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Reducing Sexual Victimization Among Adolescent Girls: A Randomized Controlled Pilot Trial of My Voice, My Choice

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Despite extensive efforts to develop and implement programs to prevent sexual violence, few programs have empirically-demonstrated efficacy. The primary exceptions are programs that emphasize risk-reduction skills; yet even these programs are not consistently effective. This study seeks to add to the literature by evaluating the effects of My Voice, My Choice (MVMC), a 90-minute assertive resistance training program that emphasizes skill practice in an immersive virtual environment (IVE). We hypothesized that MVMC would reduce male-to-female sexual victimization among adolescent girls over a 3-month follow-up period. We also examined whether these results would generalize to other forms of male-to-female relationship violence and to girls' psychological distress. Eighty-three female students from an urban public high school were randomized to MVMC (n = 47) or to a wait-list control condition (n = 36); 78 provided data over the 3-month follow-up period. Participants assigned to MVMC were less likely than control participants to report sexual victimization during the follow-up period. Our results also suggest that MVMC reduced risk for psychological victimization and for psychological distress among participants with greater prior victimization at baseline. The promising results of this pilot trial suggest that MVMC may help girls evade male-to-female relationship violence.

Keywords: teen dating violence; sexual violence; prevention; assertiveness; virtual reality

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ONE QUARTER TO ONE HALF OF WOMEN in the U.S. are victims of sexual violence in their lifetime, most commonly in their teens or early twenties (U.S. Department of Justice, 2006) and most often perpetrated by someone they know (Testa, VanZile-Tamsen, & Livingston, 2007). Sexual victimization is associated with numerous immediate and long-term deleterious effects (Baker & Sommers, 2008; Campbell, Dworkin, & Cabral, 2009; Littleton, Axsom, & Grills-Taquechel, 2009; Littleton & Henderson, 2009). Moreover, experiencing any type of interpersonal violence (e.g., sexual, physical, psychological) dramatically increases the risk of future revictimization (Finkelhor, Ormord, & Turner, 2007; Macy, 2008). As a result, preventing sexual violence has become a high priority for high schools and colleges. Unfortunately, although many sexual violence prevention programs have been developed, few have been rigorously evaluated, and even fewer have been shown to actually reduce sexual victimization (Anderson & Whiston, 2005; Morrison, Hardison, Mathew, & O'Neil, 2004).

One of the most common types of prevention programs focuses on reducing risk for victimization (in the criminology literature, this is often referred to as target hardening; Hummer & Preston, 2006). Risk-reduction programs are designed to raise awareness about sexual violence, challenge rape-supportive beliefs, and teach skills for identifying and escaping threatening situations, thereby helping individuals protect themselves (Morrison et al., 2004). Such programs are typically psycho-educational in nature, and are usually targeted at females, primarily because females are at greater risk than males for sexual victimization (U.S. Department of Justice, 2006). Unfortunately, risk-reduction programs, as a group,

have only small-to-moderate effect sizes on victimization (mean weighted effect size of d = .10 across 13 studies) (Anderson & Whiston, 2005). However, risk-reduction programs that have a more specific (and typically more thorough) focus on self-protection skills tend to have larger effect sizes, compared to those that are broader in their coverage of topics or focus primarily on raising awareness and/or changing beliefs (Morrison et al., 2004). Still, not all programs that focus on self-protection succeed in reducing victimization (Anderson & Whiston, 2005; Morrison et al., 2004). One possible reason is that, although skills may be taught and demonstrated, there is typically limited opportunity for participants to practice skills or to receive feedback on their skill mastery. The lack of practice and corrective feedback may result in poor skill acquisition if the skills are relatively new to participants or if they find self--protection behaviors challenging.

The current study builds upon the existing literature on the prevention of sexual violence by evaluating the efficacy of My Voice, My Choice (MVMC), a program designed to reduce sexual victimization by teaching adolescent girls a specific set of self-protection skills—assertive resistance—and providing them with multiple opportunities to practice skills in realistic simulations. MVMC targets assertive resistance because there is consistent evidence that girls and women who engage in such behaviors (e.g., saying "no" firmly, yelling, or physically fighting back) are more likely to escape a sexually coercive situation without being raped, compared to those who engage in more passive (e.g., freezing or crying) or polite (e.g., explaining or apologizing) resistance (Ullman, 2007). Moreover, research with actual and potential perpetrators of sexual violence indicates that girls and women with a confident, assertive self-presentation are less likely to be identified as potential victims (Book, Costello, & Camilleri, 2013; Parks, Hequembourg, & Dearing, 2008; Sakaguchi & Hasegawa, 2006) and that assertive resistance is more likely to be perceived as true rather than "token" refusal (Garcia, 1998). In addition, there is experimental evidence suggesting that training in assertive resistance can reduce the likelihood of sexual victimization (e.g., Gidycz et al., 2001; Simpson Rowe, Jouriles, McDonald, Platt, & Gomez, 2012). Thus, correlational and experimental data are consistent with a theorized causal relation: Assertive resistance in response to unwanted sexual advances or sexual coercion may help girls and women escape potentially dangerous interpersonal situations and reduce likelihood of harm.

Extensive research on skill acquisition indicates that skills learned under conditions similar to those in which they are to be used are more likely to generalize to the "real world" than skills learned under dissimilar conditions (Eich, 1995; Forgas, 2008). The real-world context for self-protection skills is that of sexual coercion or unwanted sexual advances; thus girls and women must be able to enact skills in situations that commonly cause fear and anger, are stressful, and are potentially dangerous (O'Sullivan, Byers, & Finkelman, 1998). Simulation-based learning offers a mechanism to learn and practice skills under circumstances that more closely approximate situations in which they might be applied (Jouriles, McDonald, et al., 2009). Simulations have been used in commercial and military aviation (e.g., flight simulators) for decades (de Winter, Dodou, & Mulder, 2012), and are currently used in fields ranging from the military to medicine (e.g., physicians conduct clinical exams with "standardized patients" who present with particular configurations of symptoms) (Lane, Hood, & Rollnick, 2008; Van Hasselt, Romano, & Vecchi, 2008).

Based on research that supports the benefits of behavioral practice for learning social skills (Mueser & Bellack, 2007; Spranger, Schatz, & Knopf, 2008), MVMC provides participants opportunities to practice assertive resistance and to receive feedback on their use of these skills. This practice is conducted in an immersive virtual environment (IVE), using simulations of situations that pose potential risk for sexual victimization. An IVE is a computer-simulated environment, created using virtual-reality technology that is designed to help participants suspend "normal" reality and experience a "new" reality. In this research, coercive situations that sometimes occur between teens (e.g., sitting next to an adolescent boy in his bedroom when he is trying to convince the participant to kiss him) are simulated in the IVE, so that the participant experiences herself as "in" the coercive situation. IVEs create a more realistic and immersive "sexually coercive" situation that elicits greater negative emotion than face-to-face role plays (Jouriles et al., 2009, 2011) and have been used successfully in research on sexual coercion and physical violence (e.g., Jouriles, Simpson Rowe, McDonald, & Kleinsasser, 2014; Slater et al., 2013).

Repeated practice of assertive resistance in simulated high-risk situations might be especially beneficial for girls and women who have suffered previous sexual victimization, because they are less likely than nonvictims to respond to sexually coercive behavior with assertive resistance (e.g., Gidycz, Van Wynsberghe, & Edwards, 2008; Jouriles et al., 2011; Katz, May, Sorenson, & DelTosta, 2010). One explanation for this finding is that previously victimized women are at greater risk for trauma symptoms and/or physiological arousal when faced with sexual coercion, which can lead them to feel overwhelmed