

## CHAPTER 11

# What Works? Critical Components of Effective Sexual Violence Interventions for Women on College and University Campuses

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## INTRODUCTION

In the United States and Canada, recent years have seen heightened attention to sexual assault on college campuses. In 2014, in the United States, the White House Task Force called for efforts to better identify the scope of the problem at institutions and to prevent its occurrence. Although mandates that US universities address sexual assault prevention on their campuses are not new ([National Association of Student Personnel Administrators, 1994](#)), the White House Task Force report spurred increased attention to the prevention of violence on college campuses. In Canada, no such federal mandate exists. However, the recent Province of Ontario Sexual Violence Action Plan ([Ontario Women's Directorate, 2013](#)) has had a similar impact and has been followed by actions from several other provinces. Consequently, universities and colleges are searching for programs that will reduce rates of sexual assault on campuses and do so in an efficient and cost-effective manner.

Over the past three decades, universities have invested considerable effort to achieve these goals. Most sexual assault prevention programs, however, are untested, brief, psychoeducational, and unevaluated ([Morrison, Hardison, Mathew, & O'Neil, 2004](#); [Schewe, 2007](#)). Of those that have been evaluated, few have the desired effects on sexual assault, even if they do show some effects on attitudes or knowledge. A few even produce effects opposite to those desired (e.g., [Berg, Lonsway, & Fitzgerald, 1999](#)). Overall, very few sexual assault prevention programs have been demonstrated to prevent sexual assault ([Basile et al., 2016](#); [DeGue et al., 2014](#)).

There is one major exception: programs designed to increase women's ability to recognize and resist sexual assault are associated with decreases in rates of sexual victimization. Even though such programs have demonstrated promising effects (Gidycz & Dardis, 2014; Hanson & Broom, 2005), they were not included for review<sup>1</sup> in the syntheses published by Centers for Disease Control and Prevention researchers (DeGue et al., 2014) until very recently (Basile et al., 2016). Although different terminology has been used to describe them (e.g., risk reduction, sexual assault resistance, and self-defense), these programs share a common core: providing women with skills to avoid, interrupt, and resist men's sexual violence.

Although programs that increase women's ability to recognize and resist sexual assault focus their efforts on the potential targets of violence, it does not follow that they assume that women are responsible for stopping sexual violence. The programs we describe below emphasize that the responsibility for violence rests with perpetrators and that the ultimate goal of violence prevention is to eliminate sexual violence perpetration. However, they also recognize that *no* perpetration-reduction program has yet been found to reduce the rates of sexual violence in colleges and universities. Moreover, even the most effective perpetrator prevention program, if implemented widely, would not eliminate every perpetrator. It is therefore critical to develop and implement effective programs for women as one piece of comprehensive sexual violence prevention on campuses.

Toward that end, in this chapter we provide details on the only three universal programs for college-aged women students (i.e., not focused on delivery to any particular subgroup of these women) that have demonstrated some success in reducing sexual violence. These are Gidycz's lab's successive iterations of the Ohio University Sexual Assault Risk Reduction (SARR) Program evaluated in experiments with randomization (e.g., Hanson & Gidycz, 1993; Orchowski, Gidycz, & Raffle, 2008), Senn's Enhanced Assess, Acknowledge, Act (EAAA) Sexual Assault Resistance Program evaluated in a registered, randomized controlled trial (Senn et al., 2015, 2017), and Hollander's (2004, 2014) quasi-experimental evaluation (with propensity

<sup>1</sup>A narrow interpretation of primary prevention excluded programs targeting women's responses to sexual assault they personally experience but did not exclude programs targeting men's and women's responses as empowered bystanders to other people's sexual assault experiences.

score matching) of the Self-Defense from the Inside Out (SDIO) program developed and taught as an academic course.

These three programs have an acknowledged foundation in feminist traditions (e.g., rape crisis center public education and feminist self-defense originating in 1970s) and/or psychological theory and research. The authors have described similar origins for their content or explicitly or implicitly built on each other's work. However, to date in the published social science literature, the format and content of these (and other) programs have been only briefly summarized. This means that unless we have been involved in a particular program's development or implementation, researchers and educators in the field have only a cursory knowledge of what the other programs involve. As a result, it is difficult for us to know how similar or dissimilar the programs are from each other or to begin to identify which formats, content, and processes relate to which types of effects or lack of effects. For example, the key questions for the field include: What content in these programs is *necessary* for positive psychological and sexual assault outcomes? In which contexts or with which types of facilitators or target populations are positive outcomes most likely? And if we cannot answer these questions, do we know which questions still require answers so that our programs become more effective or maintain their effectiveness through varied adaptations? Answering these questions is critical, not just so that we can choose the right programs for our particular institutional context but also to ensure that program adaptations during implementation do not eliminate the elements of the programs that may be most critical to their effectiveness. Our goal in this paper is to provide comparative details of these three programs and begin to assess how their elements are related to relevant outcomes.

The authors of this chapter are all senior researchers in this field with insider knowledge of the three programs. In the remainder of this chapter, we describe the process, format, and content of the programs and their associated outcomes from our published and unpublished data. We have provided unpublished data where they seemed helpful to understand changes in the content or length of a program and its success over time. We use an interpretative qualitative approach to analyze, compare, and contrast the programs and to draw tentative conclusions about the critical components of these types of sexual violence interventions designed for young women in university settings. We conclude by making recommendations for future practice and research.

## FACTORS INFLUENCING THE RESEARCH EVIDENCE

### Historical Influences

Gergen (1976) and others have discussed how our knowledge and our social science are both constructed by history and culture and simultaneously influence them. For interventions tied to difficult social problems like sexual violence, changes in cultural and historical context over the past three decades could be presumed to affect, at the very least, participant recruitment and responses and likely much more. These kinds of influences are virtually impossible to assess empirically, particularly retrospectively, but can be analyzed and theorized qualitatively. Where we see these types of influences at play, we bring them forward.

