Testing Two Approaches to Revictimization Prevention Among Adolescent Girls in the Child Welfare System

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Purpose: Girls in the child welfare system are at high risk of revictimization in adolescence. The present study compared two interventions designed to decrease revictimization in a diverse sample of adolescent child welfare-involved girls. The social learning/feminist (SL/F) intervention focused on concepts derived from social learning and feminist models of risk, such as sexism and beliefs about relationships. The risk detection/executive function (RD/EF) intervention focused on development of specific executive function abilities related to detecting and responding to risky situations/people.

Methods: Participants were randomized to RD/EF (n = 67) or SL/F intervention (n = 67). A group of youth (n = 42) engaged in the research assessments only. Participants (n = 180) were assessed before intervention, immediately after intervention, 2 months after intervention, and 6 months after intervention. We examined revictimization (the presence/absence of sexual or physical assault in any relationship) over time.

Results: Adolescent girls in the RD/EF condition were nearly five times less likely to report sexual revictimization compared with girls in the no-treatment group. A trend suggested that girls who participated in the SL/F intervention were 2.5 times less likely to report sexual revictimization relative to the no-treatment group. For physical revictimization, the odds of not being physically revictimized were three times greater in the SL/F condition and two times greater in the RD/EF condition compared with the no-treatment group.

Conclusions: The active interventions did not differ significantly from one another in rates of revictimization, suggesting that practitioners have at least two viable options to engage high-risk youth in revictimization prevention.

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violence) of physical (usually not sexual) dating violence [9]. Further, little is known about the specific mechanisms that underlie RV risk [1]. Therefore, research is urgently needed to target interventions for high-risk groups, such as teen girls from the child welfare system; rigorously test interventions grounded in RV research; and advance theory on the mechanisms that underlie RV. To that end, the present study tested two interventions that took theoretically distinct approaches to the problem of RV in a sample of adolescent girls from the child welfare system. This study offers an important opportunity to evaluate two different underlying RV intervention theories.

Two theoretically different approaches to revictimization intervention

Two prominent approaches address how girls exposed to abuse may be at increased risk of RV. One is grounded in social learning and feminist (SL/F) theory and the other in risk detection and executive function (RD/EF) perspectives (see Table 1 for an overview of processes and intervention targets). From the SL/F perspective, children exposed to violence (directly by caregivers and/or indirectly by witnessing violence between caregivers) may learn that violent tactics are acceptable and effective [10]. Further, they may fail to learn social and coping skills, leading to interpersonal problems and conflict in later relationships [11]. Childhood violence exposure may also lead to negative expectations that relationships involve harm [12,13]; Youth may also learn overly rigid gender roles from maltreating caregivers that result in expectancies of harm to women and inequities in power between partners [14]. Grounded in SL/F perspectives, Wolfe et al. [10,14] developed the Youth Relationships Manual, one of the only programs rigorously evaluated to address RV in teen dating relationships. The curriculum targets four broad categories of skills: (1) understanding power in relationship violence; (2) developing skills to build healthy relationships and recognize/respond to abuse in relationships; (3) developing skills to respond to societal influences and pressures that can lead to violence; and (4) increasing competency through social action [10].

The RD/EF perspective is based on the literature on sexual RV risk, which has focused on risk detection (RD) abilities. RD involves noticing and responding to external (e.g., a dating partner's threatening behaviors) and internal (e.g., one's own feelings of fear or discomfort) danger cues in intimate relationships [15]. Studies have demonstrated that sexually revictimized women compared with their peers take significantly longer to indicate that a man is inappropriate in an audio scenario [16,17], as well as to detect violations of social and safety rules [18].

RD abilities require a range of cognitive skills that are collectively referred to as executive functions (EFs), including the ability to shift, inhibit, and focus attention; maintain focus in the face of distracting information; updating new information in the working memory system; think flexibly about potential solutions; and plan and initiate actions. Research links child victimization to EF deficits [13,19], suggesting that addressing EF abilities may be important in interventions focusing on RD. Interventions with adolescents (not specific to RV) point to the potential usefulness of targeting EFs using mindfulness-based approaches [20].

