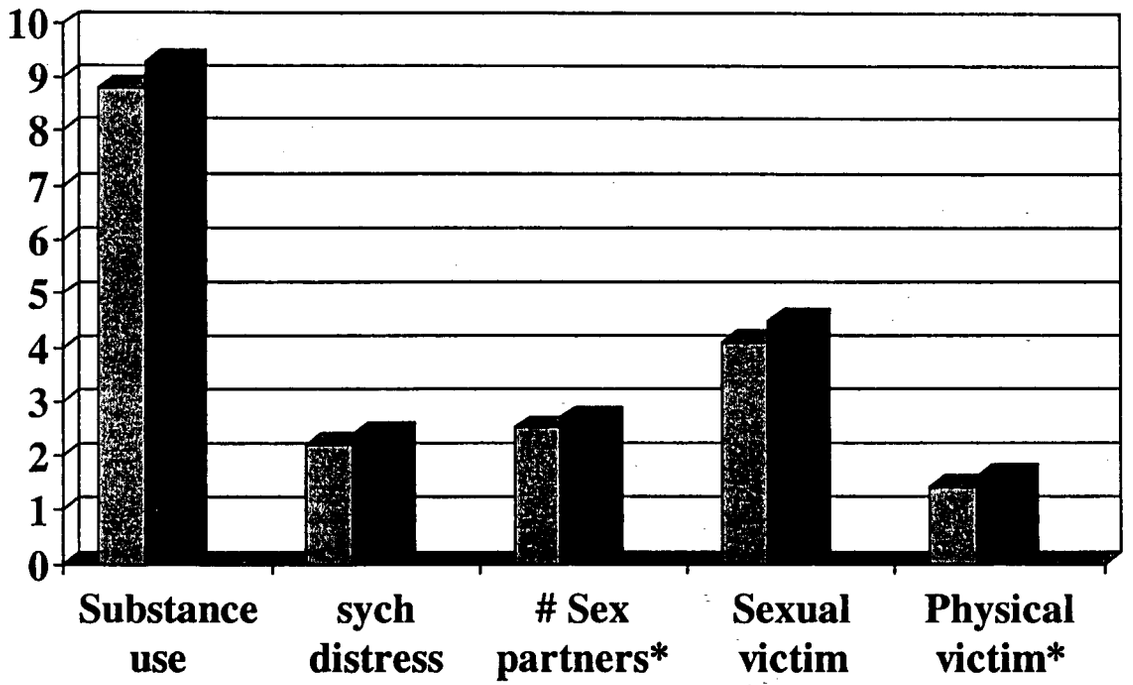
Other Risk Factors

- High risk behaviors
  - alcohol/substance use
  - delinquent behaviors
- Mental health status
- Personality
- Attitudes
- Interpersonal relationships
  - dating patterns/number of sexual partners
  - peer group characteristics

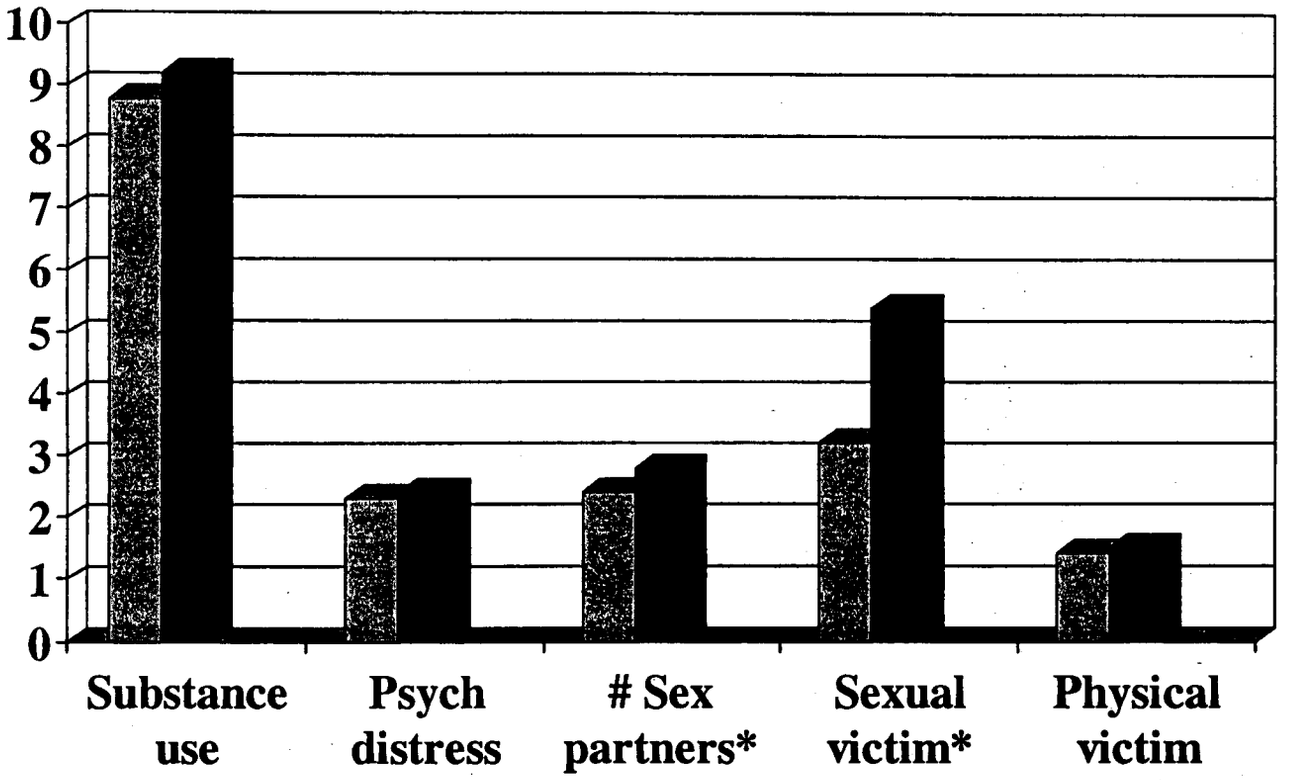
Effects of Family Violence on Adolescent Outcomes



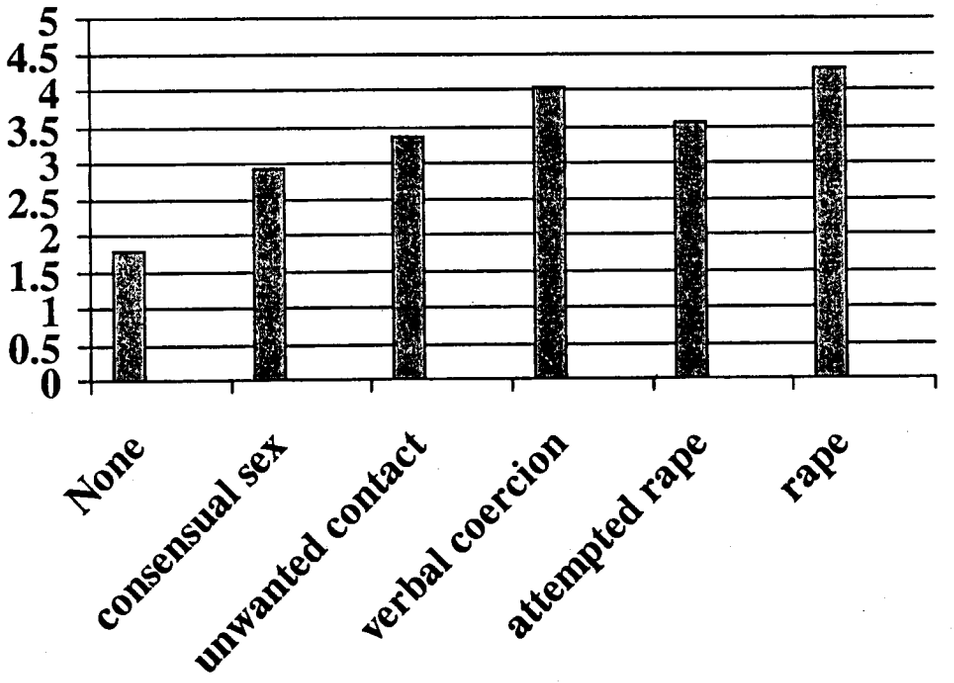
Effects of Witnessing Family Violence on Adolescent Outcomes



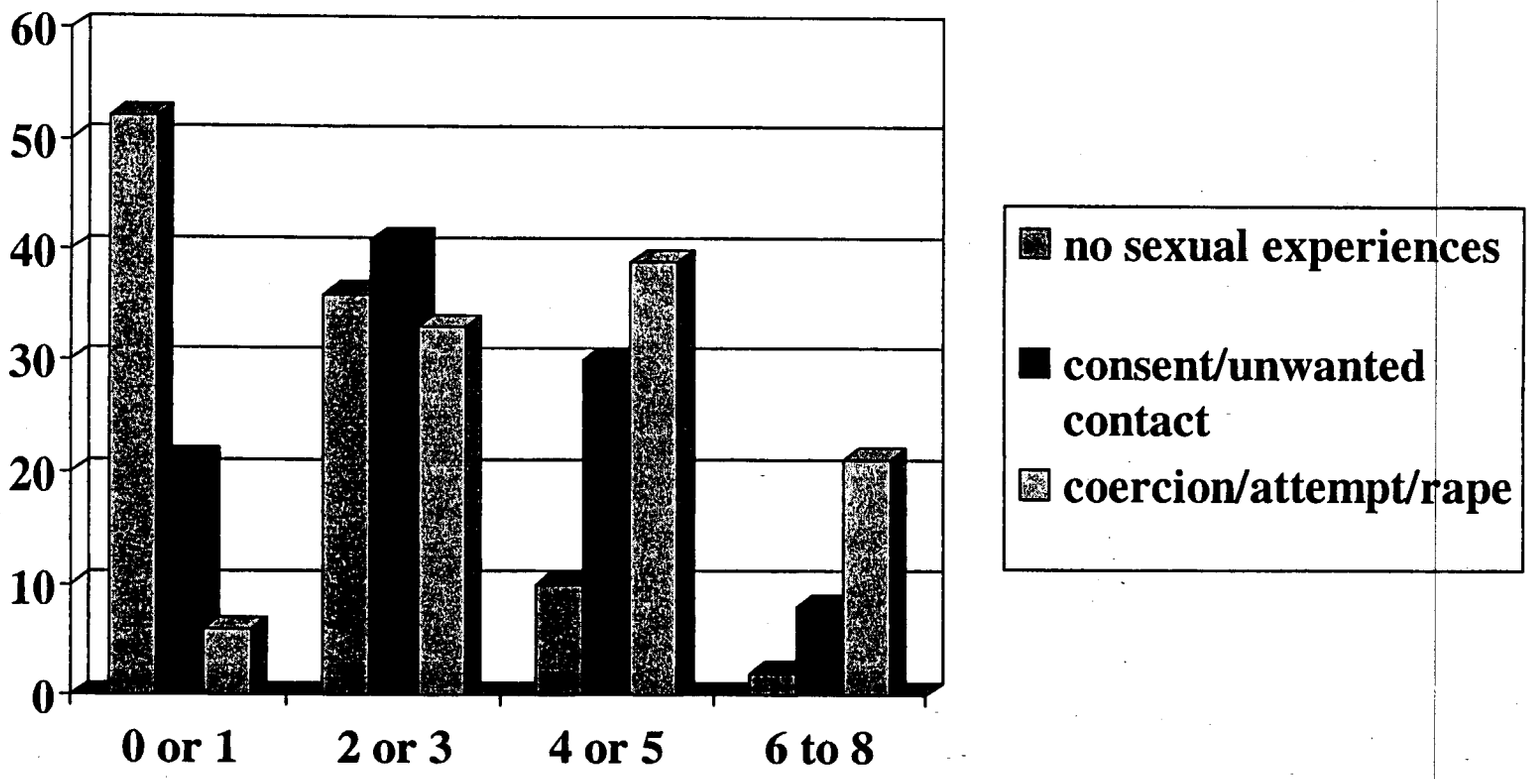
Effects of Childhood Sexual Abuse on Adolescent Outcomes