### Quality of Research Design

One of us is a clinical psychologist, one is a social psychologist, and one is a sociologist. Two of us were trained in the positivist or postpositivist tradition to view multisite, large-sample experimentation (randomized controlled trials) as the gold standard of research evidence for conclusions about programs' effects. One of us had training in both qualitative and quantitative methodology with a substantial critique of positivism, or strict adherence to the scientific method, generally using sophisticated quantitative methods. Critiques of psychologists' reliance on significance testing are more recently gaining ground (e.g., Gaasedelen, 2016; Schmidt, 1996; Schmidt & Oh, 2016). However, we were all trained during a historical time when statistical significance testing and the  $p < .05$  criterion ruled our conclusions and publication opportunities. We have therefore, to varying degrees, been guided by this training in our work. We have occasionally seen a study with a smaller sample lead to decreases in outcomes similar in size to a study with a larger sample and been frustrated by the loss of knowledge that the label of nonsignificance creates. As feminist scholars, we have also seen small sample pilot studies and qualitative data obtained in interviews, open-ended survey questions, and focus groups provide rich and different directions for our work and contribute to our interpretation of our quantitative findings. We embrace the "both/and" of mixed methods approaches within and across studies. We value the practical application of knowledge derived from a variety of sources to contribute to the solutions of important social issues such as sexual violence and to improve women's lives. So, while the majority of the studies we have conducted (alone or with colleagues) represent strong experimental designs by mainstream

standards of science, using random assignment to condition, large samples, and where possible (with external funding) evaluated on multiple sites, we also include our studies that do not meet all these standards. One of us does research on existing university- and community-based courses where random assignment is impossible, so propensity score matching is used to raise the quality of the conclusions that can be made from the quasi-experimental design. Two of us include early pilot studies with less satisfactory designs where they were the building blocks for later work and so can offer additional insight. For our purposes in this chapter, when there is a contradiction in the findings between studies, we emphasize the higher quality design and larger sample studies but otherwise benefit from knowledge generated by all the studies.

## **PROGRAM DESCRIPTIONS: COMPARISON OF KEY COMPONENTS**

The efforts to develop effective programs for women began in the 1970s and 1980s, before all of our work began (e.g., [Gray, Lesser, Quinn, & Brounds, 1990](#); [Parrot, 1991](#); [White & Nichols, 1981](#), cited in [Hanson & Gidycz, 1993](#); [Women Against Rape, 1980](#)). Gidycz's laboratory began to develop the SARR program in the early 1990s, and both Hollander's and Senn's research began in the early 2000s. The theory and evidence base available for sexual violence interventions has expanded over the past 30 years, and the design and adaptation of programs largely parallel these developments. One of the most important contributions to the field was [Rozee and Koss' \(2001\)](#) research synthesis, which provided a much-needed and useful framework for the field. It pulled together a decade of theory and research on rape and concluded that a model of rape education they termed "Assess, Acknowledge, Act (AAA)" would best fit the existing evidence on psychological barriers to resistance and effective strategies for stopping rape. Specifically, the authors argued that women could better confront potential perpetrators if they were taught to overcome barriers to resistance, identify early and quickly that a situation was risky, and then proceed through a hierarchy of responses that included both verbal and physical resistance strategies. The authors emphasized the need to move away from traditional psychoeducational programs to interventions that incorporated the teaching of resistance strategies. Because this is evolving and applied research, no two evaluations have been conducted using the same program without revising or updating it.

## SARR Program

Gidycz et al.'s (2015) SARR program has evolved over more than 20 years. In the early 1990s, Kimberly Hanson (Breitenbecher), working with Christine Gidycz, "incorporated [the latest] information about the prevalence of sexual assault, identified situational factors associated with sexual assault, and sexual assault prevention" to design a new program (Hanson & Gidycz, 1993, p. 1047). This program was also influenced by the comprehensive feminist The Ohio State University Rape Education and Prevention Program (Morrison & Green, 1990). A small pilot test was conducted and the program revised slightly based on students' feedback before the 1993 evaluation. The second iteration (90 minutes duration) of the program added content to address the hypothesized mediators of revictimization (Hanson Breitenbecher & Gidycz, 1998). Gidycz et al.'s (2001) revisions to the program made it longer (3 hours) and strengthened the theoretical basis of the content and process of the program to make it more personally salient to students. Later, the SARR program was lengthened again (to 7 hours), adding self-defense (Gidycz, Rich, Orchowski, King, & Miller, 2006) and more deliberately addressing the psychological barriers to resistance identified by Nurius and Norris (1996) and Rozee and Koss (2001) (Gidycz, Rich, et al., 2006; Gidycz et al., 2015; Orchowski et al., 2008).

The goals of the current program (Gidycz et al., 2015) center on helping women to identify risk cues, acknowledging that the situation is particularly risky for sexual assault, and then teaching them to take forceful and assertive action. It is based on feminist principles and incorporates the tenets of social learning theory, the health belief model, and the elaboration likelihood model. All versions of the SARR program have had a strong focus on acquaintance situations but also include some (limited) discussion of sexual assault by strangers. In session one, which is approximately 3 hours long, introductory information emphasizes that the program will not restrict women's freedom but rather will help them to *assess* situations for risk, *acknowledge* when they are risky, and *act* quickly and forcefully. The facilitators explicitly note at the outset that perpetrators are always responsible for sexually aggressive acts. At the same time, the facilitators highlight the importance of teaching women ways to decrease their risk, and in this introductory section, the facilitators also facilitate a brief discussion on how our society fosters violence toward women and how it can take various forms (i.e., verbal, physical, and/or sexual). Finally, the facilitators explicitly acknowledge that they know that there are survivors in the audience and emphasize that they hope that the program facilitates their recovery and reduces the chances that they will experience another assault.