Revictimization prevention curricula tested in present study

We modified the SL/F curriculum from [10] empirically supported manual to streamline the intervention from 18 to 12 sessions to address concerns about keeping child welfare youth engaged in a weekly intervention for 4.5 months given placement and other instabilities. We settled on 12 sessions based on the [20] manual on which the RD/EF intervention was partially based. We retained core social skill training, relationship perception, and societal awareness components. We removed social action components that focused on learning about services and agencies (see [21] for specific changes).

The newly formulated RD/EF curricula were based on [16] two-session intervention for college students, which focused

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Table 1

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<thead>
<tr>
<th>Approach</th>
<th>Process</th>
<th>Intervention target</th>
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<tr>
<td>Social learning/feminist</td>
<td>Violent tactics are acceptable and even effective routes to resolving conflict. Problems in assertiveness and communication skills. Develop expectations that relationships will include harm. Socialization of gender roles and sexism that support power discrepancies and violence. Fail to notice external danger cues (e.g., something in the environment, such as the expression on another person). Fail to notice internal danger cues (e.g., one's own feelings of fear). Notice cue(s), but fail to maintain and use this information or become distracted; thus, multiple danger cues seem disconnected and unrelated. Notice danger and know what to do, but fail to change or inhibit current behaviors. Notice danger, but have difficulty generating possible behavioral responses. Have difficulty planning or initiating a response. Violence in intimate relationships viewed as acceptable. Deficits in assertiveness skills increase conflict and aggression in intimate relationships.</td>
<td>Understanding power and its role in relationship violence. Develop skills to build healthy relationships and to recognize and respond to abuse in their own relationships. Understand the societal influences and pressures that can lead to violence; develop skills to respond. Increase EF to the environment (directing attention). Increase EF to emotions; improve emotion labeling/awareness. Increase EF (working memory, interference control). Increase EF (set shifting; inhibition). Increase EF (cognitive flexibility); increase knowledge of possible responses. Increase EF (planning); Practice generating ways to respond. Decrease acceptability of dating violence. Increase assertiveness skills.</td>
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RD/EF: executive function; RD: risk detection.
on risk recognition and problem solving, integrated with mindfulness-based intervention with adolescents. These modifications included adapting the content from the study by Marx et al. on RD for adolescents and using mindfulness-based exercises derived from the study by DePrince and Shirk to teach about the role that attention plays in RD (e.g., attention to one’s own internal cues to potential danger).

**Methods**

All study procedures were approved by a university-based Institutional Review Board.

**Participants**

Adolescent females (ages 12–19 years) who had histories of childhood neglect or abuse and a current or a previous open case with child welfare services were referred by case workers, service providers, or legal guardians. Youth were excluded if they reported suicide attempts or psychiatric hospitalizations in the last 3–6 months, current self-harm behavior, or psychosis and did not have a current individual therapist. From 214 referrals, 180 (84%) adolescents completed the Time 1 (T1) assessment. Of these 180, four were excluded (e.g., due to current, untreated psychotic symptoms).

**Procedure**

Figure 1 shows the study flow. For adolescents under age 18 years, parental or child welfare administrative consent was secured (depending on custody status) before the T1 assessment. Following assent/consent procedures, participants completed the initial assessment, which was administered one-on-one by graduate level researchers who were naive to condition.

Group start dates were on a rolling basis as enough youth were enrolled to populate two concurrent groups (one SL/F and one EF/RD). Youth were randomized to SL/F or EF/RD group at the first group session attended; however, 15 adolescents never attended a first session and were not randomized. Twenty-seven attended the first session only, which did not involve substantive intervention content (content focused on group rules and introductions). These 42 participants were combined into a no-treatment group, which was used as a nonrandomized comparison. Thus, we maximized use of data from youth who were not randomized in this hard-to-reach sample (see [22–24] for a review of issues related to traditional and alternative approaches to intent-to-treat approaches).

