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Exploring Revictimization Risk in a Community Sample of Sexual Assault Survivors

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Previous research points to links between risk detection (the ability to detect danger cues in various situations) and sexual revictimization in college women. Given important differences between college and community samples that may be relevant to revictimization risk (e.g., the complexity of trauma histories), the current study explored the link between risk detection and revictimization in a community sample of women. Community-recruited women (N = 94) reported on their trauma histories in a semistructured interview. In a laboratory session, participants listened to a dating scenario involving a woman and a man that culminated in sexual assault. Participants were instructed to press a button “when the man had gone too far.” Unlike in college samples, revictimized community women (n = 47) did not differ in terms of risk detection response times from women with histories of no victimization (n = 10) or single victimization (n = 15). Data from this study point to the importance of examining revictimization in heterogeneous community samples where risk mechanisms may differ from college samples.

KEYWORDS childhood abuse, sexual abuse, revictimization, risk detection
A total of 59% of women with victimization histories report sexual assaults in both childhood and adulthood, a phenomenon known as revictimization (Cloitre, 1998). Women exposed to childhood sexual abuse (CSA) are approximately 3 times more likely than women not exposed to CSA to be sexually assaulted in adulthood (e.g., Cloitre, Tardiff, Marzuk, Leon, & Portera, 1996; Roodman & Clum, 2001). Various mechanisms underlying revictimization have been proposed, including posttraumatic stress disorder (PTSD) symptoms (e.g., Kuipers, van der Knaap, & Winkel, 2012), emotional dysregulation (e.g., Messman-Moore, Ward, & Zerubavel, 2013), substance use (e.g., Testa, Hoffman, & Livingston, 2010), and assertive sexual behaviors (e.g., Santos-Iglesias & Sierra, 2012). The current study focuses on another important risk factor for revictimization—risk detection ability—and extends existing research from college samples to a community sample that was diverse in terms of racial/ethnic background, socioeconomic status, and symptom severity. Though much research on revictimization has focused on college samples, two meta-analyses have indicated that effect sizes for revictimization appear larger in community-based samples (Rich, Combs-Lane, Resnick, & Kilpatrick, 2004; Roodman & Clum, 2001), pointing to the importance of testing revictimization models beyond college samples.

**RISK DETECTION**

Risk detection (the ability to detect danger cues in various situations) has been identified as a potential mediator of revictimization in college women (see Marx, Heidt, & Gold, 2005). In one experimental methodology, participants listen to an audiotape of a man and a woman on a date that culminates in sexual assault. Participants press a button when “the man has gone too far.” The button press latency has been used as a measure of risk detection ability (Marx & Gross, 1995). Compared to singly victimized or nonvictimized college women, revictimized college women take significantly longer to press the button, waiting until the man has used verbal threats and physical force (Marx, Calhoun, Wilson, & Meyerson, 2001; Wilson, Calhoun, & Bernat, 1999). College women with greater latencies to press the button (poorer risk detection ability) reported higher incidences of rape at a 2-month follow-up (Marx et al., 2001).

Also relevant to risk detection are studies linking trauma-related symptoms and revictimization (Messman-Moore, Ward, & Brown, 2009; Sandberg, Matorin, & Lynn, 1999). Trauma-related symptoms (e.g., posttraumatic stress, dissociation, depression) involve disruptions in cognitive functioning such as avoidance, set shifting, focusing attention, and self-monitoring (e.g., DePrince, 2005; Kremen et al., 2007; Parslow & Jorm, 2007). Cognitive deficits may impair risk detection. For example, individuals with high dissociation...
scores rated the perpetrator in a rape scenario as less dangerous than individuals with low dissociation scores (Sandberg, Lynn, & Matorin, 2001). Thus, studies of risk detection abilities should include measures of common posttrauma responses, such as posttraumatic stress, dissociation, and depression.