Following the introductory information, background definitions of various forms of sexual assault are provided as well as local statistics. The facilitators provide recent data from their research studies on the frequency of sexual assault on the campus where the program is being facilitated. Information pertinent to the first year of college being a particularly high-risk period is also discussed. Risk factors for sexual assault and the recovery process are discussed in the context of a video where the survivors talk about their own experiences. More specifically, following the video, the participants are asked to discuss the characteristics of the man (e.g., drinks heavily, ignores your opinion, controls situation, gets jealous for no reason) and the situations (e.g., being in an isolated place, nonassertive behavior) that may have increased the chances of the women in the video of experiencing a sexual assault. Following the discussion of risk factors, the group leaders facilitate a discussion of the role of alcohol in sexual assaults as well as a discussion of common postassault reactions and campus resources for assault victims. The first session concludes with an interactive video entitled “Keep Your Options Open: Alternate Solutions for Stressful Social Situations” (Gidycz, 2000) where potentially risky situations are presented (e.g., getting pressured to go to an isolated place with someone who is not well known), followed by a discussion of the potential strategies for dealing with such situations. Following the discussion, several strategies are modeled on the video. The aim of this interactive video discussion is not to tell participants what to do but to help them to brainstorm strategies that might work for them if they encounter risky situations. In the context of the discussion of the video, barriers or obstacles to responding in their desired ways are also explored. The first session ends with a brief overview of active resistance strategies to prepare participants for the following session.

In the second session, which is approximately 2½ hours long, a feminist self-defense program is provided by Cheryl Cesta, a National Women’s Martial Arts Federation certified instructor with more than 30 years of experience. She covers five areas of defense, including awareness and body language skills, “trust your intuition,” verbal skills, immediate resistance, and physical techniques. More specifically, both assertive verbal responses and physical defense tactics are modeled by the instructor and then practiced by the participants. Each self-defense technique is practiced individually as well as in combination with other skills. The program includes activities to foster the development of assertive body language, as well as an emphasis on the importance of responding quickly and assertively after acknowledging a threatening dating situation. Lastly, a 90-minute booster session, typically

offered a few months after the first two sessions, includes a review of the program material as well as an opportunity for women to discuss their use of the self-defense strategies.

## EAAA Program

Senn's program development started in 2003 with the explicit intention of bringing the AAA model (Rozee & Koss, 2001) to life. Where activities or content fitting the theoretical model already existed, they were adapted for use. The program design drew on the elaboration likelihood model of persuasion and attitude change to enhance its impact for both central (i.e., direct, purposeful, thoughtful) and peripheral (i.e., indirect, incidental, casual) route processing. Sufficient time for application and practice was planned to maximize the chance of conversion from attitude change to actual behavior change (Eagly & Chaiken, 1993). Once the basic AAA version of the program was developed and refined using mixed methods, including focus groups, interviews, and a quasi-experiment (Senn, Gee, & Saunders, 2006), a Relationships and Sexuality unit was added to provide high-quality sex education and the opportunity to put women's own sexual and relationship desires and values at the center of the discussion (Fine & McClelland, 2006). This content was expected to provide an additional challenge to heteronormative sexual and romantic conventions which contribute to sexual violence (Gavey, 2005) and to speed up detection of sexual coercion by intimate partners. While there is recognition of sexual assault by strangers in Senn's Enhanced AAA program, the primary content and all practice focus entirely on acquaintance sexual assault situations (including perpetrators who are distant acquaintances, friends, classmates, relatives, neighbors, and ex- and current intimate partners).

In EAAA<sup>2</sup> (Senn, 2015), the *Assess* component (3 hours) focuses on improving assessment of risk of sexual assault in situations involving male acquaintances and developing problem-solving strategies to reduce risk. "Assess" is also related to the part of the process where the woman has communicated that she does not wish to engage in a sexual act, and the man ignores her wishes. In these (and later) units, women are educated to identify this situation as dangerous and to take into account aspects of the situation such as isolation, possible escape routes, etc. Considerable time is

<sup>2</sup>This description of the EAAA program was published previously in Senn et al. (2013). Specific citations for the evidence base and all activities not original to the EAAA are provided in the EAAA manuals.



spent providing women with empirically based information on environmental/situational cues (e.g., alcohol) and men's behavior danger/risk cues (e.g., persistence), connecting these to gender and dating stereotypes and giving women practice (with a video and written scenarios) identifying increased risk and coming up with nonrestrictive ways around it (i.e., ways to reduce the potential perpetrator's advantage while still enjoying the social situations).

The *Acknowledge* component (3 hours) assists women to explore ways to overcome the emotional barriers that can discourage effective resistance. In this unit, women's personal sexual rights are reinforced. Exercises facilitate the exploration of the sometimes competing goals in social situations such as the desire for romantic (or friend) relationships and the need for personal safety. The facilitators debunk the miscommunication hypothesis (i.e., the argument that women are not clear enough in their sexual refusals or do not mean "no" when they say "no"), as well as undermining myths and minimization related to sexual assaults where alcohol is involved. Activities provide practice for women to emotionally prepare for and respond to common verbal coercion strategies.

The *Act* component (3 hours) presents evidence on the effectiveness of various resistance strategies and offers a range of potential options for resistance depending on the elements of the situation, the perpetrator's actions, and the results of early strategies. Each woman is encouraged to create a "toolbox" of forceful verbal and physical strategies that she would be willing to use *against a man she knows* who is threatening her sexual integrity, convert fear into anger where possible, and to escalate her resistance if any early strategies she tries are ineffective. There is also discussion of the need to overcome the emotional barriers to forceful physical defense against male acquaintances when the threat demands it. Physical self-defense training is founded on Canada's oldest feminist self-defense organization, Wen-Do Women's Self Defence. It includes instruction in making a fist, yelling in a way that fuels self-defense efforts, assessing vulnerable parts of the assailant's body and using larger body parts against smaller body parts, as well as techniques for punching and kicking, breaking wrist or choke holds, and getting out from under someone who is using his or her body weight to restrain you. Some moves are practiced full force with facilitators holding strike pads; others are practiced in pairs.

The Relationships and Sexuality unit is based on content from the *Our Whole Lives* sexuality education curriculum (Goldfarb & Casparian, 2000; Kimball & Frediani, 2000) and was adapted to be inclusive of women with

all sexual identities (including asexual). The exercises are designed to assist participants to become more comfortable talking about sexuality; expand discussions of sexual practices beyond intercourse; facilitate identification of women's own sexual values and desires, sexual boundaries, and safety needs; provide practice in communicating this knowledge in an assertive and self-efficacious manner; and increase women's overall understanding of what healthy sexual relationships mean to them.