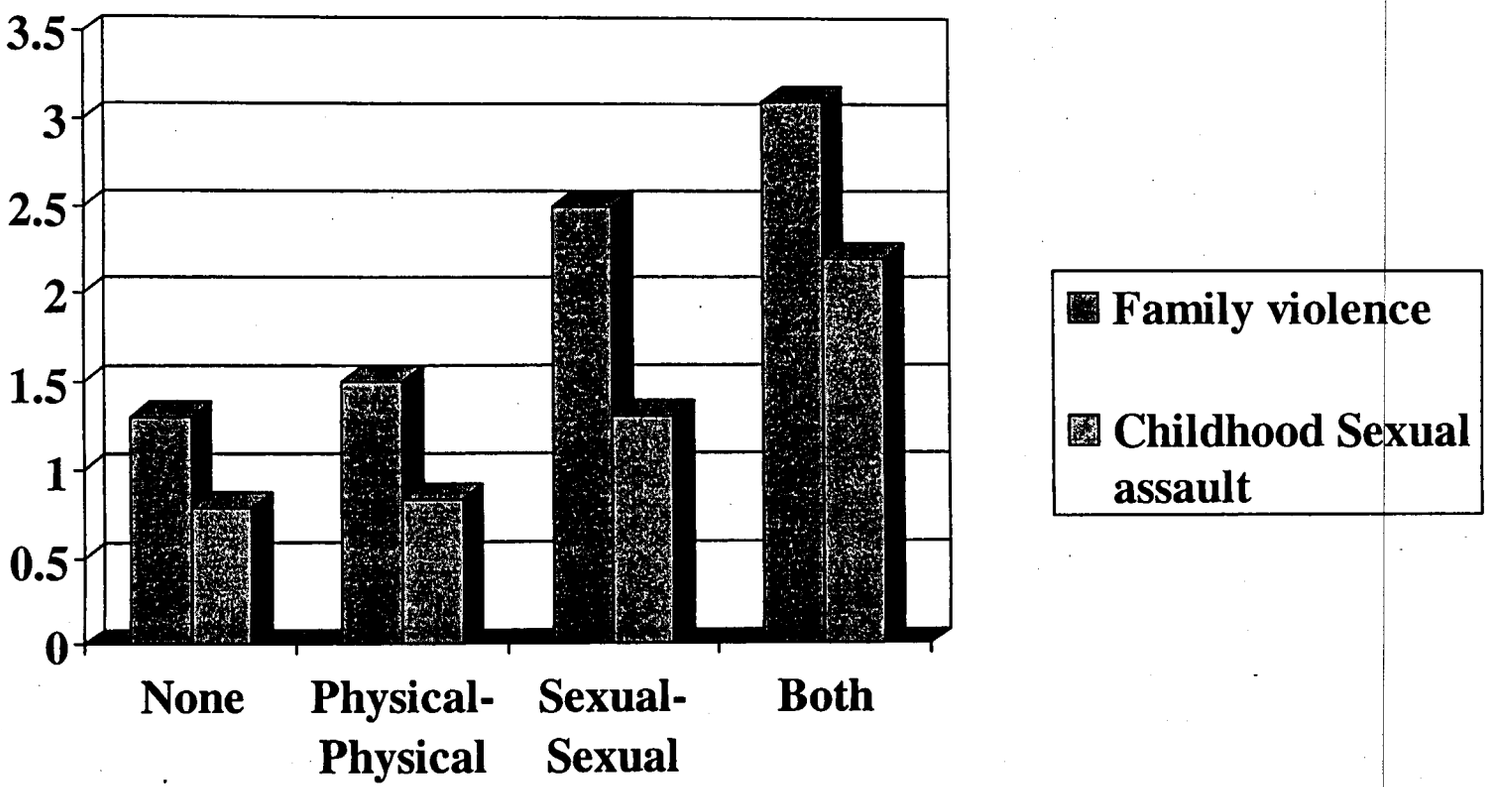
No. Risk Factors Associated with First Year College Victimization



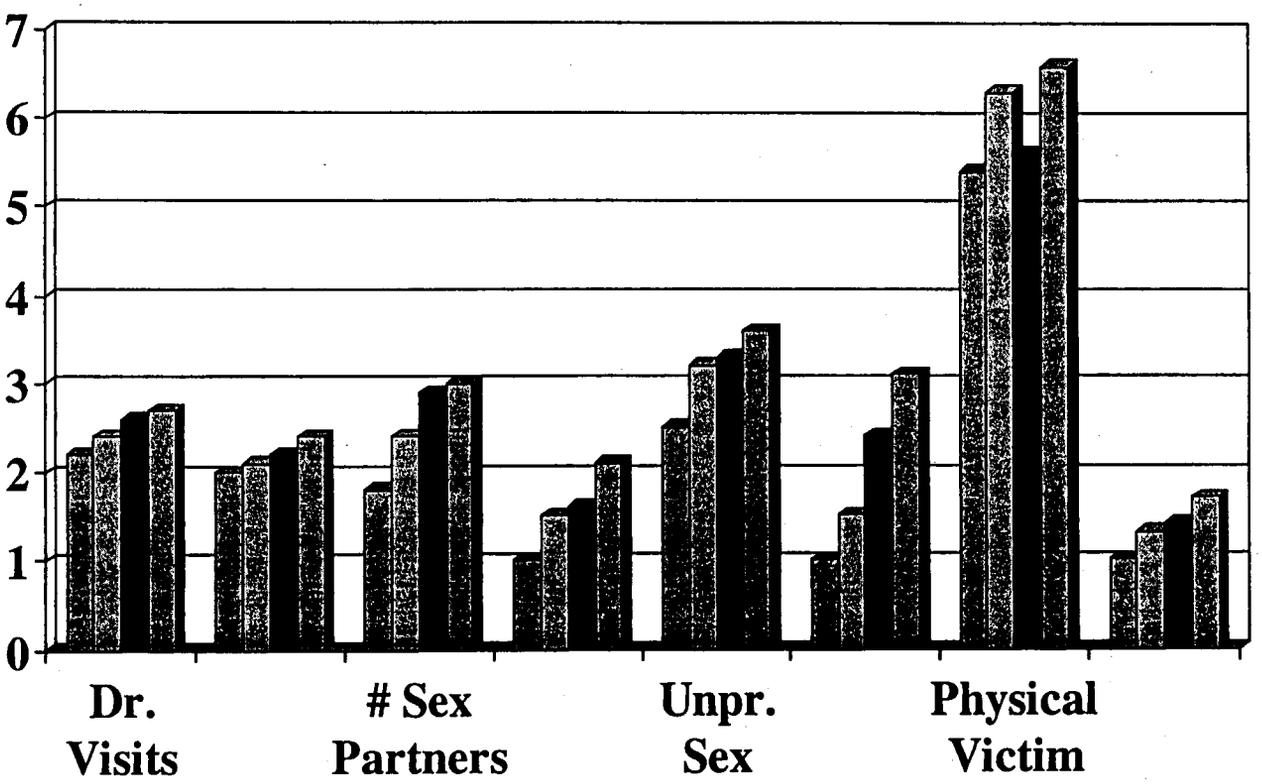
Level of Victimization by Number of Risk Factors



Impact of Childhood Victimization on Co-occurrence



Consequences of Co-occurrence in Adolescence



Physical Assault by Romantic Partner

- Threatened to hit me
- Threw something at
- Pushed, grabbed, shoved
- Hit or tried to hit
- Hit or tried to hit w/ something

- *Considered "assaulted" if 2+ acts occurred*

Percent of UNCG Women Reporting Physical Assault

High school	29.8%
Freshman	16.4%
Sophomore	15.0%
Junior	14.7%
Senior	12.5%

Across all years 63.2% of women

ercent of UNCG Women Reporting ictimization

Year	None	Physical	Sexual*	Both
HS	50.0	14.2	20.2	15.6
Fresh	68.3	9.8	15.3	6.6
Soph	73.0	8.0	12.0	7.0
Junior	71.8	9.0	13.4	5.7
Senior	75.6	6.9	13.4	5.7
All years	23.3	18.8	11.6	46.2

