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A 10-YEAR UPDATE OF “REVIEW AND CRITIQUE OF EMPIRICAL STUDIES OF RAPE AVOIDANCE”

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Ullman's review of empirical studies of rape avoidance is updated to illuminate what has been learned in the past 10 years and what is needed to continue to promote this important form of secondary prevention. Following a brief historical review, empirical studies of resistance strategies to sexual assaults since 1997 are reviewed. Studies of the effects of situational factors, rapist types, and victim-offender relationships on women's resistance are included. Selected literature on self-defense training and rape prevention related specifically to women's resistance also are reviewed, as these related areas of research have grown substantially in the past decade and can inform intervention and prevention efforts with women. Recommendations for future research and practice are offered.

Keywords: rape; resistance strategies; women; secondary prevention; rape avoidance

To understand women's resistance to rape in contemporary society, it is important to understand the historical and legal context of the phenomenon of women's resistance to rape. Resistance strategies refer to verbal and physical actions that women may engage in when confronted by potential rapists. Historically, women were held responsible for resisting rape to the utmost according to English common law, which is the basis of contemporary rape laws that have evolved in the United States. *Rape* has been defined as vaginal penetration of a female against her will by force or threat of force without her consent. The FBI continues to define *rape* in this way, although legal definitions in many states have been broadened in recent years. The traditional definition emerged from the fact that historically, women were the legal property of their fathers and husbands, and rape was considered a crime against a man's property (i.e., his wife or daughter), which was damaged or spoiled by the offense. Resistance, especially physical resistance, was considered evidence of non-consent. Injuries suffered in the struggle were expected to corroborate women's complaint that the sexual activity was indeed nonconsensual (i.e., rape). Although rape laws have been reformed and legal standards expecting victim resistance have been loosened in most states, victims are often still expected to resist so that others believe that sexual activity was indeed without their consent. Police and prosecutors still use evidence regarding victim's use of resistance as a way to support the credibility of rape claims (Abarbanel, 1986). The expectation that women resist serves to hold women responsible for controlling male sexual aggression and contributes to victim blaming in cases of rape.

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The early study of the causes of crime victimization by victimologist Menachem Amir (1971) is reflected in his theory of victim precipitation, which states that at least some rapes are the result of behaviors engaged in by victims that led to or precipitated their attacks. In the 1970s, second-wave feminists attacked this theory for blaming victims (Russell, 1975) and decried the poor treatment of rape victims by criminal justice and medical systems (Bevacqua, 2000). Except for cases where women were raped by strangers in circumstances resulting in excessive injuries (seen as proof that the sexual activity was forced) with no morally questionable behavior on their part (e.g., being out in public at night, drinking, and so forth), rape victims were considered less than innocent in their own attacks. Few women (typically less than 10%) reported attacks to police, and this remains true today (Bachman, 1998; Fisher, Daigle, Cullen, & Turner, 2003). Two thirds of rapes are committed by men known to their victims, according to large-scale epidemiological studies (Kilpatrick, Edmunds, & Seymour, 1992; Tjaden & Thoennes, 2000) that show most rapes do not fit the stranger stereotype.

Because *rape* was defined as a crime committed mostly by strangers until the mid-1980s, most rape prevention efforts were focused on telling women to restrict their behavior (e.g., refrain from going out at night, wearing revealing clothing, or drinking). Although this advice has been criticized for restricting women's freedom and full participation in society, it is still recommended in some self-help books and by some police officers. Advice to women to restrict their behavior is also supported by lifestyle and routine activities theories of victimization, which posit that one's risk of being victimized results from being out at night in places where situational opportunities, vulnerable targets, and motivated offenders come together without capable guardians to protect potential victims (see Meier & Miethe, 1993, for a review). These theories assume that most crime is committed by strangers or people who do not know each other well, outside, at night, in public places. However, we now know that most violent crime is committed by people known to each other and very often in the home. This is especially true of rape and other violence against women (Bachman, 1994). Police traditionally warned women not to fight back if attacked by a rapist. They were instead told to play along or try to talk their way out of rapes (Storaska, 1975)—strategies that subsequent research shows to be ineffective (Ullman, 1997).

Despite contemporary awareness of the high prevalence of date rape and acquaintance rape, first revealed by Mary Koss's (1985) national survey of college students in the mid-1980s and followed by other community-wide prevalence surveys showing that most rapes occur between intimates and acquaintances (Fisher, Cullen, & Turner, 2000; Tjaden & Thoennes, 2000), victims are still disbelieved, stigmatized, and held responsible for their attacks (Ullman, 1999a). These negative reactions are harmful to women's psychological functioning and may lead to or reinforce their own self-blame for being raped (Ullman, Townsend, Filipas, & Starzynski, 2007).

In response to this problem, rape prevention programs have been developed, many of which are in college settings, but they focus mostly on increasing knowledge about rape and changing attitudes that are believed to contribute to rape, such as rape myths, which are false beliefs about rape (e.g., women who dress in provocative clothing are asking to be raped). Although rape-supportive attitudes are held by many in society, there is no evidence that prevention programs can effectively change these attitudes over long periods of time or that changing these attitudes will necessarily lead to less rape (Anderson & Whiston, 2005; Brecklin & Forde, 2001; Flores & Hartlaub, 1998; Sochting, Fairbrother, & Koch, 2004). On the other hand, research consistently shows that certain resistance strategies can be used by

women to avoid rapes, implying that prevention programs should focus on teaching women effective resistance methods to protect themselves.

IMPACT OF RAPE: COSTS AND BENEFITS OF RESISTANCE

Resistance and rape avoidance are important because research shows that women who have experienced a completed rape have poorer mental health, such as more depression, anxiety, suicidal ideation, and suicide attempts, than women experiencing attempted rape (Kilpatrick, Saunders, Amick-McMullan, & Best, 1989; Ullman & Brecklin, 2002; Ullman & Siegel, 1993). Furthermore, sexual assaults of a more severe nature are related to poorer physical health outcomes, ranging from acute physical injuries, to immediate postassault acute health problems, to increased risk of developing chronic medical conditions (Golding, 1999; Koss & Heslet, 1992; Ullman & Brecklin, 2003; Ullman & Siegel, 1995). In addition, women's risks of contracting sexually transmitted diseases or becoming pregnant are higher if they suffer completed rapes. Therefore, reducing completed rapes may reduce victims' health problems and associated medical care costs. Some evidence suggests women feel better about themselves and less depressed if they resist rape, even if they are unable to avoid rape completion (Bart & O'Brien, 1985). Because costs to individual women and society are greater when more rapes are completed, any efforts to reduce completed rapes are important. Of course, concurrent prevention efforts must focus on men who are the primary perpetrators of rapes and on stopping rape from ever occurring. Unfortunately, effective prevention programs have yet to be identified that reduce male perpetration. Therefore, "risk reduction" programs that teach women facts about rape, risky situations, and effective resistance are needed. At the same time, rape prevention programs that target men can be developed and evaluated.

RAPE RESISTANCE STRATEGIES

Many women try to resist verbally and physically aggressive assailants in one or more ways. Research shows that using more resistance strategies and resisting immediately are related to avoiding completed rape (Ullman, 1997). Different types of resistance are related to different odds of suffering completed rape and physical injuries. Furthermore, assailants' assault tactics occur in varying circumstances that differentially constrain women's options for resistance. Research shows that attacks at night, with weapons, and in indoor and/or isolated locations are related to rape completion (Ullman, 1997). However, victim resistance may lead to avoiding rape, even in such circumstances, and must be examined in detail, paying close attention to relationship contexts and alcohol/substance use, which can affect women's ability and willingness to resist as well as the perceived efficacy of resistance.