## SDIO Program

In contrast to Gidycz and Senn, who developed sexual violence intervention programs for their research programs based on psychological theory and research evidence, Hollander's research (Hollander, 2004, 2010, 2014, 2015) evaluates a preexisting women's self-defense curriculum that had been developed by feminist practitioners through more than 30 years of sustained practice. The SDIO curriculum exemplifies the empowerment self-defense model (described in more detail in Dr. Hollander's chapter within this volume) that provides a comprehensive toolbox of strategies (verbal, physical, emotional, and psychological) to prevent and resist all kinds of assaults against women, from sexual harassment to rape. The curriculum addresses interactions with a broad range of others, including acquaintances, friends, family members, intimate partners, and strangers, and teaches strategies relevant not only to dangerous situations but also to everyday interactions (e.g., nonthreatening interactions with a range of people including family members, friends, coworkers, or strangers). The evidence-based curriculum addresses the social roots and consequences of violence against women, such as gender inequality and the gender expectations that encourage women to prioritize others' desires over their own, and aims to empower women rather than restrict their lives. Interestingly, although the roots of this curriculum are very different from the SARR and EAAA programs, it teaches many of the same skills, such as early recognition of risky situations and behaviors and attention to psychological barriers to resistance. It also fits well with the theoretical models that guided the EAAA and SARR programs, including social learning theory, the elaboration likelihood model, and the AAA approach advocated by Rozee and Koss (2001). Although this particular version of the empowerment self-defense (ESD) approach is no longer being taught because the instructor has retired, courses like it (though of varying lengths and formats) are taught throughout the United States and internationally by instructors trained in ESD.

The curriculum evaluated by Hollander was provided in the context of a 10-week, 4-credit college class taught through the Women's and

Gender Studies Department at the University of Oregon. The instructor, Nadia Telsey, was one of the original founders of feminist self-defense in the United States and had decades of experience teaching this content. She was assisted by several undergraduate facilitators who had completed the class in prior terms. In addition to 30 hours of in-class instruction and practice (3 hours per week for 10 weeks), students also participated in 15 hours (1.5 hours per week) of small group discussions led by these facilitators. Because the class was part of the university curriculum, it involved weekly readings, papers, and projects. Students were graded for their completion of these requirements and their participation in the class sessions.

Approximately half of the in-class content focused on physical resistance strategies, such as palm and elbow strikes, kicks, wrist and choke hold releases, and ground defense, including strategies for escaping from situations where the defender is pinned by her assailant. Students were taught to focus on matching natural “weapons” on their own bodies (e.g., elbows, knees, legs, etc.) with targets on an assailant’s body (e.g., eyes, throat, nose, groin, or knees). There was also discussion of the importance of confident body language and the use of “weapons of opportunity.” Students practiced using the physical skills in pairs and full force against heavy striking pads held by the facilitators.

About one-quarter of the class time was devoted to verbal self-defense skills, including general principles such as the use of voice, boundary setting, and deescalation, as well as specific skills such as yelling, saying no, and assertiveness tools such as I-statements (statements that foreground the effects of another person’s behavior on the speaker, e.g., “I feel uncomfortable when you ask me personal questions because we don’t know each other yet.”) and three-part statements (statements that include a description of the other person’s troublesome behavior, a statement of its effects, and a directive, e.g., “You are asking me a lot of personal questions. It is making me uncomfortable. I want you to stop.”). Students had extensive opportunity to practice these skills through exercises and role plays that focused on a range of situations, from conflicts with a roommate, to sexual harassment from a stranger, to sexual situations with an intimate partner, to threatened sexual assault from an acquaintance.

Finally, approximately one-quarter of the class involved information and discussion about a range of topics related to assault, including the prevalence and range of violence against women, gender socialization and its contribution to sexual assault, perpetrator warning signs and risk factors, awareness and safety strategies, the use of intuition, and perpetrators’ target selection

strategies and ploys. Although the class focused on responses to a wide range of situations and people, it emphasized that sexual assaults are most likely to occur at the hands of acquaintances and intimates. Throughout, women were encouraged to value and prioritize their own needs and desires and to recognize that responsibility for assault lies with the perpetrators not the victims. Overall, the focus of the class was on developing a broad range of strategies to resist assault and to assert oneself in a range of situations.

### **A Comparison of Program Content and Process**

Overall, Gidycz et al.'s SARR program (versions since 2006), Senn's AAA and EAAA programs, and the SDIO program evaluated by Hollander have many theoretical and empirical commonalities. Each program:

- provides an introduction to sexual violence, including recent statistics;
- debunks rape myths, including victim-blaming explanations for rape;
- fully locates responsibility for sexual violence with the perpetrator;
- includes information on resources and aftercare for survivors;
- includes discussion of empirically supported risk factors;
- suggests women trust their own instincts and intuition;
- uses at least some AAA elements and addresses psychological obstacles to women's resistance;
- expands women's options/strategies for dealing with risk/danger without telling women what they *should* do;
- provides verbal and physical self-defense instruction based on techniques developed by women for women over the last 40 years with a focus on teaching forceful resistance strategies and leaving as the best/most effective options;
- encourages assertive communication; and
- spends half or more of the time focused on acquaintance sexual assault.

The programs differ as to:

- whether they present local prevalence statistics (SARR and EAAA);
- whether there is content on how alcohol increases risk (SARR and EAAA) and affects resistance (EAAA);
- the breadth of their attempts to purposefully undermine women's gender socialization (SARR does this with respect to dating norms and assertiveness, EAAA and SDIO more so including focusing on socialized niceness, prioritizing others' needs over one's own, and justified women's anger);

- whether content actively critiques the notion that sexual violence is related to men's misunderstandings of women's disinterest (EAAA explicitly counteracts this view);
- how much content is spent on the negative outcomes of sexual violence and survivors' experiences (SARR most);
- what proportion of the time is spent in physical self-defense and other "on your feet" activities (SDIO has the most);
- the explicit inclusion of content on a broad range of male violence against women and gender inequality beyond sexual violence (SDIO only); and
- the inclusion of explicit positive sexuality education including identifying and negotiating desired sexual activities (EAAA 3 hours, SDIO 1 activity).