We are aware of no published studies testing the link between revictimization and risk detection ability in community samples. Extending findings from college to community samples is important for several reasons. First, many college samples tend to comprise predominantly Caucasian participants (Messman-Moore & Long, 2003), as demonstrated by two risk detection studies conducted with 85% Caucasian women (Marx et al., 2001; Wilson et al., 1999). Second, college students are typically younger than community samples: Participants in risk detection studies have reported ages ranging from 19.5 to 20.1 years (Marx et al., 2001; Marx & Soler-Baillo, 2005; Wilson et al., 1999). College students have had less time to be exposed to additional instances of violence than women in older samples. This can impact how participants are categorized into victimization groups. Third, college participants tend to report lower symptom levels than community participants (Messman-Moore & Long, 2003). In fact, studies with college students have sometimes failed to find associations between sexual abuse and PTSD symptoms, suggesting that college students may benefit from protective factors less available to community-based women, such as coping skills (e.g., Albaugh & Nauta, 2005; Avant, Swopes, Davis, & Elhai, 2011) or higher socioeconomic backgrounds (Messman-Moore & Long, 2003). Fourth, CSA victims appear more likely to drop out of college (Duncan, 2000); therefore, abused women in college samples may differ from abused women in communities.

College samples have yielded important information about the potential role that risk detection plays in revictimization risk; however, understanding of risk detection as a mediator for revictimization is limited by sole reliance on college samples. An important next step is to examine risk detection–revictimization links in diverse community samples. Thus, the current study examined risk detection latency and revictimization in a community sample that was diverse with regard to age, ethnicity, socioeconomic background, and symptom level.

METHOD

Participants

A total of 94 women ages 18–40 ($M = 30.70$, $SD = 6.24$) were recruited from a western metropolitan area through flyers posted in community agencies and on Web-based listservs advertising a study on how women cope with stressful or traumatic events in childhood. Participants were screened on
gender and age but not other demographic variables. Women were excluded if they reported a suicide attempt and/or psychiatric hospitalization within 6 months. Participants received $25 for their participation.

A total of 87 women provided information on their racial backgrounds: 66% Caucasian, 18% African American, 3% Asian American, 1% Native American/Alaska native, and 12% other or biracial/multiracial. Of the 75 women who provided ethnicity information, 25.3% identified as Hispanic/Latina. Of the 93 women who provided education information, 19.4% completed partial high school, 17.2% obtained a high school diploma, 40.9% completed partial college or specialized training, 12.9% obtained a college degree, and 9.7% had some graduate/professional training. Note that only 11 women reported being of college age (18–22), and of those women, only one reported being a student. Finally, 89 women provided the following family income information: 40.71% reported <$10,000, 17.1% reported $10,000–$30,000, 16.1% reported $30,000–$50,000, and 16.0% reported >$50,000.

Procedure and Materials

**Overview.** The study received approval from a university institutional review board. Callers who met inclusion criteria were invited to the research offices. After consenting, participants completed non-trauma-relevant surveys and lab tasks as part of a larger study (only tasks relevant for this study are described here). Participants were seated in front of a computer monitor and instructed that they were going to hear several audiotapes and answer questions about each. The experimenter then left the room and instructed participants via an intercom to simply listen to the first audiotape (neutral) to establish a neutral mood state. Participants were then instructed to listen to the second audiotape (target) and press a button “when the man has gone too far.” A written prompt with the same instructions was visible on the computer screen throughout the duration of the target tape. The audiotape was stopped as soon as participants pressed the button, though this was not disclosed to participants prior to the task. Risk detection was operationalized as the response time from the start of the tape to the button press. Finally, participants were escorted into another room and completed the trauma history interview and trauma-related symptom questionnaires. After completion, participants were debriefed and compensated $25.

**Audiotapes.** In the 190-s neutral audiotape, a man and a woman discuss in a neutral tone the rules of the game Go Fish and play the game together. The tape was constructed to be comparable to the target audiotape in length and number of interpersonal exchanges.

The target audiotape depicted a man and woman on a date that results in rape (for a full description, see Marx & Gross, 1995). The audiotape
contains cues for sexual contact (e.g., breathing/kissing sounds) that increase in intensity. The man uses verbal persuasion, argument, threats, and finally physical force to obtain intercourse. The woman responds with verbal refusals and resistance that increase in intensity. The audiotape consists of four distinct dialogue segments; each begins with verbal appeals and threat that escalate negatively until the characters reach a temporary resolution. A period of kissing without dialogue follows each resolution until the next segment begins.

As a manipulation check, participants rated how realistic the interactions on the audiotapes were on a scale from 0 (completely unrealistic) to 10 (completely realistic) after each of the audiotapes. One-sample t tests comparing realistic ratings to a neutral point on the rating scale (5) indicated that participants rated both audiotapes as realistic: neutral, $M = 6.61$, $SD = 2.22$, $t(86) = 6.75$, $p < .01$; target, $M = 7.09$, $SD = 2.00$, $t(85) = 9.69$, $p < .01$). The realism ratings did not differ significantly between the neutral and target audiotapes, $t(87) = 1.47$, $p = .15$.

**Trauma history.** Violence exposure was assessed using a two-stage interview modified from the National Crime Victims Survey (see Fisher & Cullen, 2000). Women were first asked a series of behavior-specific screening questions describing sexual victimization, ranging from threatened sexual contact to completed rape, and other forms of victimization (e.g., physical victimization). Screening questions probed for location (e.g., home, work, on the street or in a parking lot), method of attack (e.g., with a weapon; something thrown; grabbing, punching, or choking), and relationship with perpetrator (e.g., someone at work or school, neighbor or friend, relative or family member). Participants who answered “yes” to any screening questions were asked for additional details.

Replicating previous risk detection studies (e.g., Marx & Soler-Baillo, 2005; Soler-Baillo, Marx, & Sloan, 2005; Wilson et al., 1999), childhood sexual victimization was defined as any sexual contact (e.g., fondling, or penetration) prior to age 14. Adult sexual victimization was defined as unwanted sexual contact by use of drugs, coercion, threat, or actual force at or after age 14. Women reported on average 0.91 ($SD = 1.18$, range = 0–8) victimizations prior to the age of 14 and 1.04 ($SD = 1.13$, range = 0–5) victimizations after the age of 14. Women were categorized into victimization status groups: no victimization (NV), single adult victimization (SV; one victimization in adulthood and no childhood events), and multiple lifetime victimizations (MV; CSA and subsequent adult victimization or multiple victimization events in adulthood). Consistent with previous risk detection studies, women with CSA only and no adult victimizations ($n = 18$) were excluded from the analyses.

**Trauma symptoms.** Three common types of trauma-related symptoms were assessed. Posttraumatic stress symptomatology was assessed with the Posttraumatic Stress Diagnostic Scale (Foa, Cashman, Jaycox, & Perry, 1997).
This is a 49-item self-report measure based on *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM–IV)*, symptom criteria that has been positively compared to gold-standard interview methods (Foa et al., 1997; Griffin, Uhlmansiek, Resick, & Mechanic, 2004). Respondents identify a Criterion A event that had the most impact on their lives and then rate the severity of each symptom related to that event over the past month. We used symptom severity scores; the identified event was not included in the analyses (coefficient $\alpha = .93$). Dissociative symptomatology was assessed using the Dissociative Experiences Scale (Bernstein & Putnam, 1986), a widely used 28-item self-report measure. This scale has good validity and reliability and is scored by taking an average across items (coefficient $\alpha = .93$). Depression symptoms were assessed with the Beck Depression Inventory–2 (Beck, Steer, Ball, & Ranieri, 1996), a 21-item measure that assesses depression symptoms based on *DSM–IV* criteria (coefficient $\alpha = .90$).

**RESULTS**

**Preliminary and Descriptive Analyses**

Skewness and kurtosis statistics indicated that all variables were normally distributed; there were no outliers above or below 2.5 $SD$. As a manipulation check, participants rated the realism of each audiotape on a scale from 0 (*completely unrealistic*) to 10 (*completely realistic*). One-sample *t* tests comparing these ratings to a neutral point on the scale (5) indicated that participants rated both audiotapes as realistic—neutral, $M = 6.61$, $SD = 2.22$, $t(86) = 6.75$, $p < .01$; target, $M = 7.09$, $SD = 2.00$, $t(85) = 9.69$, $p < .01$—with no significant differences between the two, $t(87) = 1.47$, $p = .15$. Participants also rated the emotional valence of each audiotape on a scale from 1 (*extremely negative*) to 9 (*extremely positive*). The neutral audiotape was rated as significantly more positive than the neutral point (5), $M = 6.07$, $SD = 1.83$, $t(86) = 5.45$, $p < .01$. However, the target audiotape was rated as significantly more negative than the neutral point (5), $M = 2.66$, $SD = 1.38$, $t(85) = -15.74$, $p < .01$. Participants rated the target audiotape as significantly more negative than the neutral audiotape, $t(87) = -12.63$, $p < .001$.

One-way analyses of variance indicated that victimization status groups differed significantly on all trauma symptom scores: PTSD, $F(3, 75) = 4.55$, $p < .01$, partial $\eta^2 = .15$; dissociation, $F(3, 73) = 3.07$, $p < .05$, partial $\eta^2 = .11$; depression, $F(3, 75) = 4.11$, $p < .01$, partial $\eta^2 = .14$ (see Table 1). As predicted from the existing literature (e.g., Classen, Palesh, & Aggarwal 2005), post hoc tests showed that the MV group exhibited significantly greater PTSD, dissociation, and depression symptoms than the SV group and greater depression symptoms than the NV group. The SV and NV groups did not differ from each other on symptom measures.
TABLE 1  Means (SD) for Variables by Victimization Status Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>NV (n = 10)</th>
<th>SV (n = 15)</th>
<th>MV (n = 47)</th>
<th>Post hoc comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posttraumatic stress</td>
<td>14.10 (12.57)</td>
<td>12.43 (6.65)</td>
<td>22.98 (11.87)</td>
<td>ns</td>
</tr>
<tr>
<td>symptoms</td>
<td></td>
<td></td>
<td></td>
<td>p &lt; .05</td>
</tr>
<tr>
<td>Dissociation symptoms</td>
<td>12.63 (10.94)</td>
<td>11.48 (8.14)</td>
<td>20.75 (13.35)</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>n = 14</td>
<td></td>
<td>n = 46</td>
<td>p &lt; .05</td>
</tr>
<tr>
<td>Depression symptoms</td>
<td>9.10 (5.55)</td>
<td>9.93 (6.47)</td>
<td>17.55 (10.19)</td>
<td>p &lt; .05</td>
</tr>
<tr>
<td></td>
<td>n = 14</td>
<td></td>
<td></td>
<td>p &lt; .05</td>
</tr>
<tr>
<td>Reaction time</td>
<td>170.36 (66.70)</td>
<td>134.78 (58.81)</td>
<td>157.15 (81.91)</td>
<td>ns</td>
</tr>
</tbody>
</table>

Notes: Post hoc comparisons revealed by Tukey’s honestly significant difference test. NV = no victimization; SV = single adult victimization; MV = multiple lifetime victimizations.

Analysis of Risk Detection

One-way analyses of variance indicated that victimization status groups did not differ significantly in their response times, $F(2, 69) = 0.75, p = .47$, partial $\eta^2 = .02$. See Figure 1 for distributions of response times for each group. To replicate previous risk detection studies (e.g., Marx & Soler-Baillo, 2005; Soler-Baillo et al., 2005; Wilson et al., 2001), we initially included low-risk experiences in childhood (e.g., touching, fondling) as sexual victimizations. When we included only severe incidences (e.g., penetration, forced sex, attempted or completed sexual assault), analyses yielded similar findings. Demographic variables (e.g., age, income, education) and trauma symptoms (posttraumatic stress, dissociation, depression) were not significantly associated with response times (see Table 2).

DISCUSSION

Risk detection studies demonstrate that college women with multiple victimizations exhibit longer response latencies to a risk detection task than peers with single or no victimizations (Soler-Baillo et al., 2005; Wilson et al., 2001). The current study extended risk detection methods to a diverse community sample of women. Despite replicating the risk detection task and approaches for grouping women by victimization history, we found that women with multiple victimizations did not show longer response latencies than women with single or no victimizations. The effect size for this group comparison was negligible (partial $\eta^2 = .02$), suggesting that power was not the cause of lack of replication.

Extending findings from college samples to community samples is important for several reasons. College samples are typically composed of predominantly Caucasian, educated, young women (approximately ages 18 to 22) with financial resources to attend secondary education (see
FIGURE 1 Distributions of reaction times by victimization status group.
TABLE 2 Bivariate Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2. Income</td>
<td>−.34</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>3. Education</td>
<td>.04</td>
<td>−.11</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>5. Dissociation symptoms</td>
<td>−.13</td>
<td>.55</td>
<td>−.31∗∗</td>
<td>.49∗∗</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>6. Depression symptoms</td>
<td>−.06</td>
<td>.48</td>
<td>−.27∗</td>
<td>.54∗∗</td>
<td>.51∗∗</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>7. Response latency</td>
<td>−.05</td>
<td>.42</td>
<td>.15</td>
<td>−.05</td>
<td>.08</td>
<td>−.04</td>
<td>—</td>
</tr>
</tbody>
</table>

* p < .05
** p < .01

Messman-Moore & Long, 2003). The degree to which findings on risk detection generalize from college participants to more racially, educationally, or socioeconomically diverse community samples remains an empirical question. Researchers do not know the extent to which risk detection abilities are disrupted among women living in high-crime neighborhoods who are also at increased risk for gang or community violence. Also, to the extent that symptoms interfere with risk detection, college samples may not adequately tap the severe end of symptom spectrums; therefore, understanding of the relationship between severe psychological distress and disruptions in risk detection may be limited in college samples. A sample composed of both college and noncollege community participants would allow researchers to directly examine group differences between these populations.

Thus, the divergence between the present findings in a community sample and previous findings in college samples may be due to several contextual factors that differ between the two types of samples (e.g., age, victimization histories, relationship context). For example, women from community samples are typically older than women from college samples. Though age was not significantly correlated with response times, women may be exposed to additional incidents of sexual violence with increasing age, as illustrated by the fact that women in the current sample reported up to five victimizations after the age of 14. Furthermore, 50% of women in this community sample reported multiple victimizations compared to only a small percentage of women in previous risk detection college samples (6% in Wilson et al., 1999; 27% in Marx et al., 2001). Only 10% of women in this community sample reported no victimizations relative to 45% (Wilson et al., 1999), and 52% (Marx & Soler-Baillo, 2005) in the college samples.

In addition to differences in age, the samples may have differed in terms of the nature of the victim–offender relationship and/or the chronicity of victimization. Women in the community sample may have experienced more abuse in the context of close and/or long-term relationships (regardless of whether they were singly or multiply victimized), whereas women in the college samples may have experienced more isolated incidents of
violence (e.g., alcohol/substance-facilitated date rape). Contextual factors surrounding abuse in close and/or long-term relationships (e.g., financial dependence, fear, lack of social support) may have an impact on risk detection abilities and revictimization. For example, economic or other barriers to leaving long-term abusive relationships may decrease motivation over time to detect when a partner has gone too far, consistent with betrayal trauma theory (Freyd & Birrell, 2013). As an illustration of the economic strain in this sample, the majority of women in the community sample reported an annual income of $30,000 or less. The degree to which the samples differed in terms of closeness of the victim–offender relationship and/or chronicity of abuse may underlie differences in performance across the two samples. If women in the community sample faced more abuse by close others in long-term relationships, regardless of single versus multiple victimization group distinctions, the sample as a whole may have differed in its interpretation of when the man had gone too far compared to college-age women.

This community sample comprised women who knew about the trauma focus of the study and self-selected for voluntary participation, which limits our ability to generalize to other samples such as clinical populations. Future studies examining mechanisms underlying revictimization in heterogeneous samples remain important. For example, experts might discover with research into more heterogeneous samples that factors such as dependency on offenders better predict risk detection deficits than single versus multiple victimization distinctions. Future studies should also examine substance use and revictimization risk given the prevalence of drugs/alcohol in many social situations. Drug/alcohol use has also been widely studied in conjunction with CSA and risky sexual behaviors (e.g., Hittner & Schachne, 2012). Given that revictimization is associated with severe physical, psychological, and social impairment (e.g., Marx et al., 2005), further understanding risk detection as a risk factor and identifying additional risk factors for revictimization remain essential.

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NOTES

1. Unless otherwise noted, we use the term revictimization to refer to sexual revictimization.
2. To replicate methodology from previous studies (Soler-Baillo et al., 2005; Wilson et al., 2001), we excluded women who reported only childhood victimization and no adult victimization (n = 18). We also conducted analyses while including in the SV group those women who reported only childhood victimization. Including all women in the analyses did not change any findings.

REFERENCES