Effective strategies. A number of studies find that several active resistance strategies are effective for avoiding rape without increasing risk of physical injury. Forceful physical resistance or fighting refers to physical actions women use against their attackers, including biting, scratching, hitting, using a weapon, and martial arts or other physical self-defense techniques. These strategies are not commonly used by victims in rape situations, with studies showing only approximately 20% to 25% of women using these types of forceful physical

resistance. Studies of police-reported rapes (Zoucha-Jensen & Coyne, 1993) and unreported rapes identified in the National Crime Victimization Survey (NCVS; Clay-Warner, 2002) continue to show that women who fight back forcefully are more likely to avoid completed rape (see Ullman, 1997, for review).

Despite this positive news, some researchers have expressed concern that women who physically fight back forcefully, in particular, in response to rape may sustain more physical injuries by increasing the offender's use of violence against them in the attack (Prentky, Burgess, & Carter, 1986). Unfortunately, most studies showing that women's physical fighting is related to more physical injury still fail to take into account whether the women were already being physically attacked when they resisted. This is important because of the possibility that the offender's initial physical attack was the determinant of victim injury. The sequencing of offender violence and victim resistance in relation to assault outcomes must be assessed to draw accurate conclusions about the effects of resistance on attack outcomes. Results are misleading when simple correlations of victim resistance with assault outcome are performed, without regard for when the resistance occurs during the attack.

Specifically, positive correlations of forceful fighting by victims with physical injury appear to be spurious, resulting from the fact that victims were being more violently attacked in these situations before they resisted. When the sequence of attack-resistance-injury has been taken into account, studies show that fighting leads to less completed rape and no increase or decrease in physical injury (Quinsey & Upfold, 1985; Ullman, 1998; Ullman & Knight, 1992). It is clear that these different results have important implications for rape avoidance advice given to women who must weigh the options and potential consequences of resistance in deciding how to respond to an attack. Most important, women should be encouraged (if they are able and so choose) to resist rape (especially by men who are physically attacking them) with forceful strategies, including fighting, known to increase their chances of avoiding completed rape.

Nonforceful physical resistance strategies used by women against attackers include fleeing, guarding one's body with one's arms, struggling, and so forth. Most research continues to find that women using these forms of physical resistance are more likely to avoid completed rape and no more or less likely to be physically injured. Recent evidence supports the efficacy of physical resistance. Clay-Warner's (2002) recent study of NCVS data show that a variable combining nonforceful and forceful forms of physical resistance (as contrasted with verbal resistance) was related to avoiding rape, controlling for situational factors and other resistance strategies in a logistic regression.

Forceful verbal resistance refers to strong verbal responses such as screaming, yelling, and swearing at the attacker. These are effective strategies for avoiding rape, particularly in response to offenders using verbal threats (Ullman, 1997, 1998). However, a study of NCVS data, without sequence information, shows that physical resistance was more effective than verbal resistance for avoiding rape (Clay-Warner, 2002). Clay-Warner (2002) concluded that forceful verbal resistance was ineffective in a logistic regression analysis controlling for assault characteristics and other resistance strategies. This study constitutes a more conservative test of the efficacy of resistance strategies.

Ineffective strategies. Nonforceful verbal resistance strategies include verbal responses of pleading, crying, and reasoning (e.g., trying to talk the offender out of rape). All are related to greater odds of rape completion. Not resisting, sometimes also called "immobility" or freezing, also is related to completed rape. Nevertheless, women are sometimes unable to

resist rape if taken by surprise or if they freeze when confronted by an attacker. Recent studies using NCVS data (Clay-Warner, 2002) and police data (Scott & Beaman, 2004) continue to confirm this finding. Not resisting the offender is related to greater odds of experiencing completed rape, but it is unrelated to physical injury (Ullman, 1997).

Summary. In summary, fighting, fleeing, and screaming/yelling are all associated with decreased odds of completed rape. It is possible that verbal resistance is less effective than physical resistance, but without sequence information, this is unclear. Furthermore, these effective strategies do not appear to increase the odds of physical injury in studies that examine the sequence of offender attack, victim resistance, and injury/rape outcomes. Thus, research suggests that women should not be told to refrain from resisting as this increases their odds of experiencing completed rape. Research on resistance strategies continues to support the efficacy of forceful resistance, especially physical resistance, for avoiding rape. Clay-Warner's (2002) research shows that the efficacy of resistance strategies changes when controls for use of multiple resistance strategies and situational factors are included in multivariate analyses. Specifically, resistance may not have different effects according to situational factors. This is an important advance compared to prior studies. However, more work is needed with different samples to replicate these findings and to consider the sequence of attack-resistance on assault outcomes.

More research is needed about what resistance works in which situations, but thus far, it still appears that resistance needs to be as forceful as the offender's attack and to match the type of strategy used by the attacker. In other words, if a woman is threatened, screaming may be enough to avoid rape, whereas if she is physically attacked, she may need to fight to be able to escape. Studies typically show that women do respond with verbal resistance to verbal threats and physical resistance to physical attacks (Siegel, Sorenson, Golding, Burnam, & Stein, 1989; Ullman, 1998; Ullman & Knight, 1992). Recent studies of acquaintance rape confirm this pattern of results (Macy, Nurius, & Norris, 2006) previously documented in stranger rapes. Research on resistance and self-defense training also supports more qualitative work showing that formal self-defense training enhances women's psychological well-being and belief they can avoid rape (McCaughy, 1997). Some data suggest that such training can help women avoid rapes, but rigorous evaluations have yet to be done (see Brecklin, in press, for a review of self-defense training studies).

Despite the fact that resistance can help women to avoid rape, this should not be taken to mean that they must resist rape or that it is their fault if they are unable to stop it. Although it should not be women's responsibility to avoid rape, society and the legal system still expect women to do so (Estrich, 1987). Because of this expectation, advising women to resist may reinforce society's expectation that women must resist and that they are to blame if they do not. On the other hand, women need to be told what works and then be free to choose how they want to respond. Failing to inform them about how to avoid rape makes it less likely they will resist because of fear or belief they cannot avoid rape. The result can be less resistance and more completed rape with its negative consequences. Teaching women that resistance works and how to actually resist or use self-defense may not always be sufficient for helping them avoid completed rapes, however. There are other barriers to resistance, discussed later, especially with men whom women know well or with whom they are in a relationship. In addition, various situational and contextual factors affect rape resistance.

SITUATIONAL FACTORS AFFECTING RAPE RESISTANCE

Situational factors are characteristics of the attack itself and/or contextual factors surrounding the scene of an assault. Many situational factors are associated with whether women are likely to avoid completed rape and physical injuries. These factors include whether there is a social situation surrounding the assault, such as a party or bar environment. Another factor is the prerape behavior of victims and offenders. For instance, drinking by offenders and victims prior to attack may affect both women's likelihood of being attacked and the assault outcomes. The victim-offender relationship refers to whether the victim knew the offender prior to the attack and the nature of that relationship (e.g., stranger, nonromantic acquaintance, romantic acquaintance, husband/lover) and may also affect the outcome of rape.

Other characteristics of the attack, such as whether a weapon is involved, where the attack takes place, the time of day, and whether environmental intervention occurs (e.g., presence of other people or factors that might intervene or otherwise deter the assailant from continuing an attack), affect whether rape is likely to be completed as well as the physical injuries women experience. Finally, some have argued that the type of rapist committing the attack may affect women's ability to avoid rape.

Risky situations. Few studies examine the efficacy of resistance across situations, although Clay-Warner's (2002) recent study of NCVS data suggests that effectiveness of resistance strategies does not vary across most assault situations. More research is needed on the efficacy of specific resistance strategies in different assault situations because type of resistance may vary by assault characteristics (Clay-Warner, 2003).

Certain places and situations may put women at a greater risk of rape and affect their ability to effectively resist an attacker. Criminologists have tried to explain individuals' risk of violent crime with lifestyle and routine activities theories of victimization (Meier & Miethe, 1993). According to these theories, one's risk of being victimized can be explained by the convergence of several factors: risky situations, suitable targets, motivated offenders, and an absence of capable guardians. For example, a young woman drinking alone in a bar who meets a sexually aggressive man may face a higher risk of sexual victimization. These theories have traditionally been useful for explaining risk of violent stranger victimization, which is typically associated with engaging in activities outdoors, at night, with delinquent peers. Therefore, they may help to explain women's risk of stranger rape. However, because different contexts and relationship factors characterize attacks by acquaintances and intimate partners, different theories (or modifications of existing theories) may be needed to understand risk and avoidance of sexual assault by known men.

Rapes by acquaintances and intimates often occur indoors, in isolated locations, and sometimes are part of a series of attacks by the same perpetrator (e.g., in cases of intimate partner rape). Research also shows additional factors are related to risk of acquaintance rape, such as women initiating dates, men paying for dates, use of alcohol or drugs by one or both parties, and women going to men's homes (Muehlenhard & Linton, 1987). A recent study of college women shows that women who had been victimized in the past, drank more alcohol, had multiple sexual partners, had poor psychological adjustment, and experienced insecurity about relationships with men were more likely to report being sexually victimized at a follow-up assessment (Greene & Navarro, 1998).

Bars appear to be quite risky settings for women because they are more likely to be both physically and sexually attacked in and around these contexts (Parks & Miller, 1997). Just being in a bar, regardless of how much one has been drinking, appears to put one at greater risk of being targeted by sexually aggressive men, according to research on women who frequent bars (Parks & Zetes-Zanatta, 1999). This finding is consistent with experimental research, which shows that people view drinking victims as legitimate targets of sexual aggression and hold them more responsible for their own assaults (Abbey, Ross, McDuffie, & McAuslan, 1996).

Fraternity and sports participation may be associated with increased risk of sexual assault (Koss & Dinero, 1988; Koss & Gaines, 1993). Current research, however, is unable to answer whether fraternity members or college athletes are more likely than other men to commit sexual aggression either alone or in groups (Frintner & Rubinson, 1993; Humphrey & Kahn, 2000; Koss & Cleveland, 1996). It is possible that behaviors often associated with these groups are in fact what predict sexual aggression. A recent study of college men shows that greater problematic alcohol use and adherence to masculinity norms supportive of violence against women were associated with self-reported sexual aggression but not with athletic involvement (Locke & Mahalik, 2005).

Rapes committed by more than one man (e.g., gang rapes) appear to be more violent in nature, and women are less able to avoid completed rape and other sexual acts in these cases than in single-offender rapes (Ullman, 1999b; Ullman, in press). More research is needed on potentially high-risk populations, such as fraternities and sports teams. Foubert's (2000) empirical study evaluating actual sexually aggressive behavior of fraternity men is the only such study to have been published. Fraternity men participating in a rape prevention program were less accepting of rape myths and said they were less likely to commit rape 7 months after program completion. However, there was no decline in how much sexually coercive behavior they admitted to committing after the prevention program compared with those not receiving the program.

Environmental/Bystander Intervention. Environmental interventions are persons, events, and noises that interrupt assaults in progress and appear to facilitate rape avoidance by allowing victims a chance to escape (Bart & O'Brien, 1985; Ullman & Knight, 1991). Few studies of rape avoidance have examined the impact of environmental interventions or presence of bystanders on rape avoidance. Clay-Warner (2002) found that the presence of bystanders was associated with avoiding rape in the NCVS, as it was in two studies in Ullman's (1997) review. Recently, Banyard, Plante, and Moynihan (2004) argued that prevention messages should be targeted to community members to increase their willingness to take an active role in prevention training and intervening in rape situations.

Drinking by offenders and victims. Men and women who drink heavily have an increased risk of perpetrating or being victimized by sexual assault, respectively (see Ullman, 2003, for a review). This suggests that interventions to reduce drinking-related assaults may need to address abusive drinking in general. The role that alcohol plays in actual rape attacks is unclear, but drinking is involved in up to one half to two thirds of all sexual assaults (including stranger and known offenders). Alcohol's presence does not necessarily mean that it is a causal factor in the occurrence of rapes or in the resulting injuries offenders inflict on their victims. For example, drinking before an assault is correlated with other factors also related

to the rape outcome, such as social situations in which victim and offender are less acquainted with each other (e.g., parties, bars). It may be these risky social contexts, and not the drinking itself, that confer sexual assault risk. Recent research involving both college and community samples indicates that both victim and offender drinking are associated with more completed rapes. Victims who have been drinking may be less able to effectively resist rapes on a behavioral level (Harrington & Leitenberg, 1994; Scott & Beaman, 2004; Ullman, Karabatsos, & Koss, 1999). However, other social-psychological barriers to resisting rape have been reported by women, including fear of rejection by the man and/or one's peer network, embarrassment, and perceiving that one is too intoxicated to escape even if one resists (Norris, Nurius, & Dimeff, 1996). Recent studies of college women also suggest that women who drink blame themselves more, both of which are associated with tonic immobility and less effective resistance (Macy et al., 2006; Nurius, Norris, Macy, & Huang, 2004), although these are cross-sectional retrospective data. It is possible that women who drink resist assault less, which leads to greater self-blame and possibly greater rape completion.

Current research on the relationship of drinking and outcomes of sexual assaults is inconsistent. Offender drinking has been thought to decrease men's inhibitions against using violence, which could translate into more severe assault outcomes (e.g., completed rape, physical injuries) to women. This disinhibition theory of alcohol-related violence is based on experimental evidence showing that men who drink engage in more aggression in laboratory settings (see Bushman & Cooper, 1990, for a review). Furthermore, representative sample studies show that offender drinking is related to more victim physical injury in sexual assault incidents (Martin & Bachman, 1998). Recent studies of college students and National Crime Survey data show that rapists' use of violence is related to more rape completion when offenders are not drinking (Cleveland, Koss, & Lyons, 1999; Ullman & Brecklin, 2000). Instead of drinking and physical aggression having a synergistic (combined) effect, they may be independent strategies used by offenders to complete rapes (Cleveland, Koss, & Lyons, 1999), because each one is more predictive of physical injury in the absence of the other (Ullman & Brecklin, 2000). If victims perceive their attackers to be drunk and fear they are out of control and may become more violent, they therefore may decide not to resist. Alternatively, offenders who get their victims drunk may impair their ability to resist, whereas offenders may need to use more violence to complete rape if drinking is not involved. Drinking is more common in assaults occurring with less well-known offenders and in unplanned social situations, but some research shows more severe sexual victimization of college women in unplanned social situations and in cases where offenders were not drinking (Abbey et al., 1996; Brecklin & Ullman, 2001; Ullman et al., 1999).

It is clear that drinking is associated with the outcomes of sexual assaults, but more research is needed to understand the role of drinking in the physical injury experienced by women, not just the rape outcome, which is examined in most studies. Alcohol abuse prevention efforts are clearly integral to prevention of alcohol-related sexual assaults, and more research is needed on the role of drinking in different assault contexts so that specific information about alcohol's role in sexual assaults can be integrated into prevention programs. Two conclusions may be drawn from current research in relation to drinking and rape. First, it should not be assumed that drinking prior to assault causes offenders to become more violent and complete more rapes. Sex offender researchers have argued that drinking is unlikely to cause someone not otherwise predisposed to sexual aggression to

commit rape (Seto & Barbaree, 1995). Second, women's drinking in and of itself should not be assumed to increase their risk of sexual victimization. National studies show that rapes where only offenders were drinking (as opposed to both victim and offender) were related to greater rape completion (Brecklin & Ullman, 2002) and victim injury (Ullman & Brecklin, 2000), suggesting a greater role of offender, not victim, drinking in assault outcomes. Although drinking appears to put women at greater risk of completed rape, this may be because of other situational, behavioral, and social-psychological factors not yet completely understood.

Victim-Offender Relationship. At least two thirds of rapes are committed by men known to the victim (Kilpatrick et al., 1992; Tjaden & Thoennes, 2000). A woman's relationship to the attacker prior to the assault is related to the rape outcome. There is some inconsistency as to whether resistance is more or less effective in response to strangers or known men, but women appear to be more likely to avoid stranger rapes (Ullman, 1997; Ullman, Filipas, Townsend, & Starzynski, 2006), probably because they are more willing to resist these attackers (Martin & Bachman, 1998). Most research shows that women resist much less when attacked by known perpetrators, but their resistance is equally effective for avoiding rape completion in these cases. The fact that women are less predisposed to resist attacks by known men makes them much more vulnerable to completed sexual assaults, particularly by intimate partners (Ullman & Siegel, 1993). Although Koss (1985) found that all victims were equally likely to physically resist rapes in a college population, other studies show less physical resistance to intimates than to stranger and acquaintance assailants (Clay-Warner, 2002; Scott & Beaman, 2004; Ullman & Siegel, 1993).

Approximately 25% to 30% of rapes are perpetrated by intimate partners (Mahoney & Williams, 1998). A significant proportion of domestic violence situations also involve sexual assaults, which may be repeated within an intimate relationship and are obviously much more difficult for victims to avoid. Married women reported not resisting assaults by their husbands because they felt it was their duty to submit, feared resisting would make husbands more violent, wanted to protect their children, knew from past experience that resistance was useless, or did not feel psychologically and physically trained to fight (Finkelhor & Yllo, 1985). It is clear that preventing rape in intimate relationships may require dealing with chronically violent men who repeatedly assault their partners in marital, cohabiting, or dating relationships (Bergen, 1996). Resisting rapes by intimate partners is likely to be more difficult, and some women find that ending their relationships may be the only way to stop sexual assault by partners. More research is needed on how women avoid rape by men they know and whether specific resistance strategies differ in effectiveness for different types of known offenders. Research suggests that forceful resistance strategies can enhance women's ability to avoid completed rape by both known and stranger assailants.

Weapons. Another factor that may affect women's ability to resist and avoid rape is whether a weapon is involved. Fortunately, few rapes involve weapons (less than 11%) according to recent national data (Bachman, 1998). This is especially true of rapes by known attackers. Offenders who display weapons to their victims are more likely to complete rape, but evidence is mixed about whether offenders with weapons are more likely to

injure their victims (see Ullman, 2002). Victims attacked with weapons are more likely to develop posttraumatic stress disorder because of fear they might have been killed during the attack (Kilpatrick et al., 1989). Even when offenders have weapons, the physical injury they inflict tends to be minor, and completion of the rape itself is usually the most serious outcome for victims. Only about one third of sexual assault victims sustain injuries, usually of a minor nature, such as cuts, bruises, and scratches (Ullman, 1997).

Fortunately, resistance appears to be just as effective for avoiding rape by armed assailants (Ullman, 1997). Rapists appear to use weapons to inhibit victim resistance, not to cause gratuitous injuries. Victims are more likely to be injured by rapists carrying nonlethal weapons of convenience (e.g., sticks, stones) than lethal weapons, possibly because victims resist less when confronted with lethal weapons. However, some data suggest that victims respond with more physical resistance to assailants bearing weapons in police-reported cases (Scott & Beaman, 2004). If victims have weapons, they are less likely to be raped (Kleck & Sayles, 1990; Quigley, 1989), but few women have weapons ready to use in situations involving men they know and trust, who commit the majority of sexual assaults. More research is needed to understand the role of different types of weapons in rapes. Specifically, information is needed about how different types of resistance strategies used by women may vary in effectiveness in response to offenders with different types of weapons. Clay-Warner (2002) examined this issue in NCVS data and found no effect of physical resistance in assaults with weapons, whereas physical resistance was related to less completed rape in attacks without weapons. This may temper our prior conclusion (Ullman, 1997) that women can successfully avoid completed rape, even by offenders bearing weapons (by using forceful resistance). Although it does appear that women may be more likely to avoid rape if they have a weapon themselves (Kleck & Sayles, 1990), more research is needed on this issue. Unfortunately, no research using sequence data examines the role of weapons in relationship to subsequent victim resistance and injury outcomes of rapes, including Clay-Warner, so this issue is unresolved.

Rapist Type. Researchers have identified different types of rapists that differ according to various psychological and behavioral characteristics (Knight, 1999). There is little research examining whether women's resistance may vary in effectiveness to attacks by different types of rapists. This issue may be of concern if certain types of rapists (e.g., sadists) are more likely to respond to victim resistance with increased physical violence, as some have warned. The only study of resistance using an empirically validated rapist typology (e.g., classification system for typing offenders) shows no differences in the effectiveness of women's different resistance strategies for avoiding rape and injury according to rapist type (Ullman & Knight, 1995). More research is needed, but concerns that sadistic rapists or other specific rapist types (e.g., pervasively angry, opportunistic, nonsadistic sexual, vindictive) will inflict more injury on victims who forcefully resist (Prentky et al., 1986) remain unfounded to date. The most important factor affecting the amount of injury to victims is how much violence offenders use during the attack. Fortunately, this is an observable behavior that does not require women to figure out the type of rapist attacking them before deciding how or whether to resist. Until research shows otherwise, women should not be discouraged from resisting rape based on fears that offenders will respond with increased violence.

BARRIERS TO RESISTANCE: SOCIAL-PSYCHOLOGICAL FACTORS AND VICTIMIZATION HISTORY

Teaching women what resistance strategies are effective and how to use these strategies may not be enough to help them avoid rape, especially by known men. Various social-psychological barriers exist for women in dating situations that may need to be addressed in high school and college women, including embarrassment and fear of peer group rejection for resisting men's sexual aggression (Norris et al., 1996). These barriers may also be rooted in gender role socialization that encourages women to put the needs of others, especially men, above their own needs. Because society holds women responsible for rape and often blames them for men's sexually aggressive behavior, many women deny they have been raped and will not label themselves as rape victims (Koss, 1985). Because of this, they may internalize self-blame for experiences that make them feel victimized but for which costs of acknowledgment are too high. Women report that they perceive they face low personal risk for sexual aggression from acquaintances and low preparedness to protect themselves against this threat (Nurius, 2000). Therefore, to develop effective resistance efforts, more research is needed on factors shaping risk perceptions and how these factors influence women's risk reduction and self-protection behaviors. Gidycz, McNamara, and Edwards (2006) reviewed the literature on women's risk perception and sexual assault and concluded that although women generally underestimate their risk, relative to peers, of being assaulted, it is not clear from existing studies that they have deficits in their ability to perceive risk. Even women with prior victimization histories can detect risk, sometimes as well or better than nonvictimized women, but they show different behavioral responses to sexual assault situations, namely, less assertive responding.

Concerns about rejection by men, embarrassment at how others might negatively judge their resistance (e.g., by blaming women for asking for it), and fears of being stigmatized by friends or peers affect women's decisions of how to respond to acquaintance sexual aggression. Women's fears of negative reactions from others are well founded, as they often receive negative social reactions (e.g., blame, stigma, controlling responses, egocentric responses, disbelief) when disclosing sexual assaults (Ullman, 1999a). These social concerns may override their ability to recognize danger and take action in acquaintance rape situations. In addition, drinking may lead women to focus on cues concerning positive aspects of social situations, such as having fun and meeting men, instead of potential danger cues.

In a study of acquaintance sexual assault, Nurius, Norris, Young, Graham, and Gaylord (2000) found that college women were more likely to respond assertively to a man's sexual aggression when he used physical force, when she was concerned about injury, when she was not concerned about preserving the relationship, and when she felt angry and confident. On the other hand, women used diplomatic responses when the man used verbal coercion, when she was self-conscious of her responses, and when she felt sadder and less angry. These findings suggest that risk reduction interventions need to address women's emotional responses to sexual assault situations and that increasing women's confidence may help them actively resist sexual aggression, as suggested by self-defense experts. Another study of 415 college women assaulted by acquaintances shows that women who were less concerned about the offender's judgment, engaged in less self-blame, and had greater resentment were more likely to use more resistance (Nurius et al., 2004). Using structural equation modeling, this study

also shows that women's alcohol use was related to greater self-blame for rape, which was associated with more immobility and diplomatic responding. However, alcohol use was not related to complete immobility but instead, to attempts to verbally negotiate out of sexual assault. These results suggest a complex relationship of alcohol use, social cognitive responses, and resistance to acquaintance sexual assault.

Only one study evaluates whether addressing social-psychological barriers in a prevention program reduces risk of sexual victimization in college women. Breitenbecher and Scarce (2001) gave a treatment group a 90-minute educational program that included information about sexual assault prevalence, rape myths, sex role socialization, and rape as an act of power. A component was added to build skills in sexual communication to teach women effective verbal and behavioral responses to sexual assault after imagining the emotions and thoughts they would expect in such a situation. The treatment group showed no reduction in sexual assault risk compared to a control group of women at a 7-month follow-up. In addition, knowledge about sexual assault, dating behaviors, sexual communication, and perception of risk were unaffected by participating in the program. Possible reasons that victimization was not reduced include small sample size, the fact that one-shot interventions may be inadequate, and the program's lack of actual physical training in resistance/self-defense to sexual assault. In summary, social-psychological barriers may affect women's ability to resist sexual victimization and may need to be addressed in risk reduction efforts. More research is needed to determine whether efforts to reduce these barriers in women can lower their risk of being attacked and help them to avoid completed rapes once attacked. Educating women about these barriers may help them to become more aware of and less influenced by internal barriers to their own self-protection and resistance during attacks.

Although awareness of barriers is likely an important target for prevention, another study of 212 college women (Macy et al., 2006) finds that outcomes of acquaintance rapes are affected by not only assailant behavior and victim responses but also women's emotions and appraisals. Macy et al. (2006) concluded that reducing self-blame was needed. Self-blame was higher for victims who were drinking prior to assault and led to less victim resistance and poorer psychological aftermath. In addition, the authors suggested training women to detect threat and be aware of perpetrator tactics (e.g., isolating women, giving them drinks), to use effective resistance strategies, and to understand how their expectancies, behaviors, and prior victimization histories may affect their decisions about resistance. In particular, women with prior victimization histories appear to be more likely to use passive resistance strategies and less likely to use active resistance strategies than nonvictimized women (Norris et al., 1996). However, in the same study (Macy et al., 2006), victimization history was unrelated to resistance when assailant actions were in the model. Thus, multiple factors must be considered to understand women's ability and willingness to resist acquaintance rape.

SELF-DEFENSE TRAINING

Teaching women how to defend themselves has long been part of feminists' efforts to help empower women to avoid rape. Although no published empirical evaluations of the efficacy

of self-defense training exist, anecdotal data suggest that this type of training helps women thwart future assaults. Self-defense training has beneficial psychological effects such as increased confidence, assertiveness, perceived control of one's life, self-efficacy, and increased mastery of actual physical skills. In a controlled experimental study, Ozer and Bandura (1990) found that women trained in physical self-defense skills had enhanced efficacy and coping, decreased perceived vulnerability to assault, increased freedom of action, and decreased avoidance behaviors. Gidycz, Rich, Orchowski, King, and Miller (2006) evaluated a sexual assault risk reduction program that included a physical self-defense component using random assignment to program or a wait-list control group. Although women receiving the program had increased protective behaviors during a 6-month follow-up, there were no differences between women receiving the program and the control group in rates of sexual victimization, assertive communication, or self-efficacy. The authors suggested that the lack of a significant effect of this program on sexual victimization rates may have been because of greater awareness and labeling of sexual assault by program participants, sharing of information between women in the two groups, and lack of a powerful enough program.

Feminists argue that self-defense training empowers women and girls to overcome passive female gender role socialization that encourages them both to be out of touch with their bodies and to perceive themselves as too weak to protect themselves from men's violence (McCaughey, 1997). This socialization may explain women's fear of sexual assault in contemporary American society that leads them to restrict their behavior to avoid rape. Self-defense educators first try to help women to overcome their fear of hurting the attacker, their aversion to using violence, and feelings that they do not deserve to protect themselves. These social-psychological factors impede women from seeing themselves as active agents capable of protecting themselves and thwarting attacks. Mastering physical self-defense techniques appears to help women overcome these barriers and feel efficacious (Hollander, 2004). According to self-defense instructors, child sexual abuse survivors may have an especially difficult time defending themselves and overcoming these barriers. This may be why they are more likely to be revictimized (e.g., raped again) as adults and also may explain the ineffectiveness of current rape prevention programs with previously victimized women (Hanson & Gidycz, 1993). Although more research is needed to evaluate self-defense training, rape intervention programs need to provide access to self-defense training for women, given consistent research showing that forceful verbal and physical resistance enhance rape avoidance.

RAPE PREVENTION PROGRAMS

Although many rape prevention programs exist, most focus on changing attitudes such as rape myths or increasing women's self-efficacy (Anderson & Whiston, 2005; Brecklin & Forde, 2001; Flores & Hartlaub, 1998), with the rationale that decreasing rape-supportive attitudes may reduce rape. Little evidence shows that programs are effective in altering rape-related attitudes over time, and it is unclear whether changing attitudes will reduce rape. A review of studies of rape intervention programs for college students finds little change in rape myth attitudes as the follow-up time of assessment increased, less effectiveness for mixed-sex than single-sex programs, and less effectiveness of unpublished program evaluations (e.g., doctoral dissertations) than published evaluations (Brecklin & Forde, 2001). Other meta-analytic reviews of prevention programs with a variety of outcome measures

reach similar conclusions (Anderson & Whiston, 2005; Flores & Hartlaub, 1998), and none show evidence of reduction in risk of rape. In one of the few published studies to date assessing future victimization risk, Hanson and Gidycz (1993) found a decrease in rates of sexual assault victimization during the course of a 9-week period in college women without a prior history of sexual assault exposed to a risk reduction program that included discussion of self-defense strategies and risky dating behaviors. However, two subsequent evaluations of similar sexual assault education prevention programs found no reduction in sexual assault risk at follow-up, regardless of sexual assault history (Breitenbecher & Gidycz, 1998; Breitenbecher & Scarce, 1999).

Because women's vulnerability to rape is heavily determined by situational factors that increase their proximity to motivated offenders, focusing on women's personality characteristics or backgrounds is unlikely to effectively reduce rape. Most studies reveal that victims are indistinguishable from nonvictims on attitudinal variables such as sex role beliefs, rape myth acceptance, acceptance of interpersonal violence, and adversarial sexual beliefs. Furthermore, Lonsway's (1996) review of rape prevention education programs concludes that sexuality education is not adequate for changing rape-related attitudes if it does not explicitly address sexual violence and that programs may be more effective if they discuss women's roles and status in society. More recently, some have argued that risk reduction programs should focus more on teaching women self-defense or resistance strategy training because changing attitudes may not reduce rape (Roze & Koss, 2001; Ullman, 2002).

Some feminists have expressed valid concerns that interventions targeting women that either teach self-defense or educate them about effective resistance strategies hold women responsible for rape prevention. However, as long as males commit rape, women and girls should be given information and training in effective methods of self-protection. Women also need access to knowledge about risky situations and behaviors, just as society helps people protect themselves from other public health threats such as HIV infection. This type of education can be done without holding women responsible or blaming them for being assaulted. In addition, education and training about resistance can empower women by presenting this information in the context of programs about gender role socialization and social-psychological barriers to self-protection.

Most experts believe that a two-pronged approach is needed to prevent rape: risk reduction programs for women and prevention programs for men (Gidycz, Dowdall, & Marioni, 2002; Roze & Koss, 2001). Because programs targeting men and women separately may be more effective, information targeted to men and women should be somewhat different, although possibly not completely different. For example, women need to know about risky situations, perpetrator characteristics, and effective resistance strategies, including actual self-defense training, such as Model Mugging or other self-defense training programs. Men need to be taught what rape is (e.g., definition, rape myths, impact of rape) and how to interact with women respectfully without ignoring their needs or refusals of sexual advances. Men also need to know that drinking is not an excuse for rape and that getting a woman drunk and having sex with her actually constitutes rape. Both men and women may benefit from information about rape statistics, gender role attitudes and socialization, and rape myths.

Most rape prevention programs do not focus on teaching women about risky situations, effective resistance strategies, and actual self-defense training. Few rape prevention program evaluations examine whether participants actually have a reduced risk of future victimization or perpetration in the future. Without such evaluations, we do not know whether existing

rape prevention programs actually work. Unfortunately, the few programs that have assessed this outcome have mostly failed to show reductions in victimization risk. The two programs that showed some efficacy during brief follow-up periods did not work for all women (e.g., women with a history of previous victimization; Hanson & Gidycz, 1993) or still showed high revictimization rates among program participants (Marx, Calhoun, Wilson, & Meyerson, 2001). Finally, other studies fail to replicate these results (Breitenbecher & Gidycz, 1998; Breitenbecher & Scarce, 1999). It is important to note that these programs typically include various components, including education about rape prevalence, rape myths and attitudes, characteristics of victims and offenders, how to label sexually coercive behavior, risky situations, safe dating behaviors, how to resist rape, effects of rape on women, and local resources for victims (see Gidycz et al., 2002, for a review). When evaluations do show positive effects, it is not clear which program components are producing changes in participants. Educating women about risky situations and behaviors, including effective resistance, is likely to be important and is included in some of these programs. The overall ineffectiveness of these programs in reducing future victimization suggests that actual rape resistance and/or self-defense training is needed, especially because women with self-defense training before rape are more likely to say their resistance helped thwart the attack (Brecklin & Ullman, 2005).

Risk reduction programs typically try to keep women from ever being attacked by advising them to restrict their behavior by avoiding risky situations. Unfortunately, many women are attacked by men they know in situations they thought were safe, but they can still be empowered to thwart these attacks. Although society and even feminists may feel uncomfortable teaching women resistance strategies and self-defense, such intervention is needed. Effective resistance strategies of screaming, fighting, and fleeing should be taught to women in educational programs that include practical self-defense training. Evaluation of self-defense classes is needed to see if they help women avoid future rapes and improve their overall psychological well-being. Self-defense classes should be available for women in college and high school, and community programs providing self-defense training should be funded for women in the general population. Such risk reduction efforts will of course not stop rapists from selecting weaker targets, but they may help to reduce completed rapes for women who are attacked. Such programs also can show that society supports women's efforts to defend themselves against this crime. Interventions with women should address social-psychological barriers such as embarrassment, fear of social rejection by peers, and beliefs they are unable to resist rape or unworthy of being free from sexual assault. Evaluations of rape intervention programs for women are needed to see if components like self-defense training and education about risk reduction and social-psychological barriers are effective. Studies should include long-term follow-up assessments to determine whether positive attitude changes persist and whether future risk of actual victimization is reduced.

Risk reduction programs should be tailored to women with different victimization histories, such as child and adolescent sexual assault. A risk reduction program focused on discussion of self-defense strategies and risky dating behaviors decreased subsequent sexual victimization, but not for previously victimized women (Hanson & Gidycz, 1993). A subsequent multisite evaluation of a risk reduction program (Gidycz et al., 1998) shows that women victimized during a 2-month follow-up interval had a reduced risk of sexual revictimization at a 6-month follow-up. These results suggest that among women who had previously experienced a sexual assault, those who had the program were better able to use it.

Another study of 66 college women with a history of sexual victimization (Marx et al., 2001) expands on a risk reduction program of Hanson and Gidycz (1993); it finds no differences in rates of sexual assault revictimization between program participants and a control group after 2 months but less completed rape for program participants. Changes in women, such as decreased self-competence or increased self-blame after an assault in adolescence, both of which are related to later revictimization, could be targeted in intervention programs with previously victimized women and may be particularly affected by self-defense training. Future research must identify consequences of being victimized that lead to higher risk of future completed rape to develop intervention programs tailored to these women's needs.

Arguing for resistance and self-defense training based on extant empirical results does not mean that women are responsible for rape prevention, which is a pitfall of interventions aimed at women. However, there is a distinction between prevention that restricts women's freedom (e.g., telling them to not go out at night or to not drink alcohol) and prevention that enhances women's freedom (e.g., providing information about risk, teaching self-defense skills). Failing to provide empirical information about effective resistance strategies and training in self-defense techniques allows men to continue completing more rapes of women, which causes serious psychological and physical harm. Rapists admit planning their attacks and looking for easy targets. Thus, women who act assertively can thwart them by resisting attack. Assaultants may be surprised when women actively resist, as they may expect women to submit. Educators should help women to identify barriers to their own self-protection, such as feelings of unworthiness, and help them to define men's sexual aggression as wrong and the responsibility of men, not women.

Other prevention strategies in addition to risk reduction efforts with women are needed. The recommendation by Banyard et al. (2004) that we integrate bystanders into community-based prevention of rape is one such idea. Efforts are needed to develop such programs and evaluate whether community members can be encouraged to intervene to prevent sexual assault. Engaging the community in broader efforts to collectively prevent rape can avoid putting the sole burden of avoiding rape on potential victims. Primary prevention programs targeting males are also needed to reduce sexual aggression and can be integrated with other antiviolenence prevention programming by focusing on generalized aggression and sex role socialization. Until effective rape prevention with boys and men is identified and implemented, intervention efforts are needed with women. Fortunately, research shows that women can effectively resist and avoid rapes, which provides evidence that risk reduction programs should focus on teaching women about risky situations, effective resistance strategies, and formal self-defense training.

REFERENCES

- Abarbanel, G. (1986). Rape and resistance. *Journal of Interpersonal Violence, 1*, 100-111.
- Abbey, A., Ross, L. T., McDuffie, D., & McAuslan, P. (1996). Alcohol and dating risk factors for sexual assault among college women. *Psychology of Women Quarterly, 20*, 147-169.
- Amir, M. (1971). *Patterns in forcible rape*. Chicago: University of Chicago Press.
- Anderson, L. A., & Whiston, S. C. (2005). Sexual assault education programs: A meta-analytic examination of their effectiveness. *Psychology of Women Quarterly, 29*, 374-388.
- Bachman, R. (1994). *Violence against women: A National Crime Victimization Survey Report*. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics.

- Bachman, R. (1998). The factors related to rape reporting behavior and arrest: New evidence from the National Crime Victimization Survey. *Criminal Justice and Behavior, 25*, 8-29.
- Banyard, V. L., Plante, E. G., & Moynihan, M. (2004). Bystander education: Bringing broader community perspective to sexual violence prevention. *Journal of Community Psychology, 32*, 61-79.
- Bart, P. B., & O'Brien, P. (1985). *Stopping rape*. New York: Pergamon.
- Bergen, R. K. (1996). *Wife rape: Understanding the responses of survivors and service providers*. Thousand Oaks, CA: Sage.
- Bevacqua, M. (2000). *Rape on the public agenda: Feminism and the politics of sexual assault*. Boston: Northeastern University Press.
- Brecklin, L. R. (in press). Evaluation outcomes of self-defense training for women: A review. *Aggression and Violent Behavior*.
- Brecklin, L. R., & Forde, D. R. (2001). A meta-analysis of rape education programs. *Violence and Victims, 16*, 303-321.
- Brecklin, L. R., & Ullman, S. E. (2001). The role of offender alcohol use in rape attacks: An analysis of National Crime Victimization Survey data. *Journal of Interpersonal Violence, 16*, 3-21.
- Brecklin, L. R., & Ullman, S. E. (2002). The roles of victim and offender alcohol use in sexual assaults: Results from the National Violence Against Women Survey. *Journal of Studies on Alcohol, 63*, 57-63.
- Brecklin, L. R., & Ullman, S. E. (2005). Self-defense or assertiveness training and women's responses to sexual attacks. *Journal of Interpersonal Violence, 20*, 738-762.
- Breitenbecher, K. H., & Gidycz, C. A. (1998). An empirical evaluation of a program designed to reduce the risk of multiple sexual victimization. *Journal of Interpersonal Violence, 13*, 472-488.
- Breitenbecher, K. H., & Scarce, M. (1999). A longitudinal evaluation of the effectiveness of a sexual assault education program. *Journal of Interpersonal Violence, 14*, 459-478.
- Breitenbecher, K. H., & Scarce, M. (2001). An evaluation of the effectiveness of a sexual assault education program focusing on psychological barriers to resistance. *Journal of Interpersonal Violence, 16*, 387-407.
- Bushman, B. J., & Cooper, H. M. (1990). Effects of alcohol on human aggression: An integrative research review. *Psychological Bulletin, 107*, 341-354.
- Clay-Warner, J. (2002). Avoiding rape: The effects of protective actions and situational factors on rape outcome. *Violence and Victims, 17*, 691-705.
- Clay-Warner, J. (2003). The context of sexual violence: Situational predictors of self-protective actions. *Violence and Victims, 18*, 543-556.
- Cleveland, H., Koss, M., & Lyons, J. (1999). Rape tactics from the survivor's perspective. *Journal of Interpersonal Violence, 14*, 532-547.
- Estrich, S. (1987). *Real rape*. Cambridge, MA: Harvard University Press.
- Finkelhor, D., & Yllo, K. (1985). *License to rape: Sexual abuse of wives*. New York: Free Press.
- Fisher, B. S., Cullen, F. T., & Turner, M. G. (2000). *The sexual victimization of college women* (NCJ No. 182369). Washington, DC: U.S. Department of Justice, Office of Justice Programs.
- Fisher, B. S., Daigle, L. E., Cullen, F. T., & Turner, M. G. (2003). Reporting sexual victimization to the police and others: Results from a national-level study of college women. *Criminal Justice and Behavior, 30*, 6-38.
- Flores, S. A., & Hartlaub, M. G. (1998). Reducing rape myth acceptance in male college students: A meta-analysis of intervention studies. *Journal of College Student Development, 39*, 438-448.
- Foubert, J. D. (2000). The longitudinal effects of a rape-prevention program on fraternity men's attitudes, behavioral intent, and behavior. *Journal of American College Health, 48*, 158-163.
- Frintner, M. P., & Rubinson, L. (1993). Acquaintance rape: The influence of alcohol, fraternity membership, and sports team membership. *Journal of Sex Education and Therapy, 19*, 272-284.
- Gidycz, C. A., Dowdall, C. L., & Marioni, N. L. (2002). Interventions to prevent rape and sexual assault. In J. Petrak & B. Hedge (Eds.), *The trauma of adult sexual assault: Treatment, prevention, and policy* (pp. 235-259). New York: John Wiley.
- Gidycz, C. A., Dowdall, C. L., Marioni, N. L., Loh, C., Lynn, S. J., Marmelstein, L., et al. (1998, August). *The evaluation of a risk reduction program: A multi-site investigation*. Paper presented at the annual meeting of the American Psychological Association, San Francisco.
- Gidycz, C. A., McNamara, J. R., & Edwards, K. M. (2006). Women's risk perception and sexual victimization: A review of the literature. *Aggression and Violent Behavior, 11*, 441-456.
- Gidycz, C. A., Rich, C. L., Orchowski, L., King, C., & Miller, A. K. (2006). The evaluation of a sexual assault self-defense and risk reduction program for college women: A prospective study. *Psychology of Women Quarterly, 30*, 173-186.
- Golding, J. M. (1999). Sexual assault history and long-term physical health problems: Evidence from clinical and population epidemiology. *Current Directions in Psychological Science, 8*, 191-194.
- Greene, D. M., & Navarro, R. L. (1998). Situation-specific assertiveness in the epidemiology of sexual victimization among university women: A prospective path analysis. *Psychology of Women Quarterly, 22*, 589-604.
- Hanson, K. A., & Gidycz, C. A. (1993). Evaluation of a sexual assault prevention program. *Journal of Consulting and Clinical Psychology, 61*, 1046-1052.

- Harrington, N., & Leitenberg, H. (1994). Relationship between alcohol consumption and victim behaviors immediately preceding sexual aggression by an acquaintance. *Violence and Victims, 9*, 315-324.
- Hollander, J. (2004). "I can take care of myself": The impact of self-defense training on women's lives. *Violence Against Women, 10*, 205-235.
- Humphrey, S. E., & Kahn, A. (2000). Fraternities, athletic teams and rape: Implications of identification with a risky group. *Journal of Interpersonal Violence, 15*, 1313-1322.
- Kilpatrick, D. G., Edmunds, C., & Seymour, A. (1992). *Rape in America: A report to the nation*. Arlington, VA: National Victim Center.
- Kilpatrick, D. G., Saunders, B. E., Amick-McMullan, A., & Best, C. L. (1989). Victim and crime factors associated with the development of crime-related post-traumatic stress disorder. *Behavior Therapy, 20*, 199-214.
- Kleck, G., & Sayles, S. (1990). Rape and resistance. *Social Problems, 37*, 149-162.
- Knight, R. A. (1999). Validation of a typology for rapists. *Journal of Interpersonal Violence, 14*, 303-330.
- Koss, M. P. (1985). The hidden rape victim: Personality, attitudinal, and situational characteristics. *Psychology of Women Quarterly, 9*, 192-212.
- Koss, M. P., & Cleveland, H. (1996). Athletic participation, fraternity membership, and date rape. *Violence Against Women, 2*, 180-190.
- Koss, M. P., & Dinero, T. E. (1988). Predictors of sexual aggression among male college students. *Annals of the New York Academy of Sciences, 528*, 133-147.
- Koss, M. P., & Gaines, J. A. (1993). The prediction of sexual aggression by alcohol use, athletic participation, and fraternity affiliation. *Journal of Interpersonal Violence, 8*, 84-108.
- Koss, M. P., & Heslet, L. (1992). Somatic consequences of violence against women. *Archives of Family Medicine, 1*, 53-59.
- Locke, B. D., & Mahalik, J. R. (2005). Examining masculinity norms, problem drinking, and athletic involvement as predictors of sexual aggression in college men. *Journal of Counseling Psychology, 52*, 279-283.
- Lonsway, K. A. (1996). Preventing acquaintance rape through education: What do we know? *Psychology of Women Quarterly, 20*, 229-265.
- Macy, R. J., Nurius, P., & Norris, J. (2006). Responding in their best interests: Contextualizing women's coping with acquaintance sexual aggression. *Violence Against Women, 12*, 478-500.
- Mahoney, P., & Williams, L. M. (1998). Sexual assault in marriage: Prevalence, consequences, and treatment of wife rape. In J. L. Jasinski & L. M. Williams (Eds.), *Partner violence: A comprehensive review of 20 years of research* (pp. 113-162). Thousand Oaks, CA: Sage.
- Martin, S., & Bachman, R. (1998). The contribution of alcohol to the likelihood of completion and severity of injury in rape incidents. *Violence Against Women, 4*, 694-712.
- Marx, B. P., Calhoun, K. S., Wilson, A. E., & Meyerson, L. A. (2001). Sexual revictimization prevention: An outcome evaluation. *Journal of Consulting and Clinical Psychology, 69*, 25-32.
- McCaughy, M. (1997). *Real knockouts: The physical feminism of women's self-defense*. New York: New York University Press.
- Meier, R. F., & Miethe, T. D. (1993). Understanding theories of criminal victimization. In M. Tonry (Ed.), *Crime and justice: A review of research* (Vol. 17, pp. 459-499). Chicago: University of Chicago Press.
- Muehlenhard, C. L., & Linton, M. A. (1987). Date rape and sexual aggression in dating situations: Incidence and risk factors. *Journal of Counseling Psychology, 34*, 186-196.
- Norris, J., Nurius, P. S., & Dimeff, L. A. (1996). Through her eyes: Factors affecting women's perception of and resistance to acquaintance sexual aggression threat. *Psychology of Women Quarterly, 20*, 123-145.
- Nurius, P. S. (2000). Risk perception of acquaintance sexual aggression: A social-cognitive perspective. *Aggression and Violent Behavior, 5*, 63-79.
- Nurius, P. S., Norris, J., Macy, R. J., & Huang, B. (2004). Women's situational coping with acquaintance sexual assault. *Violence Against Women, 10*, 450-478.
- Nurius, P. S., Norris, J., Young, D. S., Graham, T. L., & Gaylord, J. (2000). Interpreting and defensively responding to threats: Examining appraisals and coping with acquaintance sexual aggression. *Violence and Victims, 15*, 187-208.
- Ozer, E. M., & Bandura, A. (1990). Mechanisms governing empowerment effects: A self-efficacy analysis. *Journal of Personality and Social Psychology, 58*, 472-486.
- Parks, K. A., & Miller, B. A. (1997). Bar victimization of women. *Psychology of Women Quarterly, 21*, 509-525.
- Parks, K. A., & Zetes-Zanatta, L. (1999). Women's bar-related victimization: Refining and testing a conceptual model. *Aggressive Behavior, 25*, 349-364.
- Prentky, R. A., Burgess, A. W., & Carter, D. (1986). Victim response by rapist type: An empirical and clinical analysis. *Journal of Interpersonal Violence, 1*, 688-695.
- Quigley, P. (1989). *Armed and female*. New York: St. Martin's.
- Quinsey, V. L., & Upfold, D. (1985). Rape completion and victim injury as a function of female resistance strategy. *Canadian Journal of Behavioral Science, 17*, 40-50.
- Rozee, P., & Koss, M. P. (2001). Rape: A century of resistance. *Psychology of Women Quarterly, 25*, 295-311.
- Russell, D. E. H. (1975). *The politics of rape: The victim's perspective*. New York: Stein & Day.

- Scott, H., & Beaman, R. (2004). Demographic and situational factors affecting injury, resistance, completion, and charges brought in sexual assault cases: What is best for arrest? *Violence and Victims, 19*, 479-494.
- Seto, M. C., & Barbaree, H. E. (1995). The role of alcohol in sexual aggression. *Clinical Psychology Review, 15*, 545-566.
- Siegel, J. M., Sorenson, S. B., Golding, J. M., Burnam, M. A., & Stein, J. A. (1989). Resistance to sexual assault: Who resists and what happens? *American Journal of Public Health, 79*, 27-31.
- Sochting, I., Fairbrother, N., & Koch, W. J. (2004). Sexual assault of women: Prevention efforts and risk factors. *Violence Against Women, 10*, 73-93.
- Storaska, F. (1975). *How to say no to a rapist and survive*. New York: Random House.
- Tjaden, P., & Thoennes, N. (2000). *Full report of the prevalence, incidence, and consequences of intimate partner violence against women: Findings from the National Violence Against Women Survey*. Washington, DC: National Institute of Justice and Centers for Disease Control and Prevention.
- Ullman, S. E. (1997). Review and critique of empirical studies of rape avoidance. *Criminal Justice and Behavior, 24*, 177-204.
- Ullman, S. E. (1998). Does offender violence escalate when rape victims fight back? *Journal of Interpersonal Violence, 13*, 179-192.
- Ullman, S. E. (1999a). Social support and recovery from sexual assault: A review. *Aggression and Violent Behavior: A Review Journal, 4*, 343-358.
- Ullman, S. E. (1999b). A comparison of gang and individual rape incidents. *Violence and Victims, 14*, 1-11.
- Ullman, S. E. (2002). Rape avoidance: Self-protection strategies for women. In P. A. Schewe (Ed.), *Preventing violence in relationships: Interventions across the life span* (pp. 137-162). Washington, DC: American Psychological Association.
- Ullman, S. E. (2003). A critical review of field studies on the link of alcohol and adult sexual assault in women. *Aggression and Violent Behavior: A Review Journal, 8*, 471-486.
- Ullman, S. E. (in press). Comparing gang and individual rapes in a community sample of urban women. *Violence and Victims*.
- Ullman, S. E., & Brecklin, L. R. (2000). Alcohol and adult sexual assault in a national sample of women. *Journal of Substance Abuse, 12*, 1-16.
- Ullman, S. E., & Brecklin, L. (2002). Sexual assault and suicidal behavior in the National Comorbidity Survey. *Suicide and Life-Threatening Behavior, 32*, 117-130.
- Ullman, S. E., & Brecklin, L. (2003). Sexual assault history and health-related outcomes in a national sample of women. *Psychology of Women Quarterly, 27*, 46-57.
- Ullman, S. E., Filipas, H. H., Townsend, S. M., & Starzynski, L. L. (2006). The role of victim-offender relationship in women's sexual assault experiences. *Journal of Interpersonal Violence, 21*, 798-819.
- Ullman, S. E., Karabatsos, G., & Koss, M. P. (1999). Alcohol and sexual assault in a national sample of college women. *Journal of Interpersonal Violence, 14*, 603-625.
- Ullman, S. E., & Knight, R. A. (1991). A multivariate model for predicting rape and physical injury outcomes during sexual assaults. *Journal of Consulting and Clinical Psychology, 59*, 724-731.
- Ullman, S. E., & Knight, R. A. (1992). Fighting back: Women's resistance to rape. *Journal of Interpersonal Violence, 7*, 31-43.
- Ullman, S. E., & Knight, R. A. (1995). Women's resistance strategies to different rapist types. *Criminal Justice and Behavior, 22*, 263-283.
- Ullman, S. E., & Siegel, J. M. (1993). Victim-offender relationship and sexual assault. *Violence and Victims, 8*, 121-134.
- Ullman, S. E., & Siegel, J. M. (1995). Sexual assault, social reactions, and physical health. *Women's Health: Research on Gender, Behavior, and Policy, 1*, 289-308.
- Ullman, S. E., Townsend, S. M., Filipas, H. H., & Starzynski, L. L. (2007). Structural models of the relations of assault severity, social support, avoidance coping, self-blame, and PTSD among sexual assault survivors. *Psychology of Women Quarterly, 31*, 23-37.
- Zoucha-Jensen, J. M., & Coyne, A. (1993). The effects of resistance strategies on rape. *American Journal of Public Health, 83*, 1633-1634.