The programs also have many similarities related to process. They all are run as a smaller group experience ( $SARR \leq 25$ ;  $EAAA \leq 20$ ;  $SDIO \leq 30$ ); they encourage active student participation in the units; and they all include discussion and application, including the use of scenarios or hypothetical situations based on women's experiences in some way. The programs vary in:

- the proportion of time spent in didactic presentation versus interactive activities (SARR most didactic and SDIO least so);
- whether they use videos or audio recordings as part of the content and practice (SARR and EAAA only);
- what proportion of the time is provided for practice (SDIO has the most);
- whether they were provided through a research experience (SARR and EAAA) or curricular education within the university (SDIO);
- length (current versions from 7 to 30+ hours of instruction and practice across an academic term);
- whether physical self-defense is taught by the same instructor as the rest of the program (EAAA and SDIO) or a different instructor (SARR); and
- the degree of training in physical self-defense of those instructors (extensive for SARR and SDIO, purposively more limited for EAAA).

Currently, the three programs also differ in their ability to be "scaled up" or implemented by others. EAAA has detailed facilitator manuals, a train-the-trainer model and available training for Campus Trainers, technical support provided through the nonprofit SARE Centre (<http://SARECentre.org>), and guidelines available on resources needed for implementation (see <http://www.blueprintsprograms.com>). SDIO has no such infrastructure but is based on the ESD model, currently taught throughout the United States and internationally; training and certification are provided by the National Women's

Martial Arts Federation (see [www.nwmaf.org](http://www.nwmaf.org)). The SARR manual can be obtained by contacting the first author of the program ([gidycz@ohio.edu](mailto:gidycz@ohio.edu)).

**TENTATIVE CONCLUSIONS ABOUT OUTCOMES/EFFECTS RELATED TO CONTENT**

Table 11.1 presents a summary of the common outcomes assessed. Table 11.2 presents a summary of the evaluation studies organized by program.

**Knowledge**

Evaluations of early sexual assault prevention programs focused on knowledge (and attitude) change outcomes. However, evidence suggests that neither knowledge nor attitude change necessarily leads to behavioral change (Schewe, 2007). We had a number of debates about whether to include “knowledge outcomes” in this analysis; we decided to include a brief review. We are unanimous in the view that measurement of sexual assault knowledge has limited utility. As a result, our recent studies have not included any basic measures of sexual assault knowledge.

Earlier studies of the SARR program where sexual assault knowledge was assessed found no consistent increases in knowledge as a function of program participation. We can find no explanation for these findings based on the content or process of the program, nor do these make sense given the other positive effects of these programs (see other outcomes later). However, given that the measures contained only a sample of potential knowledge that could be accrued, it seems likely that these measures did not reliably capture the knowledge conveyed and retained by participants, which may have been necessary for other positive changes.

**Table 11.1** Common outcomes measured across program evaluations

Outcomes	SARR	EAAA	SDIO
Rape myth beliefs		×	×
Self- and/or perpetrator blame	×	×	
Self-defense self-efficacy	×	×	×
General fear/fear of (stranger) rape		×	×
Assertive sexual communication	×	×	×
Use of protective strategies	×		
Use of self-defense tactics in hypothetical or real situations	×	×	×
Sexual assault	×	×	×

Note: × indicates outcome was measured in at least one study.

**Table 11.2** Summary of program evaluation studies by program

Program	Sessions/length	Evaluation studies
SARR	1 session/1.5 hours	<a href="#">Hanson and Gidycz (1993)</a>
	1 session/1.5 hours (for victimized women)	<a href="#">Hanson Breitenbecher and Gidycz (1998)</a>
	1 session/3 hours	<a href="#">Gidycz et al. (2001)</a>
	3 sessions/7 hours (3 hours + 2.5 hours self-defense + 1.5 hours booster at 3 months)	<a href="#">Gidycz, Rich, et al. (2006)</a>
	3 sessions/7 hours (3 hours + 2.5 hours self-defense + 1.5 hours booster at 2 months)	<a href="#">Orchowski et al. (2008)</a>
	3 sessions/7 hours (3 hours + 2.5 hours self-defense + 1.5 hours booster at 4 months)	<a href="#">Gidycz et al. (2015)</a>
EAAA	3 sessions/7.5 hours [AAA]	[mostly unpublished pilot research, conference presentations] <a href="#">Senn et al. (2008)</a>
	3 or 4 sessions/9 or 12 hours [AAA/EAAA]	<a href="#">Senn et al. (2011)</a>
	4 sessions/12 hours	<a href="#">Senn et al. (2015)</a> <a href="#">Senn et al. (2017)</a>
SDIO	10 sessions/30 hours (+ 15 hours small-group discussion)	<a href="#">Hollander (2004)</a>
	10 sessions/30 hours (+ 15 hours small-group discussion)	<a href="#">Hollander (2010)</a>
	10 sessions/30 hours (+ 15 hours small-group discussion)	<a href="#">Hollander (2014)</a>

The AAA and EAAA programs significantly increased women's knowledge of effective strategies for self-defense, including both forceful verbal and forceful physical strategies (and reported willingness to use them in hypothetical acquaintance rape situations) ([Senn et al., 2017](#); [Senn, Gee, & Thake, 2011](#)). These knowledge effects have not been explicitly tested for the other programs but can reasonably be presumed when women are more likely to say that they have used particular resistance strategies following training ([Gidycz et al., 2015](#); [Orchowski et al., 2008](#)).

It is likely that the combination of personal relevance and engaging and involving activities in all of these programs would enhance women's knowledge about sexual violence. However, the researchers do not have a good understanding of which knowledge is most critical to the more important outcomes such as self-efficacy and reducing the rates of sexual assault.

We do know that measuring general knowledge about sexual assault is likely not useful, because it is unrelated to sexual assault outcomes. The usefulness of knowledge measures is further tempered by the fact that increasingly participants come into programs already possessing considerable knowledge about the topics that are covered, with the notable exception of the most effective strategies for resistance. Taken together, it is not clear that assessments of knowledge are a particularly meaningful program outcome, aside from understanding if women were paying attention or can remember program-specific information.