*** Sexual assault of all types**

onclusions

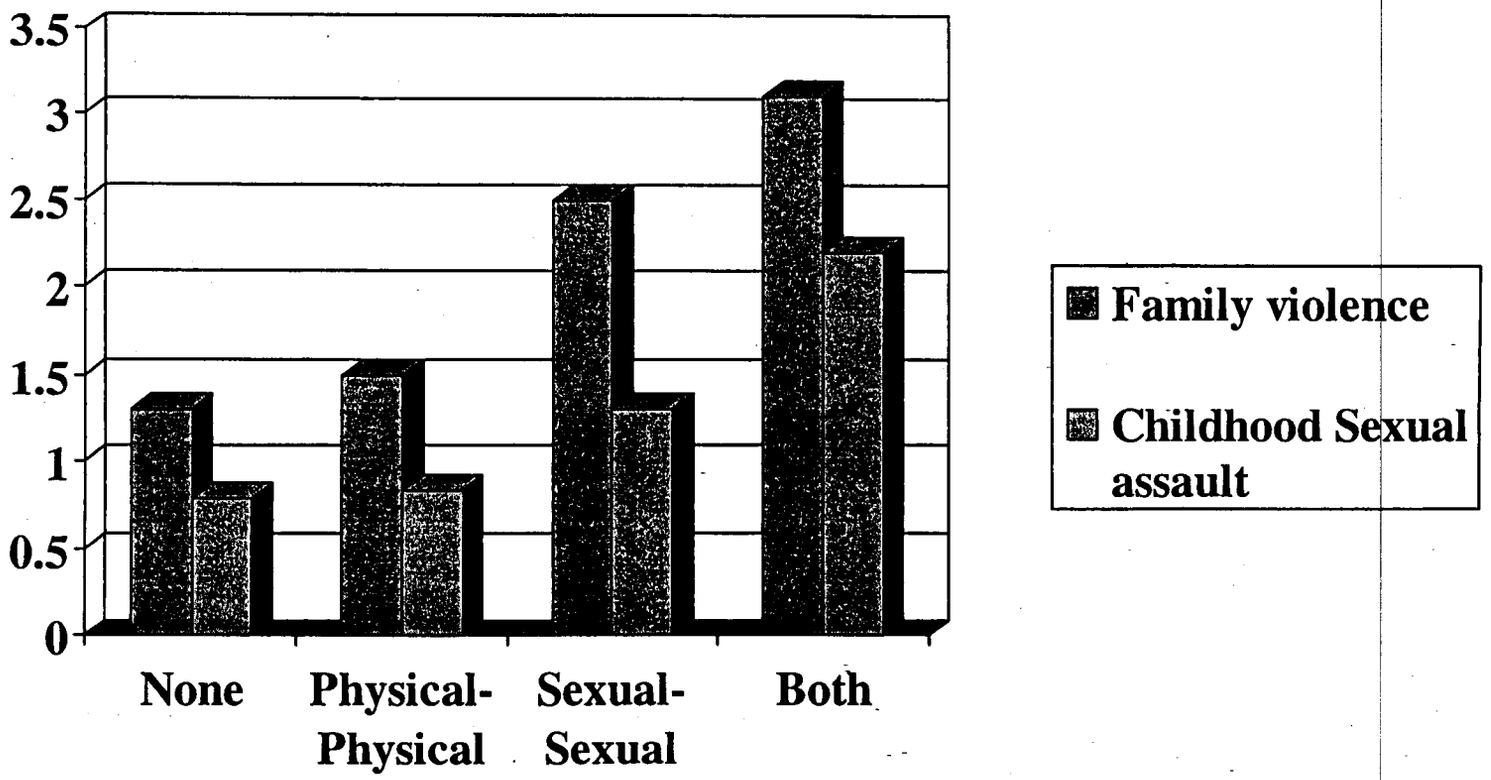
Women are at high risk for sexual and physical assault victimization

Risk decreases overtime

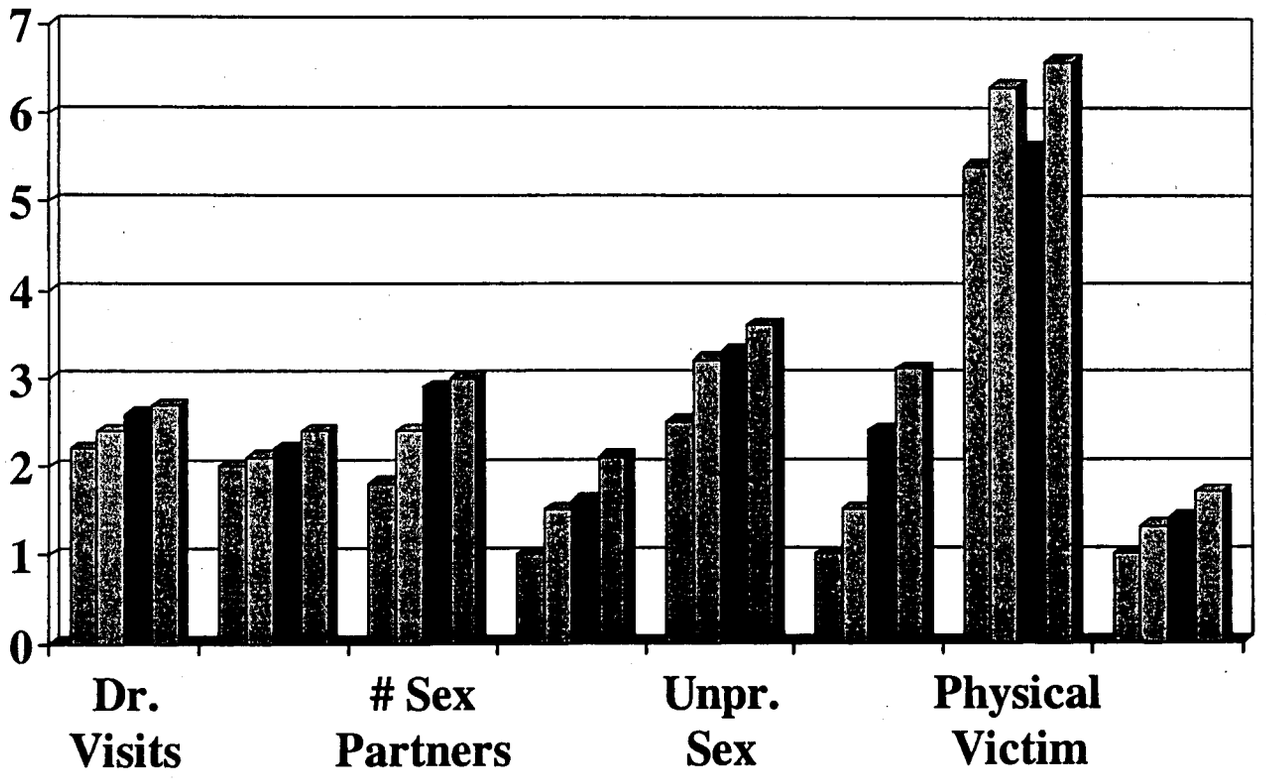
"Normative" experience in women's lives

They know their perpetrators and consider them "friends" or "boyfriends"

Impact of Childhood Victimization on Co-occurrence



Consequences of Co-occurrence in Adolescence



Percent of UNCG Women Reporting Physical Assault

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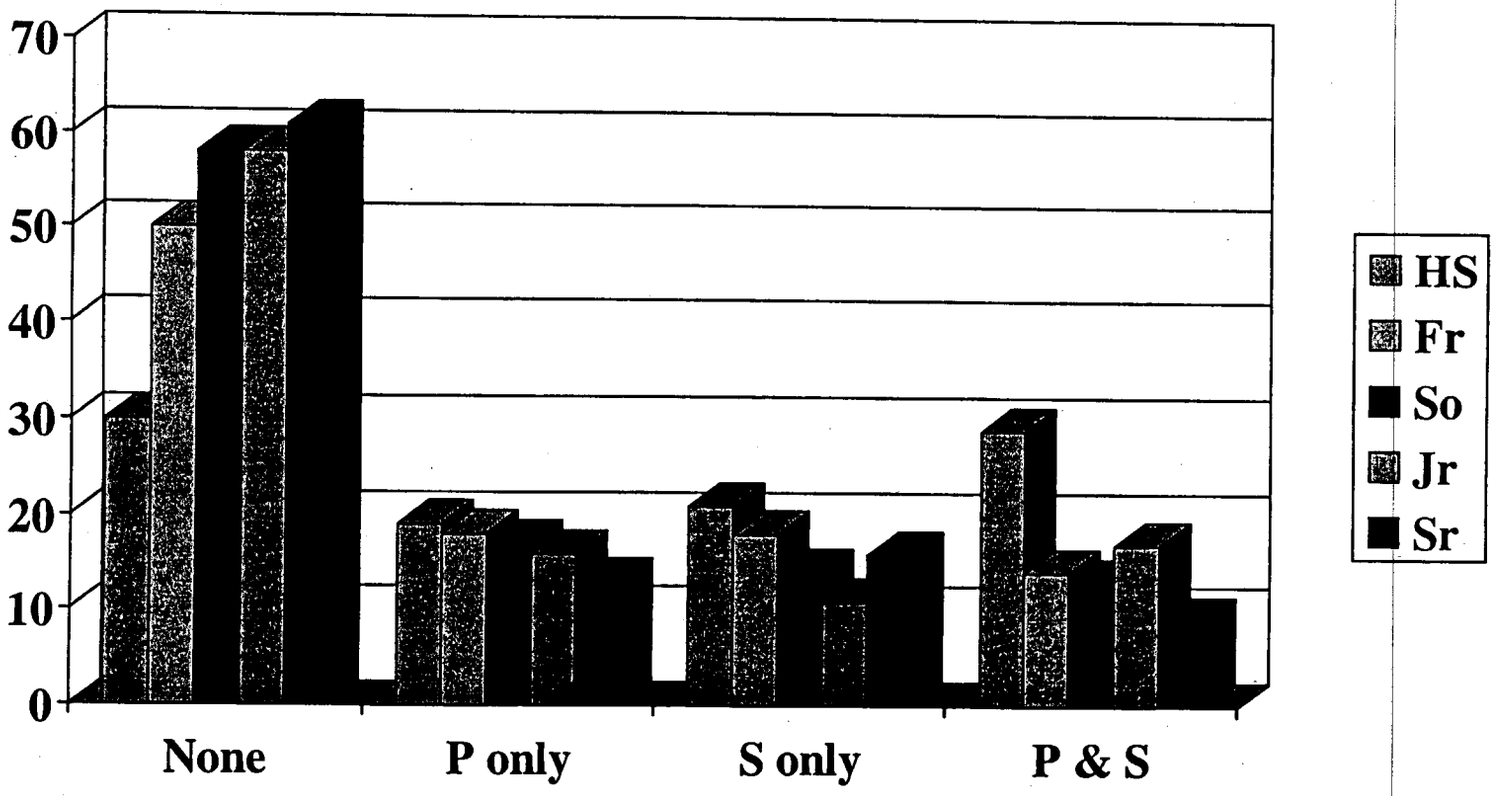
Across all years 63.2% of women