Each of the 12 weekly intervention group meetings lasted approximately for 1.5 hours and was cofacilitated by graduate students. Teens received $10 after each group meeting for transportation. Teens were also entered into a raffle once they attended nine sessions; a drawing was conducted for each cohort ($50 prize). Regardless of whether they attended groups, adolescents were invited back for three additional 2-hour assessments: immediately after the 12-week intervention, 2 months after the intervention, and 6 months after the intervention (T2, T3, and T4, respectively). For each assessment, participants received $40 for their time and $10 for transportation. All adolescents received newsletters detailing local and telephone resources for violence; specific individual referrals were made as appropriate.

**Materials**

Demographic and prior service information about each participant was collected.

**Violence exposure and revictimization.** Violence exposure was assessed using the Traumatic Events Screening Inventory-Child Version (TESI; [25]) and Conflict in Adolescent Dating Relationship Inventory (CADRI; [26]). The TESI, a 24-item scale that uses behaviorally defined items to assess exposure to a variety of events, was used to characterize previous trauma exposure. We assessed history of interpersonal victimizations including physical abuse, emotional abuse, exposure to domestic violence, sexual abuse, and neglect. The TESI was readministered at follow-up interviews to assess for the occurrence of interpersonal violence since the previous interview. Dating violence was assessed using the CADRI, a 70-item measure that assesses the frequency with which conflict tactics are used with dating partners. Items were administered to assess both dating partner’s and the participant’s behavior. Participants were instructed to think about their current or most recent relationship.

The presence/absence of RV at T2–T4 was calculated from the TESI and CADRI, as the CADRI asked about current dating relationships and the TESI asked about victimization generally. Physical RV was considered present if adolescents reported a physical victimization on the TESI (by someone other than a caregiver/close family member to exclude maltreatment) or reported on the CADRI the occurrence of at least one of the following behaviors from their dating partners: kicking, hitting, punching, slapping, shoving, shaking, or pushing. Sexual RV was considered present if participants reported a sexual victimization on the TESI (by someone other than a caregiver/close family member to exclude maltreatment) or reported on the CADRI the occurrence of at least one of the following behaviors from their dating partners: threatening sex, forcing sex, or unwanted sexual touching.

**Results**

**Participant demographics**

The 180 adolescent girls ranged in age from 12 to 19 years (mean = 15.85; standard deviation [SD] = 1.58). Of the 152 teens that indicated their race, 36% were white/Caucasian, 36% were black/African-American, 7% were American Indian/Native Alaskan/Native American, 3% were Asian/Asian-American, and 18% classified their race as “other”. Additionally, of 178 teens who identified their ethnicity, 38% identified as Hispanic/Latina, 59% as not Hispanic/Latina, and 3% declined to answer. In terms of sexual orientation, 77% of teens identified as heterosexual/straight. The majority of teens (89%) were in middle school, high school, or completing high school equivalency coursework at T1. Approximately, 81% of teens reported having attended public school at some point, although 29% reported attending alternative school, 19% school at a residential treatment center, 16% school at day treatment, and 16% online school. At T1, 6% of teens were not attending school of any type. Teens reported their current place of residence as follows: 27% with biological/natural family, 23% in foster home, 17% in group home, 12% in residential treatment facility, 4% in an independent living program, 6% with relatives, 3% on their own, 3% with an adoptive family, and 4% declined to answer.
History of exposure to violence

Participants reported the following forms of maltreatment by an adult perpetrator at T1: 37% of teens reported physical abuse; 40% reported sexual abuse; 69% reported witnessing domestic violence; 35% reported emotional/psychological abuse; and 43% reported neglect. The mean age of onset was 5.56 years (SD = 4.39). The average number of perpetrators was 2.51 (SD = 2.00). In addition to victimization by adults, 63% of teens (n = 113) reported exposure to victimizations by peer perpetrators, either outside (e.g., schoolmates) or within (e.g., siblings, cousins) the family.

Equivalence of groups

Sixty-seven participants were randomized to each of the RD/EF and SL/F intervention groups, whereas 43 participants were in the no-treatment group. As detailed elsewhere [21], we evaluated equivalence of the adolescents in the three groups (RD/EF, SL/F, and no-treatment groups) in terms of a host of demographic (e.g., age, ethnicity, placement type, school level) and individual difference (e.g., violence exposure, previous healthy relationship classes) factors. The only significant group difference noted related to witnessing domestic violence: 85% of youth in the SL/F group reported witnessing domestic violence relative to 55% in the RD/EF and 67% in the no-treatment group ($\chi^2 = 14.22; p = .001$). Following recommendations of the study by Gross and Fogg [23], we pursued using propensity scores as an alternate to the very conservative intent-to-treat (ITT) approach. As described in greater detail elsewhere [21], we found that the three groups were quite homogenous, resulting in a lack of adequate variability to pursue propensity scores. These efforts, combined with nearly entirely nonsignificant univariate analyses of baseline characteristics, suggest that there were no meaningful differences between the treatment (SL/F and RD/EF) and no-treatment groups that should prohibit comparing the three groups as we did in the analyses presented here.

Treatment adherence and attendance

Independent evaluators coded recordings of groups to check adherence to treatment components using adherence checklists corresponding to the specific protocols. Facilitator adherence was excellent, reaching 98% and 92% for the RD/EF and SL/F
conditions, respectively. The mean number of sessions attended for the RD/EF intervention (8.70; SD = 3.17; 73% of sessions) was comparable with that for the SL/F intervention (8.36; SD = 3.60; 70% of sessions).

**Revictimization**

Figure 2 shows the percentage of youth who reported physical and sexual RV, respectively, at T2–T4. Linear contrast analysis on estimates derived from a repeated-measures PROC GENMOD with general estimating equation approach was used to determine the effects of intervention on sexual and physical RV after treatment (T2–T4). We transformed regression coefficients to represent the odds for success from a participant assigned to one intervention divided by the odds of success for a participant assigned to a comparison group. Dichotomous outcomes were regressed onto intervention group (SL/F, RD/EF, and no-treatment) and time (T2, T3, and T4) and group cohort (12 groups, with the first group considered the reference group). In this approach, observations with missing values with a cluster (i.e., participant) are not used; working correlation matrix estimates are based on all available data. Within-subject covariance structure of the repeated measures was modeled and the best fitting error covariance structure that minimized the quasi-likelihood information criteria model–fit criteria was found to be exchangeable (reflecting equality of all correlations with a cluster). We tested three contrasts: (1) SL/F versus no-treatment; (2) RD/EF versus no-treatment; and (3) SL/F versus RD/EF.

**Sexual revictimization.** In two of the 12 cohorts (Cohorts 6 and 10), no participants reported sexual RV at T2, T3, or T4. Due to this quasi-complete separation, which created problems with model convergence, we recoded the two cohorts as if they participated in cohorts that were held subsequently (i.e., Cohort 7 and Group 11). Because no significant cohort effects were found \( p > .16\)–.96, this term was dropped from the model. Subsequent analysis of dichotomous RV outcomes indicated that between T2 and T4, the odds of not being sexually revictimized was 4.9 times greater for girls in the EF/RD group compared with girls in the no-treatment group \( (\chi^2 = 8.97; p = .003) \). A trend \( (\chi^2 = 3.52; p = .07) \) revealed that the odds of not being sexually revictimized was 2.5 times greater for girls in the SL/F group compared with girls in the no-treatment group. No significant differences were observed between the odds ratios of the two active interventions.

**Physical revictimization.** Cohort was not a significant covariate and was dropped from the model. For physical RV, the odds of not being physically revictimized between T2 and T4 were 2.5 times greater for girls in the SL/F group compared with the no-treatment group \( (\chi^2 = 5.31; p = .02) \) and 3.3 times greater in EF/RD group compared with no-treatment group \( (\chi^2 = 7.34; p = .007) \). No significant differences were observed between the two active treatments \( (\chi^2 = .55; p = .46) \).