## **Beliefs, Attitudes, and Emotions**

### ***Rape Myths***

Early sexual violence education for coeducational audiences commonly presented rape myths and facts and then measured belief in rape myths as a key outcome. Some of these programs did demonstrate reductions in rape myth acceptance when evaluated but only in the short term (Morrison et al., 2004). Rape myth acceptance is not related to risk of victimization for women (Koss, 1985), nor is there any evidence linking it to resistance strategies, so many researchers, including Gidycz, do not include measures of rape myth beliefs. There is considerable backlash in some places in the feminist community against interventions for women because of concerns that the focus on women alone may communicate that women are responsible for stopping rape (Cermele, 2004; Hollander, 2009, 2016b; McCaughey & Cermele, 2015). Senn reasoned that one of the only ways to counter the belief that programs for women were inherently woman blaming or would inadvertently increase woman blaming was to rule this out empirically. Thus, she included measures of general rape myth acceptance beliefs and victim-blaming explanations for rape. All versions of the AAA and EAAA program significantly reduced women's already relatively low (below the midpoint) rape myth beliefs and their belief in female responsibility for rape, and these effects last for EAAA for at least two full years (Senn et al., 2017; Senn et al., 2011; Senn, Saunders, & Gee, 2008).

The common content of SARR, EAAA, and SDIO, which debunks rape myths and focuses on perpetrators' full responsibility for their behavior, is so central to the recent programs that it can be described as being an underlying philosophy. There is good reason to think that this content, when paired with highly trained facilitators, can undermine rape myths in a deep and sustained way.



### ***Self-Blame and Perpetrator Blame***

Reducing rape myth beliefs could affect survivors' beliefs about their own experiences, which we know can be negatively affected by rape myths (Edwards, Turchik, Dardis, Reynolds, & Gidycz, 2011; Ullman, 1996; Ullman & Najdowski, 2010). This would be a positive outcome. However, some people (including some IRB committee members) have wondered whether there might be iatrogenic effects of resistance education. In other words, could teaching women about the most effective methods of resistance inadvertently suggest to them that if they are sexually assaulted after participating in such programs, they should or could have done something more and lead to them blaming themselves more?

The experience of empowerment self-defense instructors and advocates runs counter to this belief (Gidycz & Dardis, 2014; Hollander, 2004, 2016a; McCaughey & Cermele, 2015). Both Gidycz and Senn have directly measured the impact of the programs on participants who experience rape following participation and have shown important reductions in self-blame that lasted at least 3 months (Gidycz, Rich, et al., 2006), up to 7 months (Gidycz et al., 2015), and for the longer program (with no booster session) for at least 12 months (Senn, Hobden, & Eliasziw, 2016). The first two of these cited studies also demonstrated increases in (already objectively high) perpetrator blame at 3 months (but not longer). One study did not replicate either of these effects (Orchowski et al., 2008), but it had unusually high attrition at the follow-up periods, which may be responsible for reducing the power to detect the effect. Additionally, given that there were no differences in self-blame in the program group compared with the control group, at the very least, the program did not enhance feelings of blame in participants, which is important as this has been a common concern among those who do not support interventions focusing on women.

If carefully designed and facilitated with a clear feminist antivictim-blaming philosophy, then, these programs can and do reduce rape myths, victim blame, and self-blame for women who are victimized following the program. We cannot know yet whether there is any content common to the programs responsible for these effects. The constant reiteration by highly trained facilitators of total perpetrator responsibility through all content, videos, and exercises is likely key to the positive findings regarding self- and perpetrator-blame for these programs.

### ***Self-Defense Self-Efficacy***

Self-efficacy (confidence) effects are the most consistent outcome that has been assessed for self-defense programs (Brecklin, 2008). Researchers do

not measure self-defense self-efficacy when evaluating programs without a self-defense component, so Gidycz's studies prior to 2006 are not included here. In general, scores on self-efficacy rise for university women in our studies across the follow-up period whether or not they are assigned to receive the program. This may be an effect of maturation or of testing or both. In any case, the interventions attempt to have an impact that goes beyond this naturally occurring rise in confidence. Surprisingly, the first version of SARR to include self-defense did not show an increase in self-defense self-efficacy (Gidycz, Rich, et al., 2006) but both subsequent investigations have, with effects lasting at least 4–7 months (Gidycz et al., 2015; Orchowski et al., 2008). The AAA increased self-defense self-efficacy for 3 months for assaults by both strangers and acquaintances and for strangers to 6 months (Senn et al., 2011), while the EAAA showed strong self-defense self-efficacy (acquaintances and strangers combined) effects lasting a minimum of 6 months (Senn et al., 2011) and in a more recent study for at least 24 months (Senn et al., 2017). By both qualitative and quantitative measures, the SDIO program increases women's confidence in their ability to defend themselves against both strangers and acquaintances for at least 1 year (Hollander, 2004, 2014). We think it is a reasonable conclusion that a minimum of 2 (and preferably more) hours of physical self-defense is required to have a long-term impact on self-defense self-efficacy. Self-efficacy is a key to empowerment and an important component of attitude and behavior change (Bandura, 1977; Ozer & Bandura, 1990). When we look at the positive sexual victimization outcomes across studies (see section below), we observe that teaching self-defense is common to all (except the earliest) of these studies. We would therefore expect to find that future dismantling studies would identify self-defense instruction as a critical component.

### ***Fear/Fear of Stranger Rape***

Most women have been socialized since they were small to fear stranger rape (Day, 1994; Gordon & Riger, 1989; Riger & Gordon, 1981) and take various safety precautions that decrease their quality of life without necessarily providing protection (Gordon & Riger, 1989; Stanko, 1990). Therefore, any theoretically and empirically sound education program for women must not elevate these fears and preferably would reduce them (and associated limiting precautions). At the same time, a fear of stranger rape does not generalize to acquaintance situations, which are often accompanied by an optimism bias (i.e., that other women like me are at risk but I am not) (Gidycz, McNamara, & Edwards, 2006). Sexual violence education

programs should reduce optimism biases as they are obstacles to perceptions of the personal relevance of educational messages (Gidycz, McNamara, et al., 2006; Senn et al., 2017). If a woman “knows” that women are most likely to be sexually assaulted by acquaintances yet believes there is no chance that this could happen to her, then a program designed to educate her about detecting risks of and resistance to acquaintance sexual assault would have nothing to offer her. It is well established that effective persuasion occurs when educators can raise “fear” to a sufficient level for attention and assessment of relevance but then provide adequate solutions so that reasonable fears can be managed (Eagly & Chaiken, 1984). In this case, then, the theory would suggest that a woman would need to believe it is possible that she could be sexually assaulted by someone she knows, but this “fear” that acquaintance rape could happen should be mitigated by a curriculum showing her that she has the knowledge and skills to detect it early and fight back if necessary. All three programs aim to redirect fear by providing accurate information on the relative likelihood of stranger versus acquaintance assault. All attempt to counter the optimism biases, particularly regarding acquaintance assault. SDIO spends more time explicitly dealing with fear than the other two programs.

Fear of rape has been measured only in the EAAA and SDIO programs. It should be noted that the measure used by Senn (Senn & Dzinis, 1996) captures fear of stranger rape only, and only one brief section of the EAAA program (Preparatory Emotions: Dealing with Our Fear; 10–12 minutes) directly addresses these fears. Measurement of this construct was included in pilots to ensure that this type of fear was not increased; it was not included in the final study. The first version of AAA had no effect on fear of stranger rape immediately following the program but had a delayed impact; scores decreased 3 months later (Senn et al., 2006). This study was affected by large attrition at 3 months. The subsequent version of AAA and EAAA showed no differences between groups in fear of stranger rape at any follow-up (Senn et al., 2011); however, a decrease in fear of stranger rape scores occurred for women in both the control and experimental groups across the study between the baseline and 6 months.

Hollander’s 2004 article reported pretest/posttest findings on fear from a small pilot sample of 36 women. Although the sample size was small, the mixed-measures design offers insight into women’s fear following participation in the SDIO program. There were no changes in general fear between pretest and posttest, but there were significant decreases in fear in specific situations, such as being at home alone, walking through parking lots after dark, going to clubs or bars, or using public transportation. These situations

are primarily those associated with fear of stranger rape and so may be more strongly affected by an empowerment self-defense course where content addresses stranger assault situations as well as those involving acquaintances. Of the 36 women in this study, 35 (97%) said that they felt safer after taking the SDIO course. In follow-up analyses with the full sample ( $n = 117$ ), women's reported fear did not change between pretest and posttest but fell significantly between posttest and the 1-year follow-up (Hollander, 2015). Thus, decreases in general fear were seen only at follow-up; 1 year after taking the class, students' reports of general and specific fear were significantly lower.

Although this "sleeper effect" pattern, where no changes are evident at posttest but appear at a later follow-up, may seem surprising, it is well known to self-defense instructors. When students take a class focusing on sexual assault and resistance, they often learn new information about the reality of violence and spend a great deal of time during the class thinking about sexual assault. Because violence is so salient during the class, posttest measures may show no reduction in fear. In the months and years after completing the class, however, students spend less time thinking about violence and develop more confidence in their own abilities to cope with it, leading to the long-term decrease in fear seen in the follow-up data. This trajectory is present in both the early AAA and SDIO data. Despite differences in findings likely based on program content, programs including self-defense do not increase women's fear over the long run.

## Skills/Behaviors

### *Assertiveness*

At the time that the original SARR program was designed, new and popular feminist research suggested that there was common miscommunication about and misperception of women's sexual interests (Muehlenhard, 1988; Muehlenhard & Hallabaugh, 1988). Not surprisingly, then, content in the initial SARR programs (Hanson Breitenbecher & Gidycz, 1998; Hanson & Gidycz, 1993) included attention to women's "nonassertive" communication regarding consent in addition to situational risk (e.g., alcohol, isolation) and (in later iterations post-1998) men's behavior. Alternatives for women's actions, including more assertive communication, were discussed in specific situations. The facilitators were careful to remind young women that regardless of their degree of assertiveness, the perpetrators in these situations were always completely responsible for the sexual assault. Subsequent versions of the program (from Gidycz et al., 2001, on) dropped information on "nonassertive" communication regarding consent but included information

on nonassertive behavior as a situational risk factor. A discussion of nonassertive behavior was included to help women to pay attention when they felt uncomfortable in situations and to empower them to respond using active verbal and physical strategies. These tactics were modeled in the first session and practiced more fully in the self-defense component. A measure was designed by [Hanson and Gidycz \(1993, p. 1048\)](#) and refined in later studies to capture women's "perceptions of their own accuracy and clarity of communication regarding sexual intentions in a dating situation." Of the five studies evaluating versions of the SARR program with this measure included, one ([Orchowski et al., 2008](#)) showed the program increased women's assertive sexual communication, and one showed increased "relational self-assertiveness" ([Gidycz et al., 2015](#)), which was a similar construct.

The EAAA builds on recent feminist critiques and social psychological evidence that question the "miscommunication hypothesis" ([Beres, 2010](#); [Beres, Senn, & McCaw, 2009](#); [Frith & Kitzinger, 1997](#); [Kitzinger & Frith, 1999](#); [McCaw & Senn, 1998](#); [O'Byrne, Rapley, & Hansen, 2006](#)). Although there is an in-depth discussion of risk factors in the EAAA program, the focus is entirely on situational factors and men's behavior; women's assertiveness or lack thereof is not identified as a risk. The first unit uses a remake of a video originally developed by Hanson and Gidycz in one culminating activity of risk detection. Similar to the process used in SARR, the participants brainstorm the many things a woman in the situation might say or do at various stages in the interaction; these usually include suggestions that she use more (or earlier) assertive communication. That a woman "might" use such a strategy is reinforced as one option. Then in the second unit, content specifically undermines the idea that women are not already sufficiently clear verbally and nonverbally about their intentions and interests. Similar to SARR, the EAAA encourages clear assertive communication earlier in any coercive interaction but for the purpose of speeding up women's own recognition and acknowledgement of the coercion. The content in the two programs is thus both similar and different.

The first pilot study of AAA included a measure of sexual refusal and sexual initiation assertiveness to test whether there was an impact of the program, and there was none ([Senn et al., 2006](#)). In a subsequent revision, AAA again had no effects on these outcomes; however, inclusion of the emancipatory sexuality education unit (EAAA) with activities designed to provide practice communicating about activities wanted in sex (e.g., use of a condom or latex dam, particular sexual activities only) in otherwise consensual situations increased women's sexual activity initiation assertiveness

3 months later. The difference was not maintained at the 6-month follow-up; however, power to detect effects was reduced by the differential attrition in the EAAA program group (when the sexuality unit came first) compared with the AAA and control groups. All women in the study increased their assertiveness related to sexual refusals across the 6-month follow-up period, suggesting a maturation effect. This sexual assertiveness measure was not included in the final study.

The SDIO program focuses a great deal of attention on verbal and physical assertiveness. However, assertiveness (or lack thereof) is not framed as a cause of sexual assault, as would be suggested by the miscommunication hypothesis. Rather, women's assertiveness is discussed as a strategy for reducing the likelihood of being targeted for assault and for recognizing and interrupting assaults in their early stages before any physical violence has occurred. Verbal assertiveness skills are framed as a way to deter a potential assailant by communicating that one is unlikely to be compliant in the face of attempted intrusion. This information is provided in the context of SDIO's focus on women's right to be safe and to center their own needs and desires, countering the ideology that women should prioritize others (especially men) over themselves (Phillips, 2000). Assertive communication and behavior are suggested not as women's responsibility to prevent assault—the instructor clearly communicated that responsibility for assault lies only with the perpetrators—but as a strategy to increase women's power and equality. To this end, the SDIO curriculum focuses approximately one-third of the 30 program hours on expanding women's verbal and nonverbal capacity to set and maintain boundaries in a wide variety of social situations, including but not limited to explicitly sexual ones. Hollander did not use a measure of sexual communication assertiveness in her studies, but in the qualitative component of her first study (Hollander, 2004), a number of women specifically mentioned that they become more sexually assertive as a result of their participation in SDIO. They felt clearer about what they wanted and did not want to engage in sexually and more empowered to communicate those desires to their partners. Further, more than 80% reported increases in their perceived right to be assertive (in any context) and to prioritize their own needs and beliefs. Participants discussed changes in their assertiveness with a wide range of individuals in their lives, from strangers to intimates, in everyday situations and in situations of threat. As such it seems that this effect is the result of the combination of curriculum on verbal and nonverbal strategies for resistance and on women's right to have and express their psychological and physical boundaries.

As part of a goal to empower women and increase their freedom and sexual pleasure, we may well want to influence women's ability to ask for and to receive more of the sex they do desire in a consensual context. This goes beyond what can be accomplished by these programs alone but can be started with attention to sexual communication in these programs. Earlier and longer emancipatory sexuality education programming before and during university would likely be necessary for longer term impact. We should also be cautious about focusing too much of our attention on casual or longer term intimate partnerships in our sexual assault programming for women in university. In contrast to the realities for women in community samples (and postgraduation) where husbands, boyfriends, and expartners are the most common perpetrators (Martin, Taft, & Resick, 2007; Tjaden & Thoennes, 2000), perpetrators of sexual violence against women students are *not* most likely to be men with whom women have a current romantic or sexual interest but rather those more distant acquaintances with whom no sexual activity is desired (Fisher, Cullen, & Turner, 2000; Krebs et al., 2016). If our programs aim to have an impact that goes beyond intimate partnerships and beyond even a sexual assault context, a feminist framing of women's physical rights and boundaries, paired with in-depth coverage of a range of specific verbal skills and strategies for asserting/defending those boundaries in a wide variety of situations and across the relationship spectrum, may be particularly promising. We await more rigorous evaluation of this outcome.

### ***Use of Protective Tactics***

In early evaluations of versions of the SARR program (without self-defense), the Dating Behavior Survey (Hanson & Gidycz, 1993) was created to assess the program's impact on "risky" versus protective dating behaviors (e.g., stop going out with men who make sexist remarks). The shortest version of the program had a significant (but not seemingly clinically meaningful) impact on scores on this measure, but no changes were evident in either of the next two evaluations. The researchers began to use the Self-Protection Against Rape Scale (Moore & Waterman, 1999), and information on perpetrator risk factors (e.g., controlling, negative views of women) was added to the SARR program. There were no differences for program and control groups on this measure (Gidycz et al., 2001). When the program content was changed (beginning in 2006) to include a video activity that depicted risky situations that participants had the opportunity to discuss and model ways to address, as well as the self-defense component, consistent increases



in self-protective dating behaviors were found and maintained for the full follow-up periods in all studies (4, 6, or 7 months) (Gidycz et al., 2006; Gidycz et al., 2015; Orchowski et al., 2008). We tentatively conclude that programs that include a self-defense component as well as opportunity to practice a range of responses to risky situations lead to meaningful increases in protective relationship behaviors.

### ***Willingness/Intention to Use Particular Tactics in Hypothetical Situations***

All AAA and EAAA evaluations used coding of qualitative responses to open-ended questions about a hypothetical situation to assess the intention to use the most effective direct self-defense strategies, that is, forceful verbal and forceful physical defense, as well as to assess the number (frequency) of such strategies they generated within each category. Later studies also used a measure of willingness to use direct resistance using an established scale (Norris, Nurius, & Graham, 1999; Testa, VanZile-Tamsen, & Livingston, 2006). Both the AAA and EAAA programs increased women's willingness to use direct resistance when they were presented with specific options on a survey. In open-ended responses, both programs led to more women identifying strategies that would be effective (verbal or physical) as well as more unique tactics within each of these categories of strategies (e.g., within forceful verbal strategies—yell, swear, threaten). These findings differed depending on the version of the program and the rigor of the study. Early pilots of AAA showed effects on women's willingness to use effective strategies as well as the number of these strategies they generated; however, these changes were not always maintained for the full follow-up period (Senn et al., 2006; Senn, Gee, Saunders, & Thake, 2007). A sleeper effect was evident for forceful physical strategies (Senn et al., 2006). Comparisons of the EAAA to the basic AAA showed the enhancement led to mostly similar or better effects for the identification of forceful verbal and physical strategies (Senn et al., 2011). