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Psychological Consequences of Sexual Victimization Resulting From Force, Incapacitation, or Verbal Coercion

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Abstract

Recently, incapacitated rape has emerged as a distinct type of sexual victimization. However, little is known about its longer-term psychological consequences. Two studies compare the psychological consequences of incapacitated rape to those of forcible rape and verbal coercion. Generally, the traumatic impact of incapacitated rape was intermediate to that of verbal coercion and forcible rape; however, there were domains (e.g., current perceived trauma and emotional impact) in which incapacitated and forcible rape had a similar impact and other domains (e.g., attributions of responsibility) in which incapacitated rape was similar to verbal coercion. This research suggests that sexual assault researchers might benefit from separately examining forcible and incapacitated rape.

Keywords

posttraumatic stress; rape; sexual victimization

In the past decade, there has been a growing recognition that a substantial number of rapes occur as a result of a man having sex with a woman who is unable to consent to or resist sexual intercourse owing to alcohol or drug intoxication (Abbey, BeShears, Clinton-Sherrod, & McAuslan, 2004; Schwartz & Leggett, 1999; Testa, Livingston, VanZile-Tamsen, & Frone, 2003; Tyler, Hoyt, & Whitbeck, 1998). Some researchers have adopted the term *incapacitated rape* to describe this phenomenon (Kaysen, Neighbors, Martell, Fossos, & Larimer, 2006; Kilpatrick, Resnick, Ruggiero, Conoscenti, & McCauley, 2007; Testa et al., 2003) and have distinguished it from forcible rape, which occurs when a perpetrator uses or threatens to use physical force to obtain sex from an unwilling victim. At least one study of community women showed that incapacitated rape occurs about as frequently as does forcible rape (Testa et al., 2003), and it appears to be especially prevalent among college students (Kilpatrick et al., 2007; Mohler-Kuo, Dowdall, Koss, & Wechsler, 2004).

Among college students, being a victim of incapacitated rape (or rape while intoxicated) is predicted by being underage, sorority membership, and engaging in heavy episodic drinking (Mohler-Kuo et al., 2004). Other studies, with both college and noncollege samples, have also documented the importance of heavy drinking as a risk factor for incapacitated rape (Kaysen

et al., 2006; Tyler et al., 1998); in particular, incapacitated rape has been shown to involve heavier alcohol consumption and/or drug use by both the victim and perpetrator at the time of the assault than with forcible rape (Abbey et al., 2004; Clum, Nishith, & Calhoun, 2002; Testa et al., 2003). Finally, incapacitated rape occurs more often following bar or party situations and is less likely to involve a prior sexual relationship between the victim and perpetrator than with forcible rape (Testa et al., 2003; but see Abbey et al., 2004, who did not find an effect for prior sexual history).

Despite increased attention to incapacitated rape, little is known about the consequences of incapacitated rape compared to other types of sexual assault. Incapacitated rape meets legal definitions of rape in many jurisdictions and is combined with forcible rape in many studies of sexual assault (e.g., Brown, Messman-Moore, Miller, & Stasser, 2005; Gidycz, Hanson, & Layman, 1995; Testa, VanZile-Tamsen, Livingston, & Koss, 2004), but there is reason to suspect that the psychological consequences of incapacitated rape may be different from those of forcible rape. For instance, incapacitated rape shares some important features with verbal coercion, such that in both cases a woman has sex against her will in the absence of physical force and without offering much resistance. Verbal coercion, which involves unwanted sexual intercourse subsequent to arguments and verbal pressure, is considered to be a less severe type of sexual assault than rape (Gidycz et al., 1995) and is known to be less traumatic than rape (Testa et al., 2004).

In this article, we present findings from two studies on the psychological correlates of unwanted sex obtained via force, incapacitation, and verbal coercion. These three types of sexual victimization were selected because all involve unwanted sexual intercourse; however, because they involve different methods of coercion, they may have different consequences. The main question for the current research is whether the consequences of incapacitated rape are more similar to the consequences of forcible rape or are more similar to the consequences of verbal coercion. This research is needed because of the growing interest in incapacitated rape and the lack of research on its psychological consequences.

This research also has important implications for measuring sexual assault. Unwanted sexual experiences are often measured along a continuum, including categories of unwanted sexual contact (e.g., kissing or fondling), verbal coercion, attempted rape, and rape (Koss, Gidycz, & Wisniewski, 1987), presumed to reflect the least to most severe experiences (Brown et al., 2005; Gidycz et al., 1995). A continuous measure of sexual victimization experience has been shown to positively correlate with psychological distress (Brown et al., 2005); however, few attempts have been made to validate this continuum approach. One study that did ask victims to rate how traumatic their unwanted sexual experiences were provided only limited support for the continuum approach (Testa et al., 2004), showing that rape was perceived as more traumatic than verbal coercion, but there was little distinction between other types of unwanted sexual experiences. More important, it is not clear whether forcible and incapacitated rape are equally severe. If forcible rape is more traumatic than incapacitated rape, it may be useful to expand the sexual assault continuum to include separate categories for forcible and incapacitated rape.

There is evidence that forcible rape is more physically traumatic than incapacitated rape. Forcible rapes involve more force used by the perpetrator, involve more resistance offered by the victim, and are more likely to result in injury (Abbey et al., 2004; Kilpatrick et al., 2007; Testa et al., 2003). Forcible rapes are accompanied by more physical symptoms of stress during the attack, such as shortness of breath, rapid heart rate, and sweating, than are incapacitated rapes (Clum et al., 2002). Although forcible and incapacitated rapes may differ in the degree of physical trauma involved, there is less evidence that they differ regarding emotional trauma. For instance, there was no difference between the two types of rape regarding the emotional

symptoms of stress (e.g., confusion, guilt, anger) experienced at the time of the assault (Clum et al., 2002). Victims of forcible and incapacitated rape did not differ in their ratings of the perceived severity of the event (Clum et al., 2002), their perceptions of the seriousness of the event (Abbey et al., 2004), or the degree to which they felt emotionally affected by the event (Schwartz & Leggett, 1999). They also did not differ significantly regarding who they thought was responsible for the event (Abbey et al., 2004; Schwartz & Leggett, 1999), although there was a (nonsignificant) tendency for incapacitated rape victims to attribute less responsibility to the man and accept more responsibility for themselves.

Although research has been conducted comparing forcible and incapacitated rape, this research has tended to focus on the immediate consequences of the event (e.g., injuries) and on victims' general perceptions of the seriousness or severity of the event. It is not yet known whether these different types of rape have similar or different longer-term consequences regarding outcomes such as posttraumatic stress (PTS) symptoms or other symptoms of psychological distress. It is also not clear whether any similarities or differences in the consequences of forcible and incapacitated rape are stable across different domains (e.g., perceived trauma, disclosure, attributions of responsibility).

Verbally coerced intercourse is similar to rape in that it involves completed sex that was not desired by one party. However, there are several factors that are uniquely correlated with verbal coercion experience. Compared to women who have been raped, victims of verbal coercion have lower self-esteem, lower assertiveness, higher social anxiety, and more sexually permissive attitudes (Testa & Dermen, 1999; Tyler et al., 1998; Zweig, Barber, & Eccles, 1997). However, verbal coercion has often been assumed to be less severe than rape (Brown et al., 2005; Gidycz et al., 1995), and the few studies that have empirically tested this assumption have found support for this notion (Testa et al., 2004). Abbey and colleagues (2004) included verbal coercion in their analysis of different perpetrator tactics and found that verbal coercion was seen as less serious at the time of the assault than either forcible rape or incapacitated rape, although when seriousness was reported at the time of the assessment, verbal coercion differed only from forcible rape. Verbal coercion involved less perpetrator force, victim resistance, and injury than did forcible rape but did not differ from incapacitated rape. Finally, victims of verbal coercion held themselves more responsible for the incident than did victims of forcible rape and held the perpetrator less responsible than did victims of either forcible or incapacitated rape.

The Current Research

The purpose of the current study was to examine the longer-term psychological consequences of unwanted sex based on three different methods of coercion. Although previous research has compared forcible and incapacitated rape to one another and rape to verbal coercion, very few studies have looked at all three, and the types of consequences examined have been limited. For instance, Tyler et al. (1998) broke sexually coercive strategies into categories for those involving physical force, alcohol or drug coercion, and verbal coercion, but their analyses were limited to the precursors of victimization and perpetration. Abbey and colleagues (2004) analyzed sexual assault experiences among a sample of community women, comparing perpetrator tactics involving verbal coercion, physical force, and victim intoxication. They looked at aspects of the assault, victims' perceptions of the assault, and several consequences of the assault including the extent of injury, the extent of life disruption, the extent to which participants learned from the experience, and the degree of perceived seriousness of the incident at the time of assessment. Abbey et al.'s study is important, but it is the only known study to have examined the consequences of forcible rape, incapacitated rape, and verbal coercion, and it included no formal assessment of trauma-related psychological distress. More research is

needed to more fully understand the psychological impact of sexual assault based on these three methods of coercion.

It was known that forcible rape is more traumatic than verbal coercion, but it was not clear how incapacitated rape would compare to the other two types of coercion. Based on the results of Abbey et al.'s (2004) research, we hypothesized that the severity of the consequences of incapacitated rape would be intermediate to the consequences of forcible rape and verbal coercion. But we also investigated whether the consequences of incapacitated rape were more similar to the consequences of forcible rape in some domains and more similar to verbal coercion in other domains. Furthermore, given that some studies suggest that victims of verbal coercion may have lower self-esteem and assertiveness (Testa & Dermen, 1999; Zweig et al., 1997), we investigated whether there were domains (e.g., self-blame) in which the consequences of verbal coercion were actually more severe than those of forcible rape (and where incapacitated rape fell on those domains).

The current research utilized existing data from two large samples of women (one college sample, one community sample) that included assessments of different methods of coercion as well as measures of various negative consequences of sexual victimization. The first study addressed symptoms of PTS and trauma-related cognitive distortions. The second study included a measure of PTS as well as data on specific outcomes of the unwanted sexual experience collected during in-person interviews. Although data from both of these samples have been previously reported (Messman-Moore & Brown, 2004; Testa et al., 2003; Testa et al., 2004), the questions posed in the current research have not been previously addressed.

Study 1

Traumatic experience can cause disruptions in both emotional and cognitive responses (Owens & Chard, 2006). Posttraumatic stress disorder (PTSD) is particularly prevalent among survivors of sexual assault (Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993) and is thus an important negative consequence to study. The experience of interpersonal victimization has also been linked with disruptions in beliefs about the self, others, and the world (Janoff-Bulman, 1992). The beliefs, or cognitive distortions, are perhaps not *inaccurate*, particularly for victimized individuals, but are problematic because such beliefs disrupt one's ability to develop or sustain meaningful relationships. Trauma-related cognitive distortions involve perceptions of self-blame and low self-worth as well as perceptions of helplessness and danger (Janoff-Bulman, 1992; McCann & Pearlman, 1990). Although most cognitive distortions involve thoughts about the self, some, including preoccupations with danger, are also very externally focused. Because forcible rape involves more violence, it is likely to be especially disruptive to thoughts about external danger. However, to the extent that victims of incapacitated rape and verbal coercion feel more responsible than do victims of forcible rape, these individuals may indicate higher scores on more self-focused cognitive distortions, particularly those dealing with self-blame.

Because forcible rape is more physically traumatic than is incapacitated rape, and because injury and life threat are risk factors for PTSD (Resnick et al., 1993), we predicted that current PTS symptoms would be higher among victims of forcible rape than among victims of incapacitated rape. However, because incapacitated rape and forcible rape have been perceived by victims as equally serious and severe (Abbey et al., 2004; Clum et al., 2002), we predicted that PTS scores among incapacitated rape victims would also be relatively high and would be significantly higher than those of victims of verbal coercion.

Method

Participants—Participants included in these analyses were 265 college women drawn from a larger sample of 925 women (see Messman-Moore & Brown, 2004) who reported experience with verbal coercion, incapacitated rape, or forcible rape. All participants were attending a medium-sized public university in the Midwest and participated in exchange for research participation credit or monetary payment. Ages ranged from 18 to 22, with a mean age of 19 ($SD = 1.06$). Most participants were White (93.2%), and 2.3% were African American, 1.5% were Asian or Asian American, 1.5% indicated a biracial identity, and the remaining 1.5% indicated some other racial identity. Demographics of the victimized women included here did not differ from the larger sample.

Procedure—Women were recruited through class announcements, flyers, and experimental sign-up boards. Data were collected during large group sessions. A number of questionnaires, including those described below, were contained in a manila envelope. Signed consent forms were returned separately, so that all data collected were anonymous. After completing all measures, participants placed them back in the envelopes and returned the envelopes to an experimenter. Before participants left, they were given a written debriefing and information about local counseling and rape crisis services.

Measures

Unwanted sexual experiences: Unwanted sexual experience was assessed using a modified version (Messman-Moore & Brown, 2004) of the Sexual Experiences Survey (SES; Koss et al., 1987). The original 10-item SES was expanded to include 18 items that consisted of three types of unwanted sexual acts: sexual contact (kissing, fondling), oral–genital contact, and sexual intercourse (vaginal or anal). For each type of unwanted sexual act, participants were asked about different methods of coercion: arguments and pressure, misuse of authority, alcohol or drug intoxication (separate questions for attempted and completed acts), and physical force (separate questions for attempted and completed acts). Participants indicated whether or not they had experienced each incident since their 17th birthday.¹ Participants were counted as victims of verbal coercion if they responded positively to having experienced oral, vaginal, or anal sex when they did not want because they were “overwhelmed by someone’s continual arguments and pressure” or because someone used a position of authority to make them. Victims of incapacitated rape reported that they had had unwanted oral, vaginal, or anal sex because they were “incapable of giving consent or resisting due to alcohol or drugs,” and victims of forcible rape reported having unwanted oral, vaginal, or anal sex “because someone threatened or used some degree of physical force (twisting your arm, holding you down, etc.)” to make them. The main differences between the original SES (Koss et al., 1987) and the measure used in the current study are that verbal coercion and incapacitated rape were specifically assessed for oral–genital contact as well as sexual intercourse and that the incapacitated rape item in the current study eliminated the requirement that the man gave the woman alcohol or drugs but specified that the woman was unable to consent or resist sexual activity. Consistent with previous research (e.g., Gidycz et al., 1995), participants who endorsed more than one item were categorized according to their most severe victimization experience; based on the findings of Abbey and colleagues (2004), we decided to a priori rank incapacitated rape between verbal coercion and forcible rape in terms of severity.

PTS: PTS symptoms were measured using the self-report version of the PTSD Symptom Scale (PSS; Foa, Riggs, Dancu, & Rothbaum, 1993). The PSS contains 17 items assessing the three major symptoms of PTSD based on the *Diagnostic and Statistical Manual of Mental*

¹Items were worded to be non–gender specific, and the gender of the perpetrator was not assessed. However, there is evidence that the vast majority (97.8%) of rapes and sexual assaults are perpetrated by men (Bureau of Justice Statistics, 2005).

Disorders, third edition, revised (*DSM-III-R*; American Psychiatric Association, 1987): reexperiencing, avoidance, and arousal, in relation to an unwanted sexual experience. Participants responded to each item based on how often they had experienced that symptom (e.g., “Have you had recurrent or intrusive distressing thoughts or recollections about the sexual experience(s)?”) within the past month. Although responses were made on a 4-point response scale (ranging from 0 = *not at all* to 3 = *very much*), because of the high proportion of 0 responses, items were dichotomized to reflect whether a participant had experienced the symptom at all within the past month. Because symptom clusters were highly correlated (r values $> .58$), one overall PTS score of the total number of symptoms experienced in the past month was computed by summing scores on 16 of the items.² The measure has been shown to have good reliability and validity in the past (Foa et al., 1993); internal reliability was also high in the current sample ($\alpha = .93$ based on untransformed variables; $\alpha = .89$ based on dichotomized variables).

Trauma-related cognitive distortions: The Cognitive Distortions Scale (CDS; Briere, 2000) is a 40-item measure containing five subscales measuring different domains of cognitive distortions related to traumatic experience: Self-Blame, Self-Criticism, Helplessness, Hopelessness, and Preoccupation With Danger. Responses were made on a scale indicating the frequency (1 = *never*, 5 = *very often*) of experiencing particular cognitions in the prior month. The Self-Blame subscale measures the extent to which the respondent blames herself for negative, unwanted events (not specifically sexual victimization). The Self-Criticism subscale measures the tendency to criticize or devalue oneself, both internally and to others, and is related to self-esteem. The Helplessness subscale measures the perception of being unable to control important aspects of one’s life, which may lead to passivity in the face of danger. The Hopelessness subscale measures the belief that one’s future is bleak or that one is destined to suffer or fail and is associated with pessimism or failure to persevere. The Preoccupation With Danger subscale involves beliefs that the world is dangerous, particularly interpersonal relationships. Elevations may be associated with perceiving objectively benign circumstances to be risky. The CDS has demonstrated construct validity and reliability (Briere, 2000), and each subscale demonstrated high internal reliability in the current sample (Self-Blame, $\alpha = .91$; Self-Criticism, $\alpha = .93$; Helplessness, $\alpha = .93$; Hopelessness, $\alpha = .96$; Preoccupation With Danger, $\alpha = .87$). Overall scores for each subscale were computed by summing the relevant items.

Results and Discussion

Of the 265 women who reported experiencing unwanted sexual intercourse since their 17th birthday, 29 of them (10.9%) were classified as forcible rape victims, 111 (41.9%) were classified as incapacitated rape victims, and 125 (47.2%) were classified as verbal coercion victims. A one-way multivariate analysis of variance (MANOVA) was computed with method of coercion as the independent variable and PTS scores and scores on each CDS subscale as dependent variables.

The multivariate effect was significant, Wilks’s $\Lambda = .79$, $F(12, 488) = 4.80$, $p < .001$. Univariate effects were significant for PTS, $F(2, 261) = 26.80$, $p < .001$, Self-Blame, $F(2, 259) = 6.49$, $p < .01$, Self-Criticism, $F(2, 257) = 3.22$, $P < .05$, Helplessness, $F(2, 260) = 5.08$, $P < .01$, Hopelessness, $F(2, 256) = 6.44$, $P < .01$, and Preoccupation With Danger, $F(2, 260) = 7.60$, $p < .001$. Descriptive statistics are presented in Table 1. Post hoc Tukey’s tests were performed to uncover mean differences among the three victimization groups. All three groups differed significantly from one another on PTS scores: Consistent with hypotheses, forcible rape victims reported the highest number of posttraumatic symptoms, followed by incapacitated rape

²There was an error in the wording of one item in the current study, so it was dropped.

victims, with victims of verbal coercion reporting the fewest posttraumatic symptoms. In contrast, forcible rape victims had significantly higher scores than did incapacitated rape victims on only one of the CDS subscales: Preoccupation With Danger. Incapacitated and forcible rape victims did not differ on any of the CDS scales dealing with self-focused cognitive distortions, and both groups showed more distress than did victims of verbal coercion.

As is common in research utilizing self-report versions of the SES, many women endorsed multiple items on the SES. Because women were categorized according to their most severe victimization experience, women in the rape categories (especially forcible rape) endorsed more items than did victims of verbal coercion. This is potentially problematic because the higher distress experienced by forcible rape victims could be because of repeated victimization rather than the uniquely traumatic nature of forcible rape. To account for this covariance, we repeated our analysis controlling for the number of unwanted sexual experiences. We summed the total number of SES items endorsed, including unwanted sexual contact and attempted rape experiences as well as verbal coercion and rape experiences. On average, verbal coercion victims endorsed 3.39 ($SD = 1.82$) items, incapacitated rape victims endorsed 5.43 ($SD = 2.28$) items, and forcible rape victims endorsed 8.03 ($SD = 3.83$) items, $F(2, 256) = 55.32, p < .001$.³

The multivariate effect for the covariate was significant, Wilks's $\Lambda = .91, F(6, 238) = 4.16, p < .001$. However, even when controlling for the effect of number of unwanted sexual experiences, the multivariate effect for method of coercion remained significant, Wilks's $\Lambda = .89, F(12, 476) = 2.39, p < .01$. We followed up with univariate tests, but only the model for PTS symptoms was significant, $F(2, 243) = 8.09, p < .001$. Because there were no significant effects of method of coercion on any of the CDS subscales after controlling for number of unwanted sexual experiences, it appears that the effects of method of coercion on cognitive distortions could be explained by the greater number of traumas experienced by rape victims. However, because the effect of method of coercion on PTS symptoms held even when controlling for number of unwanted sexual experiences, we can conclude that forcible rape, incapacitated rape, and verbal coercion have unique consequences for PTS symptoms.

There were some limitations to Study 1 that should be addressed. The sample used in Study 1 consisted of college students who were fairly homogeneous in terms of race and socioeconomic status. We cannot be certain that these findings would replicate in a more diverse community sample. A more serious limitation was that the assessment of sexual victimization in this study was potentially problematic. As stated above, many women endorsed multiple items on the SES, and because women were categorized according to their most severe experience, victims of forcible rape reported more items than did victims of incapacitated rape, who reported more items than did victims of verbal coercion. Because we did not collect more detailed information about these assaults, it is not possible to know whether women who endorsed multiple items experienced multiple methods of coercion during a single incident or if they had multiple victimization experiences. Previous research (Testa et al., 2004) that did collect more detailed information found that more than half of the women who endorsed multiple SES items had experienced different incidents. Thus, we cannot separate the effects of method of coercion from those of repeated victimization. By using number of SES items endorsed as a covariate, we were able to statistically control for the effects of repeated victimization, but we cannot eliminate all ambiguity resulting from our assessment of sexual assault. The results of Study 1 should thus be considered preliminary given these limitations.

³Because women were asked about specific *acts* that they had experienced rather than *incidents*, it is likely that in many cases endorsing multiple items reflected multiple acts during a single incident rather than multiple incidents.

Study 2

Study 2 addressed some of the limitations of Study 1 by involving a more diverse community sample and by categorizing women according to their most recent victimization experience rather than their most severe experience. Study 2 also included event-level interview data consisting of specific questions about the assault and its aftermath. Study 2 included a measure of PTS but did not include the CDS. Instead, interview questions asked about perceived trauma, life disruption (impact on emotional and social life), disclosure of the incident, and attributions of responsibility for the incident.

The questions about trauma and life disruption were selected to supplement the objective measure of traumatic impact (PTS) with respondents' subjective experience of trauma and impact of the event. We again predicted that victims of incapacitated rape would report consequences that fell between those of verbal coercion victims and forcible rape victims, with forcible rape victims showing significantly more severe consequences than verbal coercion victims on most measures. On measures of trauma and life disruption, we predicted that victims of incapacitated rape would report consequences more similar to those of forcible rape victims than to those of verbal coercion victims.

Attributions of responsibility for the event were assessed to better test the prediction from Study 1 that victims of verbal coercion and incapacitated rape would be more likely than victims of forcible rape to blame themselves. Because we specifically asked about who was responsible for the incident of unwanted sex in Study 2, we predicted that victims of verbal coercion would attribute more responsibility to themselves and less responsibility to the man than would victims of forcible rape. Because their alcohol use often contributes to their victimization, we predicted that victims of incapacitated rape would show attributions of responsibility that were more similar to those of verbal coercion victims than to those of forcible rape victims.

Telling others about one's assault can have important implications for sexual assault victims' coping and recovery. Disclosing an assault gives others the opportunity to provide tangible aid and emotional support; however, when disclosures are met with negative social reactions, the results can be very detrimental to a victim's recovery (Filipas & Ullman, 2001; Ullman, 1999). Little work has examined postassault disclosures of victims based on method of coercion, but there is reason to suspect differences. Ullman and Filipas (2001) found that victims of alcohol-related assaults were more likely to have disclosed to mental health professionals than were women whose assaults did not involve alcohol, but they were less likely to have disclosed to other sources. Littleton, Axsom, Radecki Breitkopf, and Berenson (2006) did not categorize types of assaults but found that unacknowledged rape victims (women who did not define their experience as any type of crime) were less likely to have disclosed the incident than were acknowledged victims; acknowledgment status was related to alcohol use and force involved (unacknowledged rapes involved less force and more heavy drinking on the part of the victim). This implies that incapacitated rape victims may be less likely to have disclosed their assaults to others (except, perhaps, to mental health professionals) than forcible rape victims; we cannot predict how likely verbal coercion victims would be to tell others about their assaults.

Method

Participants—Participants for this study were 244 women reporting experience with verbal coercion, incapacitated rape, or forcible rape, from a larger community sample of 1,014 women between the ages of 18 and 30. The average age of women in the current sample was 24 ($SD = 3.57$). Of the sample, 76.0% were White, 17.3% were African American, 2.0% were Asian, 1.2% were Hispanic, and the rest came from other ethnic backgrounds. Demographics of the current sample did not differ from those of the larger sample. Potential participants were

recruited via random-digit dialing of phone numbers in and surrounding Buffalo, New York. See Testa et al. (2003) and Testa et al. (2004) for more information on characteristics of the larger sample, participant recruitment, and procedures.

Procedure—Participants completed a battery of questionnaires, including the SES and PTSD measures described below, via computer-assisted self-interview. Before completing questionnaires, the nature of the study was explained and participants were told that some questions could make them uncomfortable. Participants provided informed consent and were able to refuse to answer any questions. Participants who responded positively to any item on the SES were asked to participate in semistructured, face-to-face interviews to gather more information on the nature of their most recent sexual assault. Interviews were recorded, with participants' consent, and transcribed.

Measures

Unwanted sexual experiences: A modified version (Testa et al., 2004) of the SES (Koss et al., 1987) was used to assess unwanted sexual experiences with a male perpetrator since the age of 14. The questionnaire contained 11 items, including 2 referring to verbal coercion: one asked about unwanted sexual intercourse following continual arguments or pressure, the other asked about unwanted sexual intercourse with someone in a position of authority. Two items assessed forcible rape, asking about (a) sexual intercourse and (b) sex acts (including oral sex, anal sex, and penetration by objects) subsequent to threats or use of physical force. Two items assessed incapacitated rape: one item asked about unwanted sexual intercourse that occurred "because a man made you intoxicated by giving you alcohol or drugs without your knowledge or consent"; the other asked, "Have you ever been in a situation in which you were incapacitated due to alcohol or drugs (that is, passed out or unaware of what was happening) and were not able to prevent unwanted sexual intercourse from taking place?" The measure used in this study was similar to the original SES (Koss et al., 1987); relevant changes included changing the wording of the original incapacitated rape item to specify that drugs or alcohol were administered without consent and adding an additional incapacitation item to reflect rape that occurred following voluntary intoxication. For each item that participants endorsed, they were asked a few additional questions, including when the incident occurred. Women were categorized as victims of verbal coercion, incapacitated rape, or forcible rape according to their most recent unwanted sexual experience.

PTS: All women who reported an unwanted sexual experience or another traumatic event were assessed for symptoms of PTS using a self-report version of the National Women's Study PTSD Module (Resnick et al., 1993). This instrument contains 21 items assessing the three main symptoms of PTSD according to *DSM-III-R* (American Psychiatric Association, 1987). Respondents were asked to indicate whether there had been a period of one month or more in which they experienced symptoms related to reexperiencing (e.g., "You felt a lot worse in a situation that reminded you of something that happened in the past"), avoidance (e.g., "You deliberately tried very hard not to think about something that happened to you"), and hyperarousal (e.g., "Unexpected noises startled you more than usual"). Participants were not asked to think about any specific traumatic event when responding to the items. Symptom clusters were highly correlated (r values $> .76$), so the total number of symptoms experienced was summed to create an overall PTS score. The instrument has been shown to be a valid measure of PTSD (Resnick et al., 1993) and demonstrated high internal reliability in the current sample ($\alpha = .93$).

Event-level interview: After completing the self-administered questionnaires, participants were prompted by an interviewer to think about their most recent unwanted sexual experience (as reported on the SES) and asked to describe how that incident came about. They were then

asked several specific questions about the incident. Those relevant to the current study included two questions about how traumatic or upsetting the event was, both at the time of the experience and currently, on looking back at the experience. Responses were made on scales scored from 1 to 6 anchored at *not at all traumatic* and *most traumatic thing possible*. Participants were also asked whether they experienced any emotional or psychological reaction to the incident and whether the experience had any impact on their social lives or relationships, with response options for both questions consisting of either yes or no. Participants were asked whether they told anyone about the event, and if so, they were asked who they told. Targets of disclosure were coded as informal sources (e.g., friends or family members) or formal sources (e.g., counselors, therapists, or law enforcement personnel); participants were categorized according to whether or not they disclosed the event at all, according to whether or not they disclosed to informal sources, and according to whether or not they disclosed to formal sources. Finally, participants were asked who or what they thought was most responsible for what happened. Responses were coded as self-blaming (e.g., her character, behavior, or substance use) or perpetrator blaming (e.g., his character, behavior, or substance use). Participants were categorized according to whether or not they made self-blaming attributions and according to whether or not they made perpetrator-blaming attributions. Because participants could give multiple responses, it was possible for an individual to be in both the self-blaming and perpetrator-blaming categories.

Results

Of the 244 women who reported experiencing verbal coercion, incapacitated rape, or forcible rape as their most recent unwanted sexual experience on the SES, 73 (30%) indicated a forcible rape, 49 (20%) reported an incapacitated rape, and 122 (50%) reported verbal coercion. On average, these events occurred just more than 4 years prior to the time of the study; however, this differed based on victimization group, $F(2, 243) = 5.39, p < .01$. Incidents of verbal coercion had occurred more recently ($M = 3.67, SD = 3.61$) than had incidents of forcible rape ($M = 5.49, SD = 4.08$); the number of years passed for incapacitated rape victims ($M = 4.48, SD = 3.57$) did not differ from that of the other two groups. On average, the women in this sample had experienced 1.66 ($SD = 0.88$) separate incidents of unwanted sexual activity since the age of 14, and this did not differ between groups. Several women endorsed multiple methods of coercion during their most recent incident. There were 8 women who reported experiencing forcible rape and incapacitated rape during the same incident, 9 women who reported experiencing forcible rape and verbal coercion during the same incident, and 5 women who reported experiencing incapacitated rape and verbal coercion during the same incident. Women who reported experiencing multiple methods of coercion during their most recent assault were categorized according to the more severe method of coercion experienced (e.g., someone who experienced both verbal coercion and force was classified as a forcible rape victim).⁴

A one-way MANOVA was performed on the three continuous dependent variables: PTS, perceived trauma at the time of the event (event trauma), and perceived trauma at the time of the interview (current trauma). The multivariate effect was significant, Wilks's $\Lambda = .74, F(6,$

⁴We examined the transcripts of cases that involved multiple methods of coercion during the most recent incident. Cases involving forcible rape and verbal coercion typically involved a combination of both physical and verbal pressure. Several involved a pattern of behavior in an ongoing abusive relationship that involved coercive sex within the context of physical violence and manipulation. Because all involved violence or physical restraint, we are comfortable placing these cases in the forcible rape category. Cases involving incapacitated rape and verbal coercion sometimes involved verbal arguments and pressure, but all involved a victim who was highly intoxicated and was not aware of everything that occurred during the incident, typical of incapacitated rape. Cases that involved forcible and incapacitated rape were somewhat ambiguous. In all but one case (in which the victim suspected she had been drugged), the victim had been drinking heavily and was quite intoxicated; in all cases the victim had some memory for the event but involved periods of blacking out, inability to remember all the details of the attack, or feeling otherwise out of it during the incident. However, all women in these cases reported being held down or otherwise physically forced and are thus included in the forcible rape category. We also performed analyses in which women who reported multiple methods of coercion during their most recent incident were dropped from analyses. The results were virtually identical to those reported in the text; thus, to maintain power, we chose to leave those women in the sample.

478) = 12.65, $p < .001$. Univariate effects were significant for PTS, $F(2, 241) = 8.70$, $p < .001$, for event trauma, $F(2, 241) = 32.80$, $p < .001$, and for current trauma, $F(2, 241) = 10.65$, $p < .001$.⁵ Descriptive statistics are presented in Table 2. Post hoc Tukey's tests revealed that victims of verbal coercion had significantly fewer PTS symptoms than did victims of forcible rape; victims of incapacitated rape had an intermediate number of PTS symptoms that was not significantly different from those for either of the other groups. All groups significantly differed from one another on the trauma perceived at the time of the event, with victims of forcible rape perceiving the event to be the most traumatic, followed by victims of incapacitated rape, followed by victims of verbal coercion. Victims of both types of rape, however, perceived equivalent levels of current trauma, and both perceived more trauma than did victims of verbal coercion.

Chi-square tests were performed to see if there was an association between type of victimization experience and responses to interview questions regarding emotional reactions, impact on social life, disclosure, and attributions of responsibility. Tests showed a significant association in every case (see Table 3) except for disclosure to informal sources, which was reported by 100% of those who disclosed the incident at all. To better understand whether the consequences of incapacitated rape were more similar to those of forcible rape or verbal coercion, we conducted chi-square tests with 1 degree of freedom comparing incapacitated rape to each other type of victimization. All significant effects indicated $p < .05$.

The proportion of incapacitated rape victims indicating an emotional or psychological reaction to the event was greater than the proportion of verbal coercion victims indicating such a reaction but did not differ from that of forcible rape victims. Incapacitated rape victims were more likely to indicate that the event affected their social lives than were victims of verbal coercion but were less likely to indicate such an impact than were victims of forcible rape. Victims of incapacitated rape were more likely than victims of verbal coercion to have told someone about the experience but not more likely than victims of forcible rape. However, victims of incapacitated rape did not differ from victims of verbal coercion in the proportion who disclosed to formal sources of support, and they were significantly less likely to disclose to formal sources than were forcible rape victims. Finally, victims of incapacitated rape did not differ from victims of verbal coercion in rates of either self-blame or perpetrator blame, and they were more likely to blame themselves and less likely to blame the man than were victims of forcible rape. For all items, the responses of victims of verbal coercion differed significantly from those of forcible rape victims.

Discussion

Consistent with Study 1, and as predicted, the responses of incapacitated rape victims were intermediate to those of verbal coercion victims and forcible rape victims on most dependent variables in Study 2. Although the PTS scores of forcible and incapacitated rape victims were not significantly different from one another, and although similar proportions of both groups reported emotional reactions to the event, forcible rape victims perceived more trauma at the time of the event and were more likely to report that the incident had affected their social lives and relationships. Consistent with the greater life disruption reported by forcible rape victims, more of them had sought help from formal sources of support; however, equal numbers of both groups had disclosed the event at all. This is inconsistent with our prediction that victims of incapacitated rape would indicate less disclosure than victims of forcible rape and inconsistent with Ullman and Filipas's (2001) finding of greater disclosure to mental health professionals

⁵We also investigated several possible covariates: number of incidents of unwanted sexual activity since age 14, number of years passed since the most recent unwanted sexual experience, and whether the most recent experience occurred during adolescence (younger than 18) or adulthood. However, controlling for these variables had no impact on the results, so to simplify the presentation of results in the narrative, we have included only those analyses without controlling for any covariates.

among victims of alcohol-related assaults. Our findings could indicate that most rape victims were affected by what happened enough to want to tell someone at some point, but because forcible rape involved more violence and was initially perceived as more traumatic, forcible rape victims sought more assistance from helping professionals. Ullman and Filipas specifically recruited sexual assault victims, including some from mental health agencies; we recruited general community women and then later assessed for sexual assault history. As a result, their sample included more treatment-seeking members than ours did; this difference in recruitment could explain the discrepant findings between studies regarding disclosures to formal sources of support.

Forcible rape was seen as more traumatic at the time of the event than was incapacitated rape, and this is likely the result of two related factors: (a) forcible rape is more physically violent (Abbey et al., 2004; Testa et al., 2003) and (b) because of their high intoxication, victims of incapacitated rape are somewhat numb to the experience at the time (Testa et al., 2003). However, in some ways, incapacitated rape might be harder to cope with than forcible rape. The data suggest that over time, victims of forcible rape were able to cope with what happened to them, as their ratings of event-related trauma decreased substantially over time. Trauma ratings of incapacitated rape victims also decreased over time, but in a less dramatic manner, such that both groups rated current trauma as equally high. Furthermore, incapacitated rape victims blamed themselves more than did forcible rape victims, which has been shown to negatively affect coping (Katz & Burt, 1988).

As expected, verbal coercion appeared to have fewer negative effects than did forcible or incapacitated rape. However, it should not be concluded that verbal coercion is not harmful. Women who had experienced verbal coercion rated the experience as moderately traumatic at the time (with average trauma ratings in the middle of a 6-point scale), and many of them reported being affected by the experience in some way (for more details, see Livingston, Buddie, Testa, & VanZile-Tamsen, 2004).

General Discussion

Incapacitated rape is similar to forcible rape in that it is legally defined as rape, but it is similar to verbal coercion in its lack of force and violence. In one of the first attempts to document the longer-term psychological consequences of incapacitated rape, we have shown that, consistent with its intermediate position, incapacitated rape is somewhat less traumatizing than is forcible rape, but it is more traumatic than is verbal coercion. Although there were domains in which the consequences of forcible and incapacitated rape were comparable (i.e., emotional reactions and disclosure of the incident), there were domains in which the reactions of incapacitated rape victims were quite different from those of forcible rape victims and similar to those of verbal coercion victims (i.e., attributions of responsibility and disclosure to formal sources of support).

Although Study 1 and Study 2 were quite different in terms of sample characteristics, data collection procedures, and methods used, the results of the two studies complement each other. The patterns of results for PTS symptoms were identical between studies; the only differences were of magnitude, such that PTS scores of incapacitated rape victims were significantly different from those of both verbal coercion and forcible rape victims in Study 1 but were not significantly different from either other group in Study 2. In Study 2, PTS symptoms were not assessed in relation to any unwanted sexual experience as they were in Study 1. This could be considered a significant weakness, as elevated PTS scores could have reflected some other traumatic experience. Study 1 assessed PTS in relation to an unwanted sexual experience but was limited by its assessment of sexual victimization, in which repeated victims, who are likely to experience especially high levels of trauma (Messman-Moore, Brown, & Koelsch, 2005), were more likely to be classified as rape victims, especially forcible rape victims. In essence,

each study controlled for the weaknesses in the other; because the results were so similar, we can accept the findings of both with more confidence.

One notable difference between the two studies supports a pattern that has been observed elsewhere in the literature: Namely, the prevalence of incapacitated rape was much higher in Study 1, which utilized a college student sample, than in Study 2, which utilized a community sample. Previous work has shown that incapacitated rape is much more common than forcible rape among college students (Mohler-Kuo et al., 2004) and that incapacitated rape is more common in college samples than in general population samples (Kilpatrick et al., 2007).

The results of these studies are also consistent with those of Abbey et al. (2004) in that the consequences of incapacitated rape tended to be intermediate to those of forcible rape and verbal coercion. There were some discrepancies: Most notably, the pattern of attributions of responsibility differed between Abbey et al.'s study and our Study 2. Specifically, in their study, forcible and incapacitated rape victims did not differ in their ratings of their own or the man's responsibility, and both types of rape victims had higher ratings of perpetrator responsibility than did verbal coercion victims; in our study, victims of verbal coercion and incapacitated rape showed similar attributions of responsibility, and both were significantly different from forcible rape victims. These discrepancies may be because of differences in the way items were measured. Abbey and colleagues used rating scales measuring the degree of perceived responsibility; our measures involved counts of the number of women in each group endorsing a personal or perpetrator characteristic as responsible for the event. It is entirely likely that similar proportions of verbal coercion victims and incapacitated rape victims would spontaneously list perpetrator behaviors or characteristics as contributing to the assault, but when asked the extent to which the man's behavior or characteristics played a role, incapacitated rape victims might assign higher weight to those factors than would verbal coercion victims.

This research has important implications for the measurement of sexual assault. If the sexual assault continuum is based on the trauma associated with different types of sexual assault, this research (a) confirms that rape is more traumatic than verbal coercion and (b) suggests that the continuum should be expanded to include different categories for forcible and incapacitated rape, with the former considered more severe than the later. Because there were some domains in which the consequences of forcible and incapacitated rape were similar, from a practical standpoint it might be justified to combine forcible and incapacitated rape into a single category under certain circumstances; however, researchers—especially those interested in disclosures and attributions of responsibility—may benefit from separately examining these two types of rape.

Limitations

Like all studies relying on secondary data analysis, we were limited in the questions we could ask by the data available in the existing data sets. Although collecting original data with specific research questions in mind is ideal, it is useful to know what existing data have to say about a research question before embarking on such an endeavor. This research is strengthened by being able to ask similar questions of two distinct data sets.

In Study 1, we could not determine whether women who selected multiple items on the SES were referring to multiple incidents or multiple methods of coercion present in a single incident. In Study 2, it was easier to determine whether multiple SES endorsements reflected single or multiple incidents. However, the weakness in Study 1 is a typical one in self-report versions of the SES. Recent revisions of the SES (Koss et al., 2007) offer a step toward solving the ambiguities faced in Study 1, and hopefully further advances will clarify future research.

Both studies relied on retrospective self-reports of all variables, and thus we cannot conclusively say that PTS, or any other dependent variable studied here, is a consequence of sexual victimization and not some other trauma. Indeed, research indicates that PTSD symptoms (mediated by substance use) can predict subsequent rape in a prospective study (Messman-Moore, Ward, & Brown, in press). It is possible that women with more severe preexisting psychological distress were more likely to experience forcible or incapacitated rape. It is also possible that less distressed women interpreted their unwanted sexual experiences in a less threatening manner (indicating that they were verbally pressured rather than physically pressured). We cannot rule out these possibilities, but the methodological details of Study 2 make either possibility unlikely. In Study 2, women were interviewed about their most recent experience, and thus most dependent variables in Study 2 referred to the aftermath of that incident and thus do accurately reflect consequences. Nonetheless, it will be helpful to use longitudinal analyses to understand the true long-term consequences of different types of sexual assault.

Future Directions

These studies revealed several differences in the consequences of forcible rape, incapacitated rape, and verbal coercion. The processes behind these differences remain unclear, although the results of Study 2 suggest that the process of disclosure may play a role in outcomes associated with sexual victimization. Recall that forcible rape victims perceived the incident as more traumatic at the time than did victims of incapacitated rape but that, over time, forcible and incapacitated rape victims reported being similarly affected by their experiences. This could be because of (a) the greater likelihood of victims of forcible rape seeking help from counselors or other helping professionals, which could aid in recovery, or (b) more negative social reactions received by incapacitated rape victims from social network members. Our data do not indicate how friends and family members reacted to victims' disclosures, but previous research has shown that victims who were intoxicated at the time of their assault are judged more negatively by observers (especially if the perpetrator had also been drinking; Norris & Cubbins, 1992; Stormo, Lang, & Stritzke, 1997) and that victims of alcohol-related sexual assaults receive more negative social reactions than do victims of sexual assaults not involving alcohol (Ullman & Filipas, 2001). However, other research has shown that assault severity (i.e., the degree of physical force involved) is positively associated with negative social reactions (Ullman, Townsend, Filipas, & Starzynski, 2007), which would suggest that forcible rape victims would be most likely to receive negative social reactions. Thus, the impact of victim intoxication on social reactions following assault disclosures is not well understood, nor is it entirely clear why victims of verbal coercion are less affected by their assaults than are victims of incapacitated rape. More research will be needed to better understand how different methods of coercion relate to disclosures by victims and social reactions received and the role this plays in coping and recovery.

Finally, although this research showed distinct psychological consequences for forcible rape, incapacitated rape, and verbal coercion, other types of sexual assault, such as unwanted contact and attempted rape, which were not investigated here, likely have different consequences as well. Sexual assault experiences are often measured on a continuum, on which rape is considered to be the most severe experience, followed by attempted rape, verbal coercion, and unwanted sexual contact (Brown et al., 2005; Gidycz et al., 1995). Such an approach has combined forcible and incapacitated rape into one category. Although we have suggested expanding the continuum to include separate categories for forcible and incapacitated rape, our finding that incapacitated rape is similar to forcible rape in some domains and similar to verbal coercion in other domains, along with research showing a lack of differentiation between categories of sexual victimization regarding perceived trauma (Testa et al., 2004), may call into question the validity of the continuum approach to measuring sexual assault. Further

research will be needed on the psychological consequences of various forms of sexual victimization to better understand and categorize them according to severity.

References

- Abbey A, BeShears R, Clinton-Sherrod AM, McAuslan P. Similarities and differences in women's sexual assault experiences based on tactics used by the perpetrator. *Psychology of Women Quarterly* 2004;28:323–332.
- Diagnostic and statistical manual of mental disorders. Vol. 3rd ed., rev.. Washington, DC: Author; 1987. American Psychiatric Association.
- Briere, J. Cognitive Distortions Scale professional manual. Odessa, FL: Psychological Assessment Resources; 2000.
- Brown AL, Messman-Moore TL, Miller AG, Stasser G. Sexual victimization in relation to perceptions of risk: Mediation, generalization, and temporal stability. *Personality and Social Psychology Bulletin* 2005;31:963–976. [PubMed: 15951367]
- Bureau of Justice Statistics. Table 38: Percent distribution of single-offender victimizations, by type of crime and perceived gender of offender. 2005 [Retrieved May 20, 2008]. from http://www.ojp.usdoj.gov/bjs/abstract/cvus/single_offender_victimizations298.htm
- Clum GA, Nishith P, Calhoun KS. A preliminary investigation of alcohol use during trauma and peritraumatic reactions in female sexual assault victims. *Journal of Traumatic Stress* 2002;15:321–328. [PubMed: 12224804]
- Filipas HH, Ullman SE. Social reactions to sexual assault victims from various support sources. *Violence and Victims* 2001;16:673–692. [PubMed: 11863065]
- Foa EB, Riggs DS, Dancu CV, Rothbaum BO. Reliability and validity of a brief instrument for assessing post-traumatic stress disorder. *Journal of Traumatic Stress* 1993;6:459–473.
- Gidycz CA, Hanson K, Layman MJ. A prospective analysis of the relationships among sexual assault experiences. *Psychology of Women Quarterly* 1995;19:5–29.
- Janoff-Bulman, R. Shattered assumptions: Towards a new psychology of trauma. New York: Free Press; 1992.
- Katz, BL.; Burt, MR. Self-blame in recovery from rape: Help of hindrance?. In: Burgess, AW., editor. Rape and sexual assault II. New York: Garland; 1988. p. 151-168.
- Kaysen D, Neighbors C, Martell J, Fossos N, Larimer ME. Incapacitated rape and alcohol use: A prospective analysis. *Addictive Behaviors* 2006;31:1820–1832. [PubMed: 16446044]
- Kilpatrick, DG.; Resnick, HS.; Ruggiero, KJ.; Conoscenti, LM.; McCauley, J. Drug-facilitated, incapacitated, and forcible rape: A national study (Report NCJ219181). Washington, DC: U.S. Department of Justice, National Institute of Justice; 2007.
- Koss MP, Abbey A, Campbell R, Cook S, Norris J, Testa M, et al. Revising the SES: A collaborative process to improve assessment of sexual aggression and victimization. *Psychology of Women Quarterly* 2007;31:357–370.
- Koss MP, Gidycz CA, Wisniewski N. The scope of rape: Incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *Journal of Consulting and Clinical Psychology* 1987;55:162–170. [PubMed: 3494755]
- Littleton HL, Axson D, Radecki Breitkopf C, Berenson A. Rape acknowledgment and postassault experiences: How acknowledgment status relates to disclosure, coping, worldview, and reactions received from others. *Violence and Victims* 2006;21:761–778. [PubMed: 17220018]
- Livingston JA, Buddie AM, Testa M, VanZile-Tamsen C. The role of sexual precedence in verbal sexual coercion. *Psychology of Women Quarterly* 2004;28:287–297.
- McCann, IL.; Pearlman, LA. Psychological trauma and the adult survivor: Theory, therapy, and transformation. New York: Brunner/Mazel; 1990.
- Messman-Moore TL, Brown AL. Child maltreatment and perceived family environment as risk factors for adult rape: Is child sexual abuse the most salient factor? *Child Abuse and Neglect* 2004;28:1019–1034. [PubMed: 15519433]

- Messman-Moore TL, Brown AL, Koelsch LE. Posttraumatic symptoms and self-dysfunction as consequences and predictors of sexual revictimization. *Journal of Traumatic Stress* 2005;18:253–261. [PubMed: 16281220]
- Messman-Moore TL, Ward RM, Brown AL. Substance use and PTSD symptoms impact the likelihood of rape and revictimization in college women. *Journal of Interpersonal Violence*. in press
- Mohler-Kuo M, Dowdall GW, Koss MP, Wechsler H. Correlates of rape while intoxicated in a national sample of college women. *Journal of Studies on Alcohol* 2004;65:37–45. [PubMed: 15000502]
- Norris J, Cubbins LA. Dating, drinking, and rape: Effects of victim's and assailant's alcohol consumption on judgments of their behavior and traits. *Psychology of Women Quarterly* 1992;16:179–191.
- Owens GP, Chard KM. PTSD severity and cognitive reactions to trauma among a college sample: An exploratory study. *Journal of Aggression, Maltreatment, & Trauma* 2006;13:23–36.
- Resnick HS, Kilpatrick DG, Dansky BS, Saunders BE, Best CL. Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *Journal of Consulting and Clinical Psychology* 1993;61:984–991. [PubMed: 8113499]
- Schwartz MD, Leggett MS. Bad dates or emotional trauma? The aftermath of campus sexual assault. *Violence Against Women* 1999;5:251–271.
- Stormo KJ, Lang AR, Stritzke WGK. Attributions about acquaintance rape: The role of alcohol and individual differences. *Journal of Applied Social Psychology* 1997;27:279–305.
- Testa M, Dermen KH. The differential correlates of sexual coercion and rape. *Journal of Interpersonal Violence* 1999;14:548–561.
- Testa M, Livingston JA, VanZile-Tamsen C, Frone MR. The role of women's substance use in vulnerability to forcible and incapacitated rape. *Journal of Studies on Alcohol* 2003;64:456–764.
- Testa M, VanZile-Tamsen C, Livingston JA, Koss MP. Assessing women's experiences of sexual aggression using the sexual experiences survey: Evidence for validity and implications for research. *Psychology of Women Quarterly* 2004;28:256–265.
- Tyler KA, Hoyt DR, Whitbeck LB. Coercive sexual strategies. *Violence & Victims* 1998;13:47–61. [PubMed: 9650245]
- Ullman SE. Social support and recovery from sexual assault: A review. *Aggression and Violent Behavior: A Review Journal* 1999;4:334–358
- Ullman SE, Filipas HH. Correlates of formal and informal support seeking in sexual assault victims. *Journal of Interpersonal Violence* 2001;16:1028–1047.
- Ullman SE, Townsend SM, Filipas HH, Starzynski LL. Structural models of the relations of assault severity, social support, avoidance coping, self-blame, and PTSD among sexual assault survivors. *Psychology of Women Quarterly* 2007;31:23–37.
- Zweig JM, Barber BL, Eccles JS. Sexual coercion and well-being in young adulthood: Comparisons by gender and college status. *Journal of Interpersonal Violence* 1997;12:291–308.

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Terri L. Messman-Moore, PhD, is an associate professor of psychology at Miami University and a clinical psychologist. Her research interests include the impact of child maltreatment, sexual assault, and rape on female adolescents and adults. Her work focuses on identification of risk and outcome factors associated with sexual victimization among college women including emotion dysregulation, alcohol and drug use, sexual behavior, posttraumatic stress disorder and other traumatic symptomatology. In particular, she is interested in the intersection of alcohol use and risky sexual behavior in relation to sexual assault risk.

Table 1
Means and Standard Deviations for Dependent Variables in Study 1

Dependent Variable	Verbal Coercion			Incapacitated Rape			Forcible Rape		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Posttraumatic stress	2.63 _a	3.10	125	5.55 _b	4.42	111	7.68 _c	5.24	28
Self-blame	16.95 _a	6.52	123	19.78 _b	7.32	110	20.83 _b	7.51	29
Self-criticism	20.01 _a	7.45	124	22.44 _b	8.05	108	22.57 _{ab}	8.24	28
Helplessness	14.56 _a	6.48	124	16.79 _b	7.36	110	18.38 _b	7.21	29
Hopelessness	12.73 _a	6.71	121	14.96 _{ab}	8.02	109	17.83 _b	7.85	29
Preoccupation with danger	15.44 _a	6.04	125	17.18 _a	6.15	109	20.28 _b	7.46	29

Note: Within rows, means with different subscripts are significantly different from one another based on post hoc Tukey's tests, $p < .05$.

Table 2
Means and Standard Deviations for Dependent Variables in Study 2

Dependent Variable	Verbal Coercion (<i>n</i> = 122)		Incapacitated Rape (<i>n</i> = 49)		Forcible Rape (<i>n</i> = 73)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Posttraumatic stress	9.13 _a	6.88	10.78 _{ab}	6.42	13.16 _b	6.00
Event trauma	3.41 _a	1.46	4.24 _b	1.39	5.01 _c	1.11
Current trauma	2.70 _a	1.48	3.69 _b	1.58	3.47 _b	1.42

Note: Within rows, means with different subscripts are significantly different from one another based on post hoc Tukey's tests, $p < .05$.

Table 3

Percentage of Women Endorsing Various Consequences in Event-Level Interview, Based on Method of Coercion, Study 2

Consequence	Verbal Coercion	Incapacitated Rape	Forcible Rape	χ^2 Value ^a
Emotional reaction	76.2 _a	89.8 _b	93.2 _b	11.26
Impact on social life	38.1 _a	63.3 _b	80.6 _c	33.96
Told anyone	59.3 _a	89.4 _b	81.7 _b	19.76
Told informal sources ^b	100.0	100.0	100.0	—
Told formal sources ^b	4.3 _a	9.5 _a	46.6 _b	39.24
Self-blame	61.3 _a	73.5 _a	37.0 _b	18.18
Perpetrator blame	74.8 _a	71.4 _a	91.8 _b	10.24

Notes: Cell values represent the percentage of participants with a yes response. In the verbal coercion group, percentages are based on *n* values ranging from 118 to 122 (except where noted) because of missing data on some items; in the incapacitated rape group, *n* values range from 47 to 49; in the forcible rape group, *n* values range from 71 to 73. Percentages with different subscripts are significantly different from one another based on individual comparisons, $p < .05$.

^a χ^2 tests distributed with 2 degrees of freedom; all values are statistically significant, $p < .01$.

^b Percentages in this row are based on only the number of people ($n = 155$) who disclosed to anyone.