**Discussion**

**Two approaches to revictimization prevention**

The present study compared two active theoretically distinct curricula targeting RV in a diverse sample of adolescent girls from the child welfare system. A subgroup of youth was not randomized or only attended an introductory session, enabling us to compare the active interventions with a post hoc no-treatment condition. Adolescent girls who participated in the RD/EF intervention that focused on RD were about five times more likely to not report sexual RV over the course of the study period compared with girls in the no-treatment group. This trend suggested that girls who participated in the SL/F intervention that focused on social learning and feminist principles related to RV risk were 2.5 times more likely to not report sexual RV relative to the comparison group. The two intervention conditions did not differ significantly from one another. For physical RV, the odds of not being physically revictimized were three times greater in the SL/F group and two times greater in the RD/EF group compared with the no-treatment group.

The active interventions did not differ from one another in rates of sexual or physical RV across the study period, suggesting that both SL/F and RD/EF theoretical approaches are relevant to RV. Comparing two active interventions with theoretically different underpinnings offered an opportunity to advance theory. The current findings suggest that neither theory outperforms the other in terms of intervention outcomes. Both theories should continue to be evaluated in specifying models of RV risk and improving prevention approaches. These findings suggest that practitioners have different curricula options to
engage youth around RV prevention and that integration of the two approaches might be profitably examined.

**Engaging high-risk adolescents outside of school-based programs**

To date, the majority of dating violence prevention programs has been implemented as universal prevention programs in schools and targeted attitudes regarding the acceptability of violence (for a review, see [28]). Although many of these programs have been successful in modifying attitudes, results are mixed in terms of their success in decreasing actual experiences of victimization. Unfortunately, the field knows little about how high-risk groups (such as youth in the child welfare system) might respond to prevention programs. The present study takes an important step in filling this gap. Youth in this sample were diverse with regard to race/ethnicity as well as sexual orientation, with nearly one quarter of the sample identifying with a group other than heterosexual. Youth in the sample also experienced complex maltreatment histories before study start and significant economic challenges. This study demonstrates that diverse youth who have experienced significant adversity can be successfully engaged in intervention research outside school settings. The fact that these youth were engaged in the intervention is particularly important given that many would not otherwise be reached by traditional school-based dating violence programming. Nearly two thirds of the adolescent girls in this sample reported having attended school in a setting outside of the traditional public school system where some of the hallmark dating violence prevention programs have been tested [29–32]. Although we were successful in engaging youth in this 12-session intervention, researchers also need to identify other short-term interventions given that longer interventions may not be implemented in practice and may suffer from greater attrition.

**Limitations**

Several limitations should be considered in interpreting findings. We did not have a randomly assigned control group. Referring caseworkers expressed concerns about referring to a study where some adolescents would not receive intervention (for a no-treatment control group) or would have to wait more than nine months to begin intervention (for a waitlist-control condition). Recognizing this practical real-world concern, we continued to engage youth who did not participate in the intervention groups in follow-up assessments and analyzed their data in a no-treatment group. Although this group was not randomly assigned, the group was comparable with the intervention groups on critical variables and provided a much stronger benchmark than a general community sample.

Our comparison of youth who attended at least one substantive session of either curriculum with a post hoc non-randomized group who attended no substantive sessions differed from a strict ITT approach. Notably, our approach was still quite conservative (e.g., we did not analyze only treatment completers); however, we departed from the traditional ITT approach, which calls on researchers to treat all cases as randomized regardless of adherence to treatment protocol or other considerations [22–24,33]. Although ITT has been championed as the best method to represent a clinical population (vs. focusing solely on treatment completers, for example), the approach has also been critiqued, particularly in prevention research [23].

Additional limitations include the fact that the intervention targeted girls in the child welfare system. We targeted reduction of female RV in adolescence that is predictive of additional RV in adulthood. Women, and not men, appear to be at elevated risk of RV by intimate partners in adulthood [34]; however, little is known about men who may also be at risk of intimate partner abuse. Inclusion of both males and females in groups may facilitate more dynamic discussions about gender roles in curricula that integrate social learning and feminist perspectives; however, there may be cases where discussions are facilitated in single-gender groups. Future research should consider the relative benefits and costs of coed intervention groups that target RV risk.

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