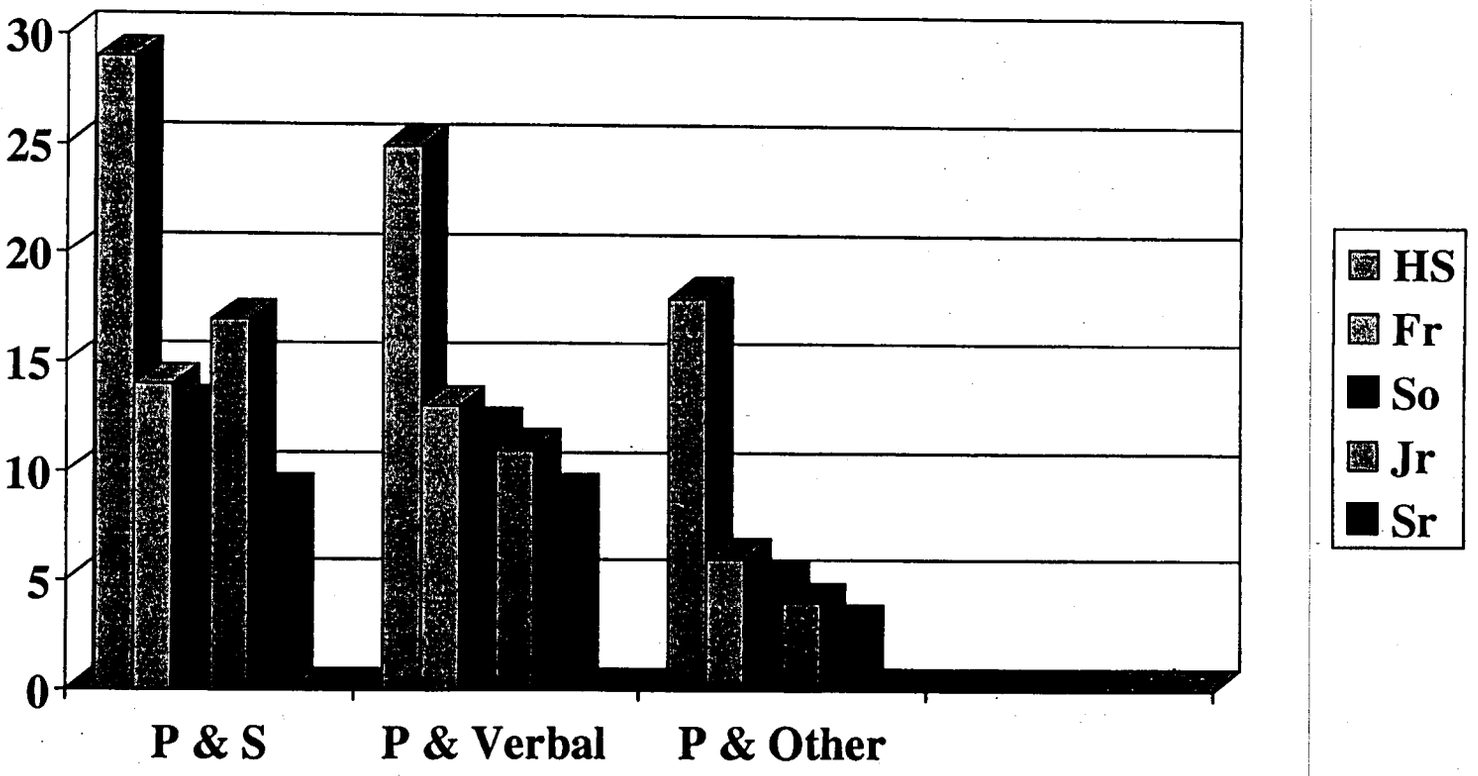
Co-occurrence of Partner Physical Violence (PPV) and Sexual Violence (SV)

	HS	Fr	So	Jr	Sr
None	30%	50%	58%	58%	61%
PPV only	19%	18%	17%	16%	13%
SV only	21%	18%	14%	11%	16%
PPV w/ SV	29%	14%	13%	17%	9%
PPV w/ SV: verbal	25%	13%	12%	11%	9%
PPV w/ SV: other	18%	6%	5%	4%	3%

Co-occurrence of Partner Physical Violence and Sexual Violence



Co-occurrence of Partner Physical Violence and Different Types of Sexual Violence

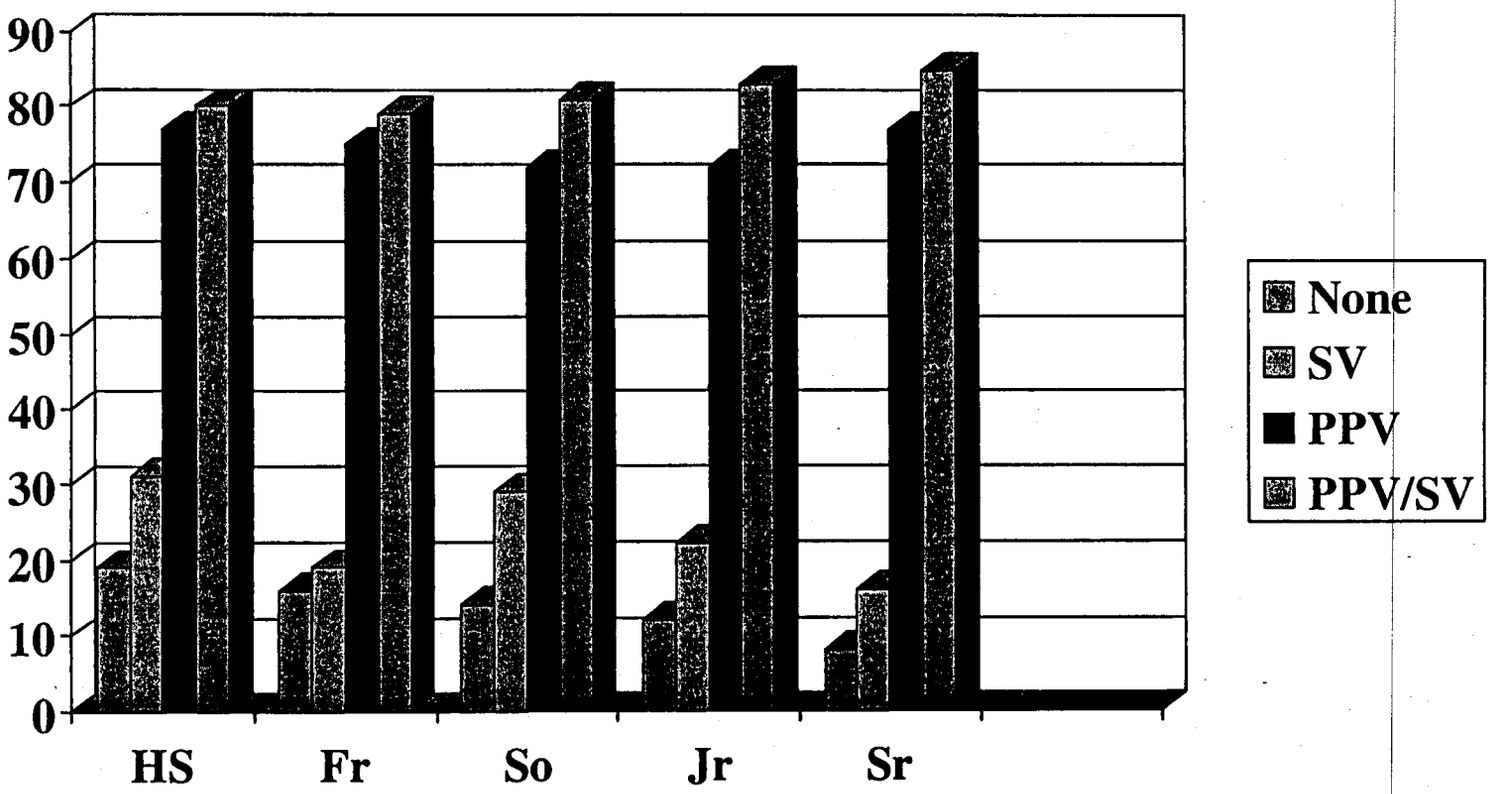


Odds[1] of Co-occurrence of Partner Physical Violence and Sexual Violence

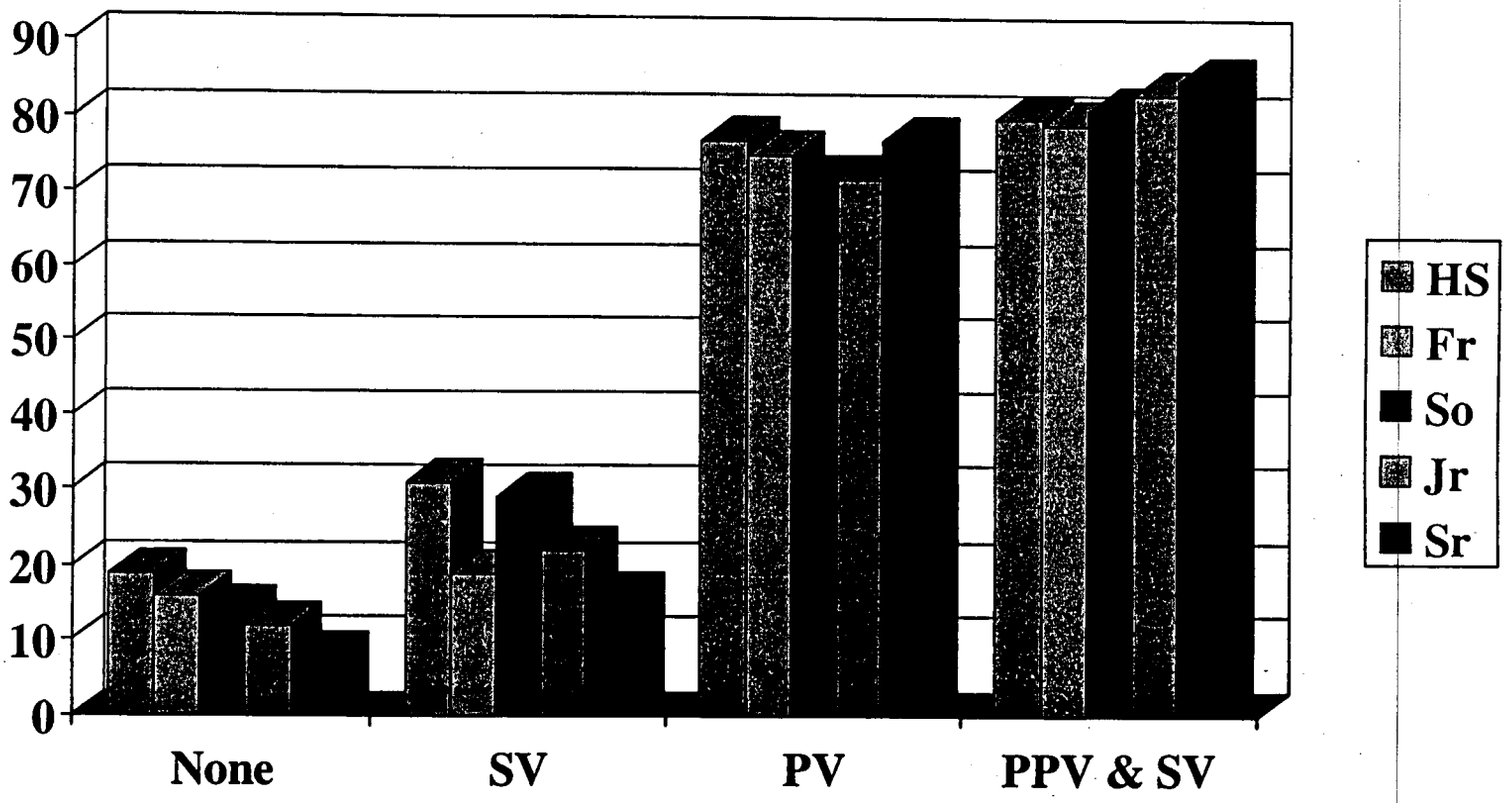
	HS	Fr	So	Jr	Sr
PPV and Verbal SV	**1.9**	**2.3**	**3.3**	**3.1**	**2.8**
PPV and Other SV	**2.7**	**1.8**	**2.8**	**2.2**	**2.7**

[1] Mantel -Haenszel common odds ratio

Percent of women who used Physical Violence by Type of Abusive Experience by Year



Percent of Women Who Used Physical Violence by Type of Abusive Experience



Conclusions: Co-occurrence

- Odds of having one increased 2-3x given the other
- More common than either alone in high school
- Less common than either alone in college

Conclusions: Co-occurrence

- Partner physical violence more likely to occur with
  - physically violent sexual assault in high school
  - verbally coercive sexual assault in college

Conclusions: Co-occurrence

- Sexual violence context for women's assaults on their partners
- Women who experienced only sexual assault 2x as likely to use assault
- Women who experienced both most likely to use physical violence[1] (17 -23x)

[1] Except for senior year

Table 1

Percentage Reporting Sexual Victimization Experiences

	Ever victimized	Unwanted Contact	Verbal Coercion	Attempted Rape	Rape	N
As an Adolescent	49.5	14.0	15.1	7.4	13.0	1571
Collegiate Year 1[+]	31.3	9.6	11.5	3.8	6.4	1398
Collegiate Year 2[+]	26.8	7.8	11.8	2.4	4.8	1178
Collegiate Year 3[+]	25.7	6.9	11.4	2.4	5.0	955
Collegiate Year 4[+]	24.2	7.2	11.8	1.3	3.9	747
Total[++]	69.8	15.7	21.1	11.8	21.2	747

[+]percentage occurrance for a one year period

[++]Cumulative experiences, adolescence through 4th collegiate year

Table 2

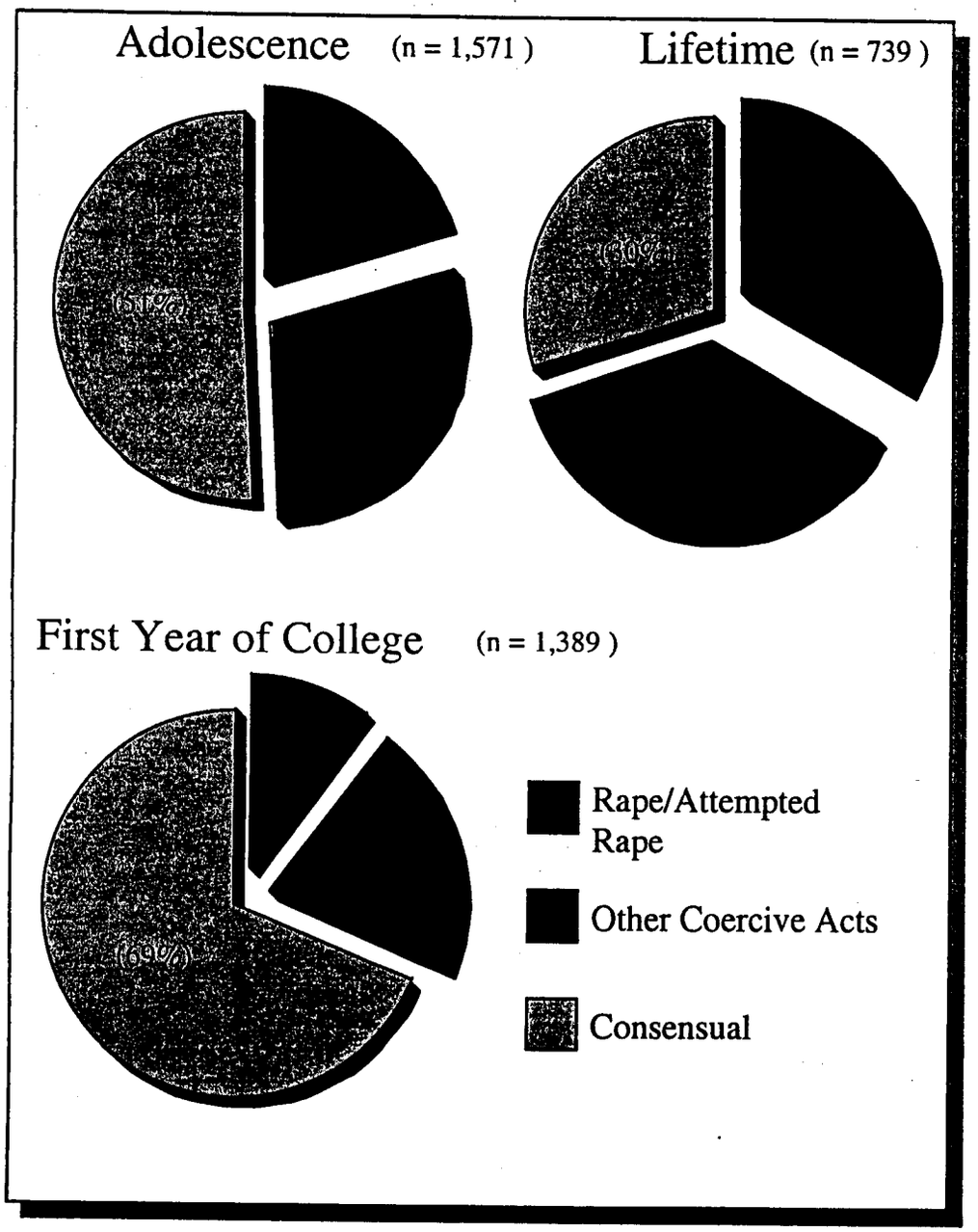
Odds of collegiate victimization given adolescent victimization

by type of adolescent victimization

Type	Odds[+]	Odds[++]
Overall	4.6	6.8
Unwanted Contact	2.6	1.6
Verbal Coercion 3.8	2.1	
Attempted/Completed Rape	4.4	13.7

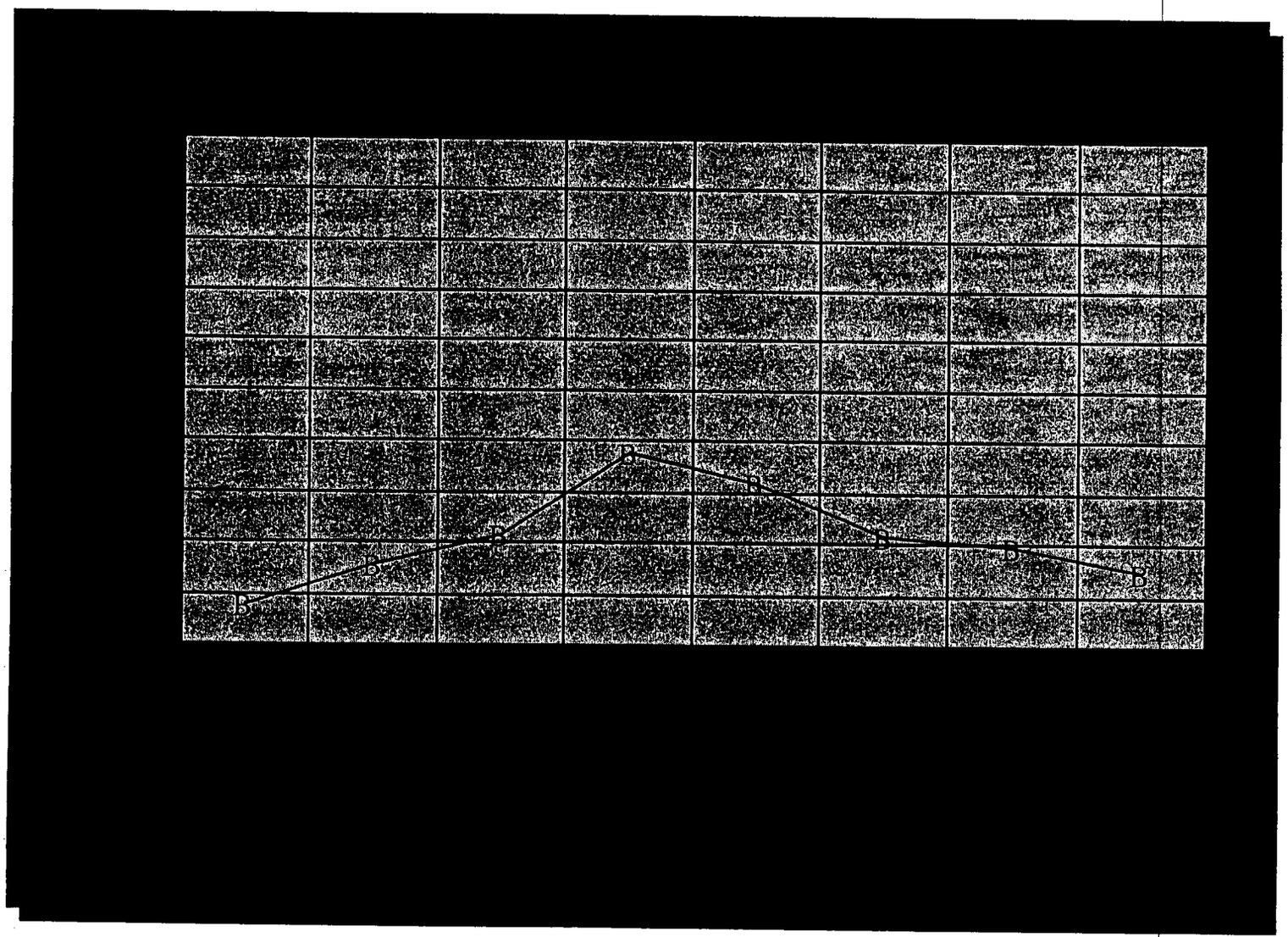
[+]Odds of any type of victimization during 1st year

[++]Odds of attempted/completed rape during 1st year

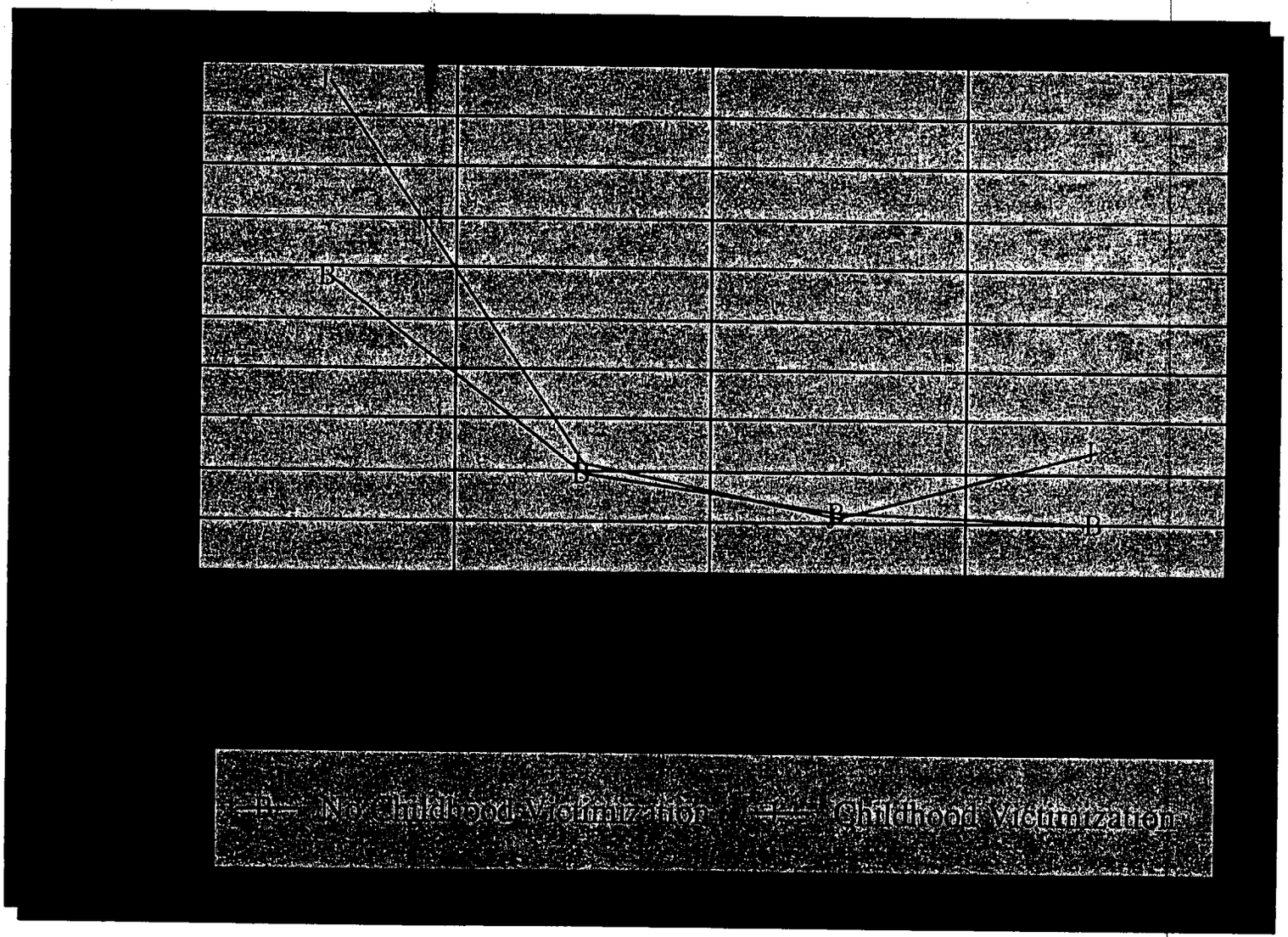


Patterns of Female Sexual Victimization

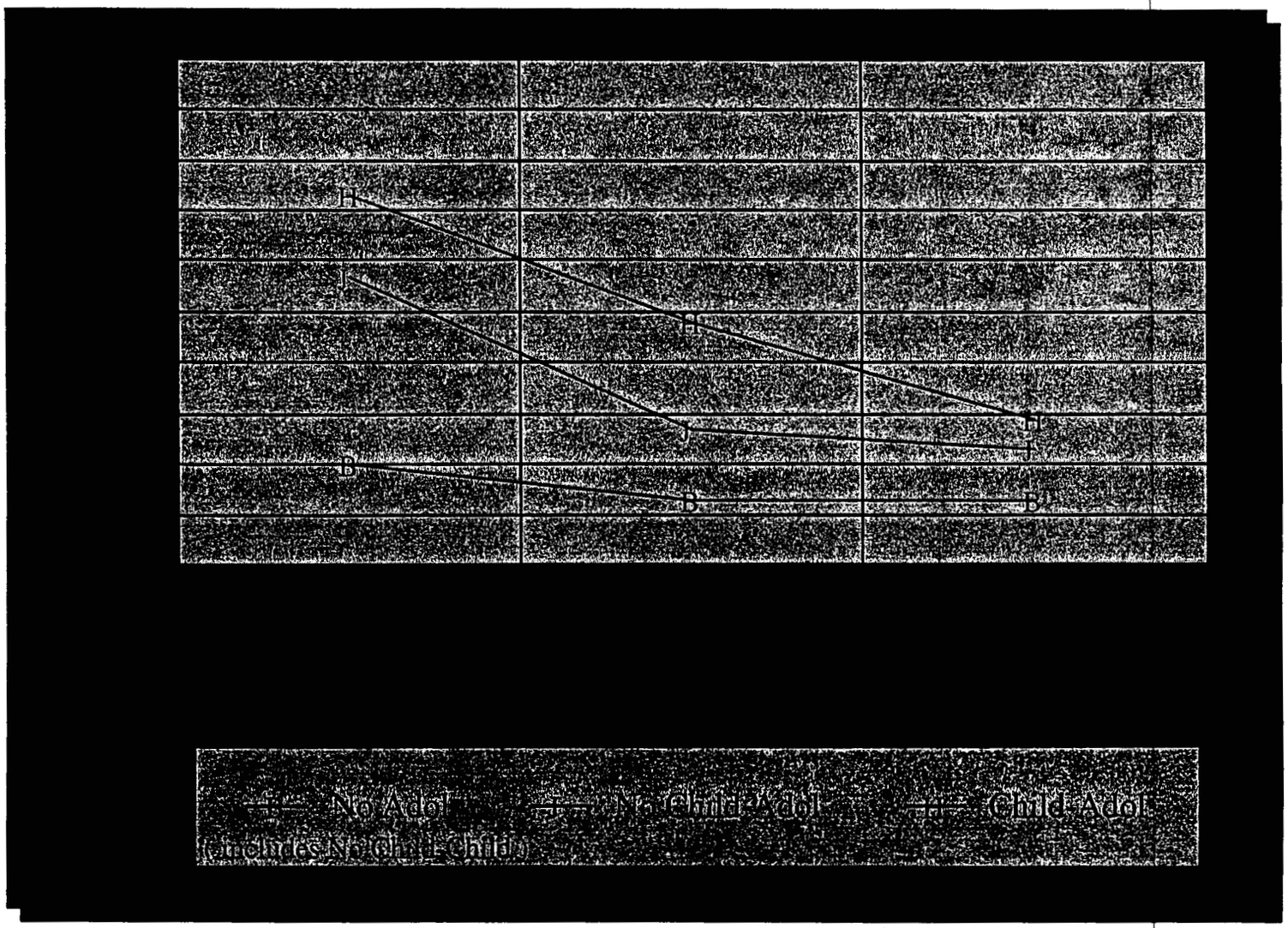
Hazard Rates for First Victimization



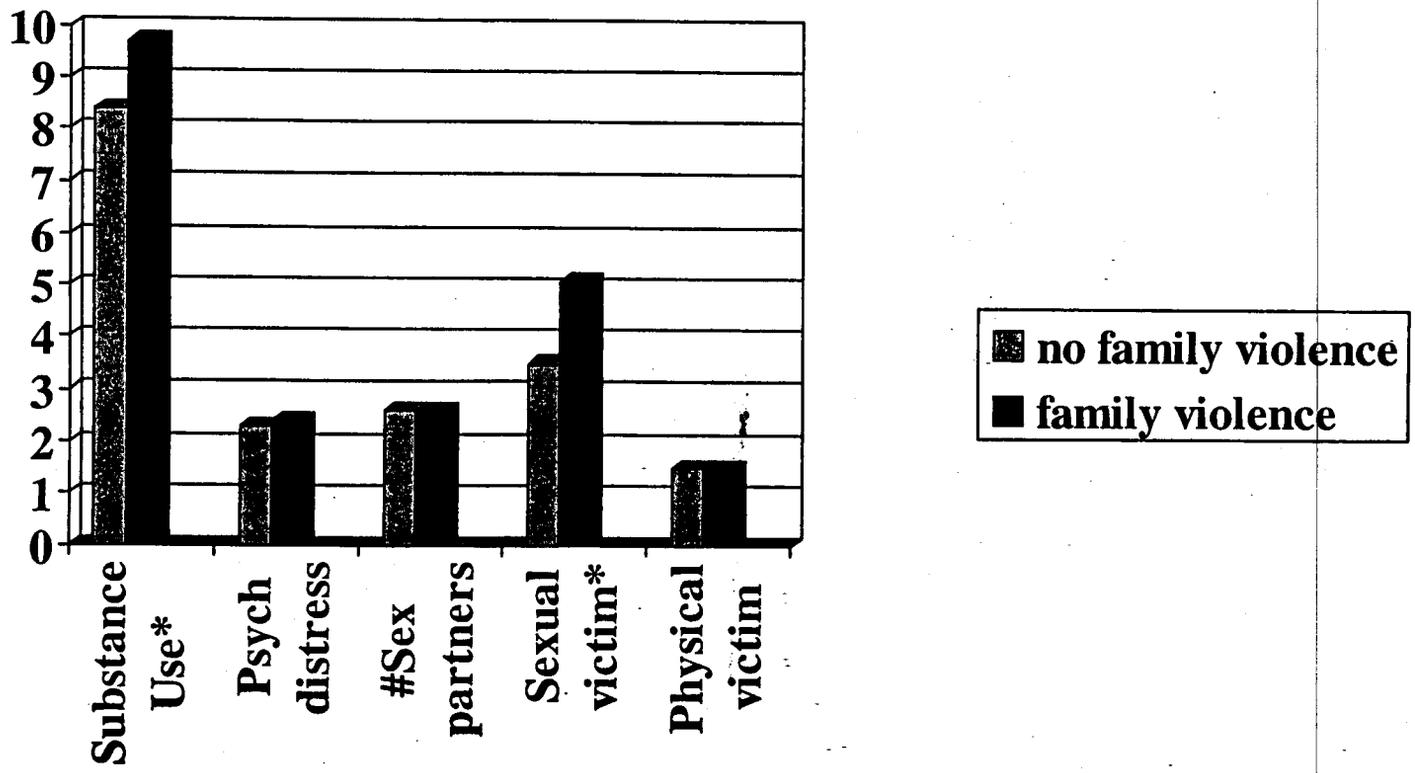
Hazard Rates for First Victimization as a Function of Childhood Victimization



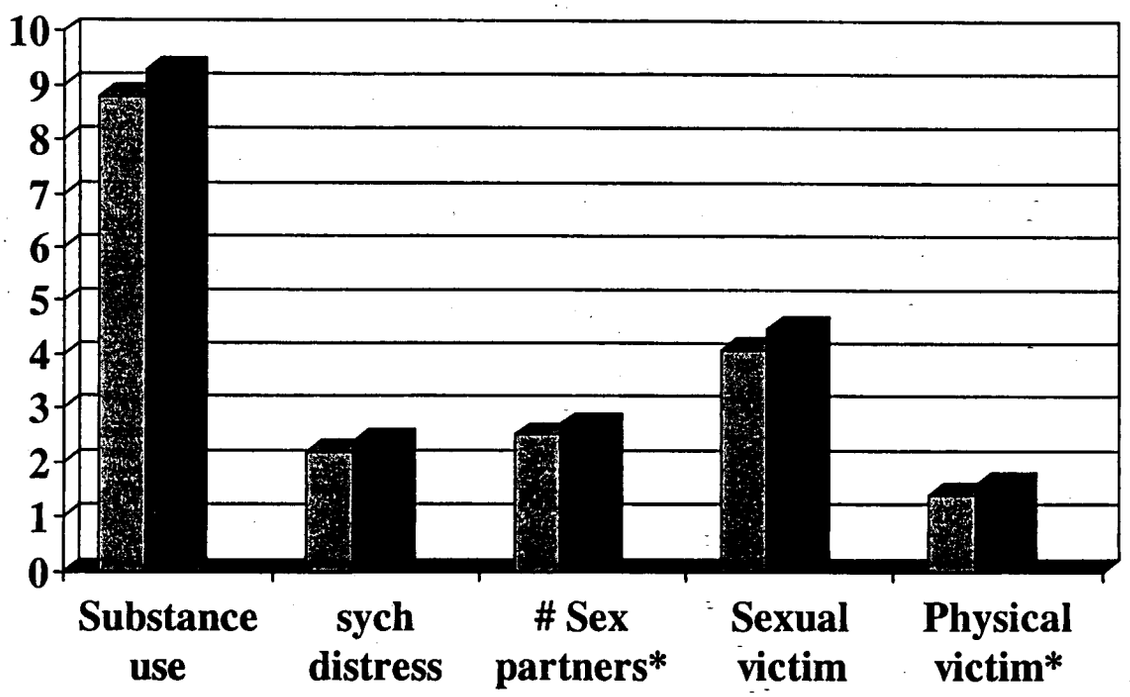
Hazard Rates for College Victimization as a Function of Earlier Victimization



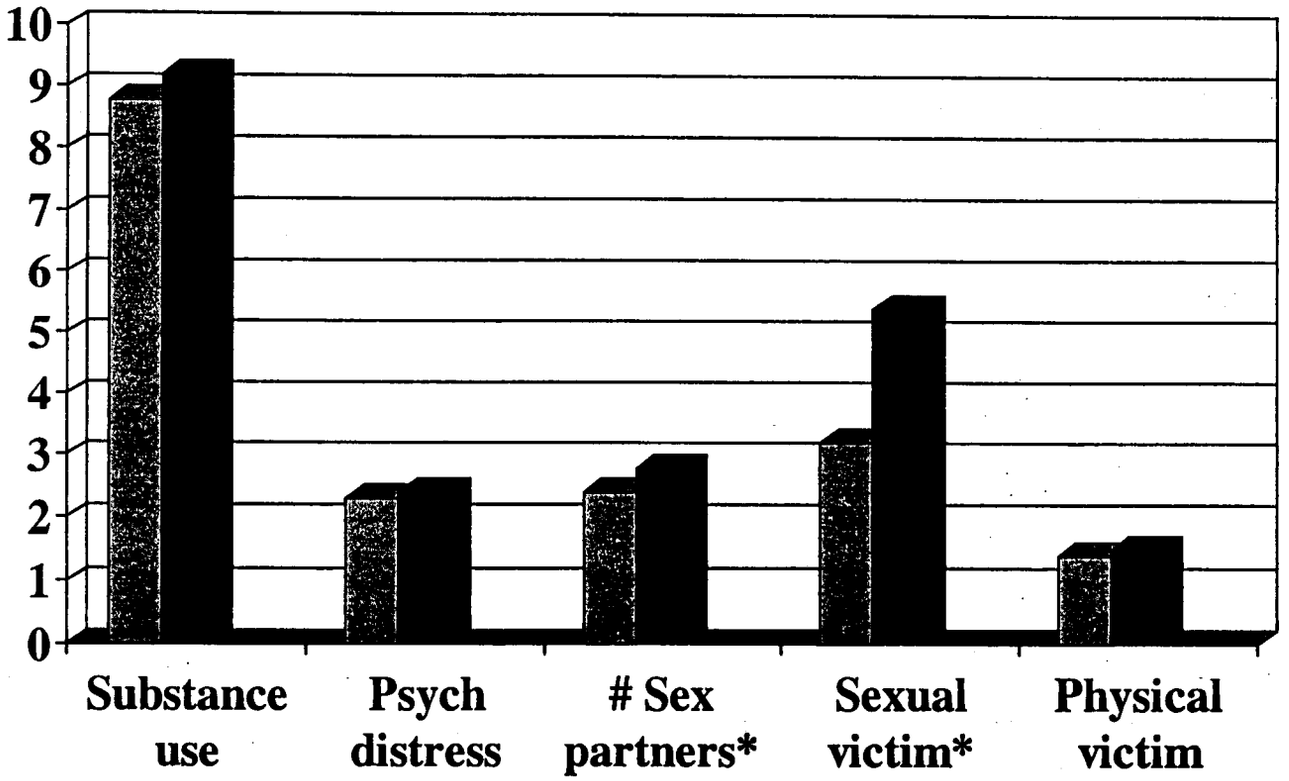
Effects of Family Violence on Adolescent Outcomes



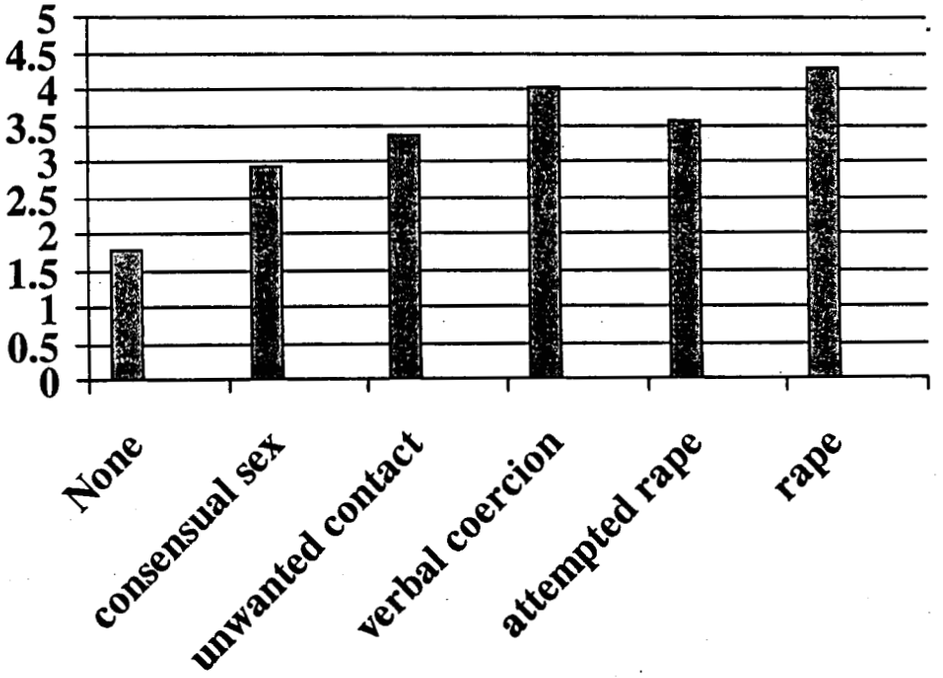
Effects of Witnessing Family Violence on Adolescent Outcomes



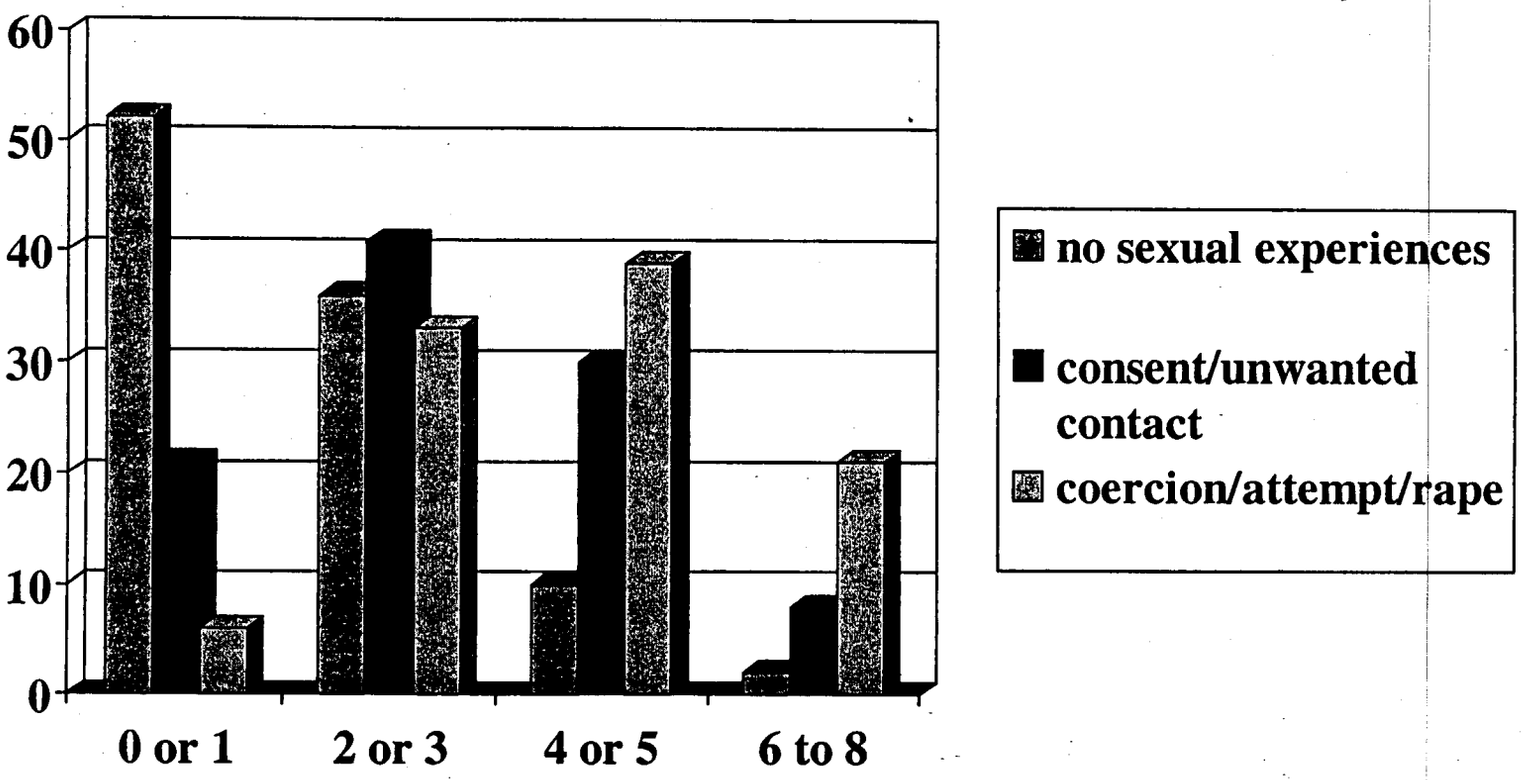
Effects of Childhood Sexual Abuse on Adolescent Outcomes

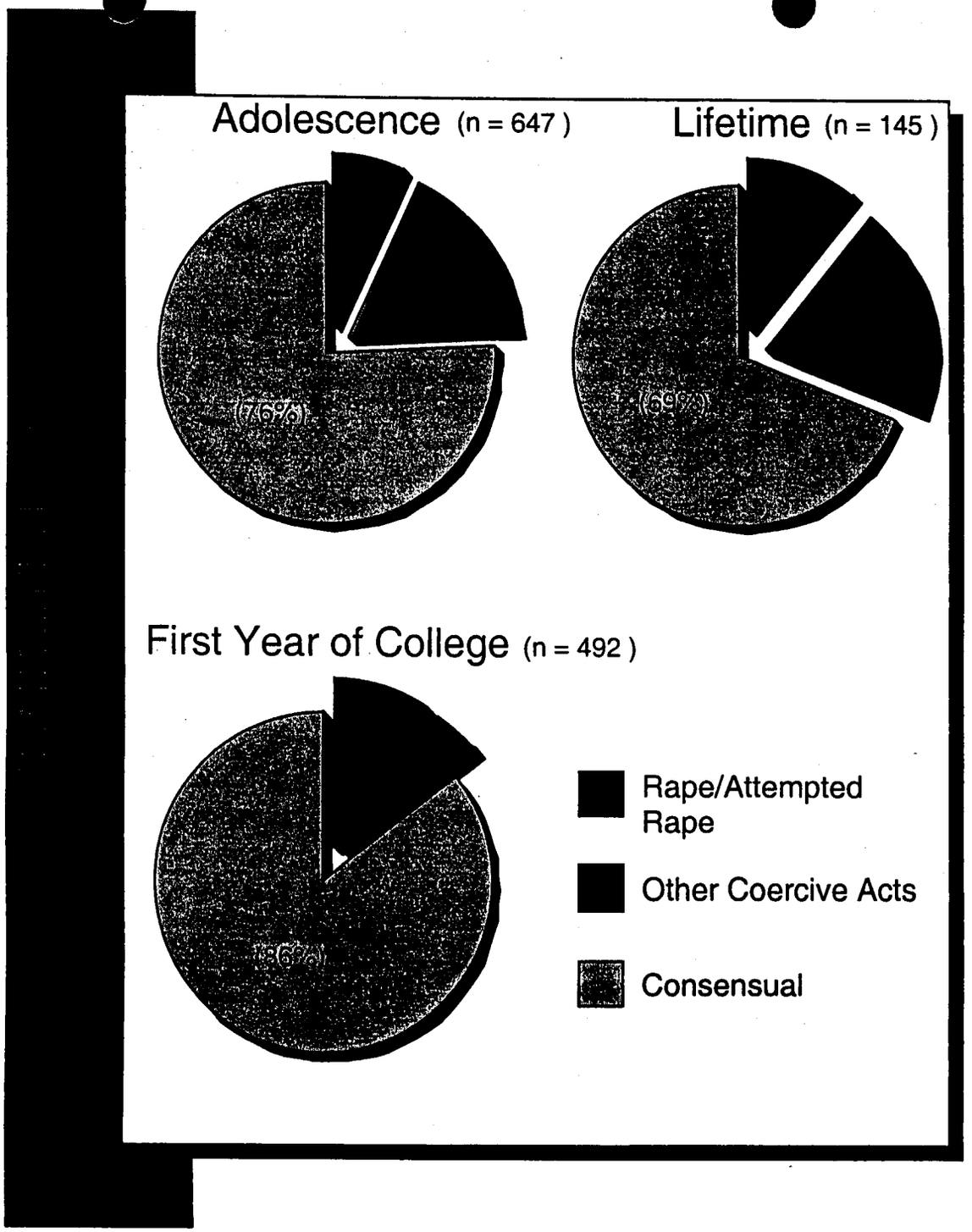


No. Risk Factors Associated with First Year College Victimization



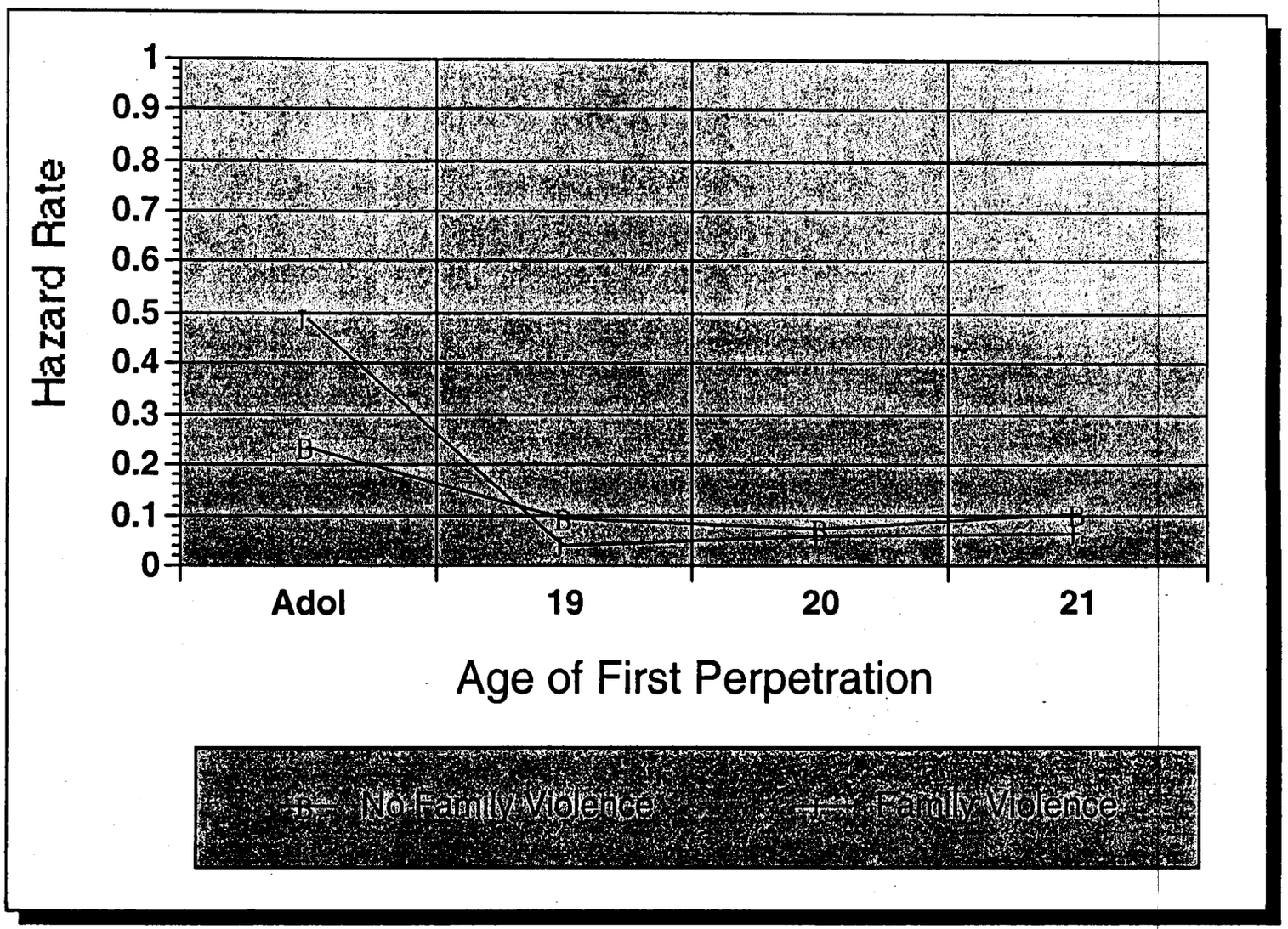
Level of Victimization by Number of Risk Factors



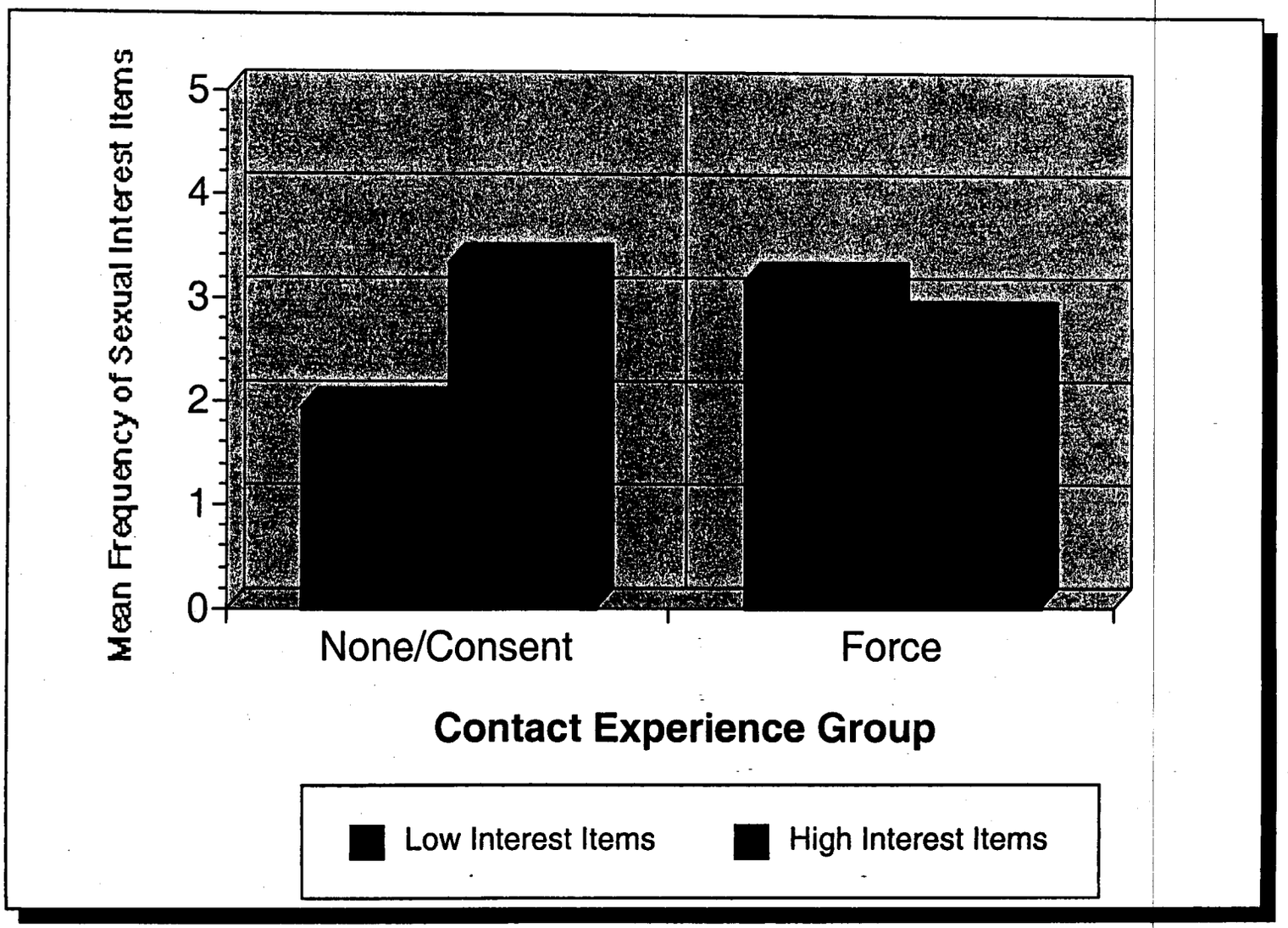


Patterns of Male Sexual Coercion

Hazard Rates for First Perpetration as a Function of Family Violence



Perceived Sexual Interest by Contact Experience



Sexual Attitudes by Contact Experience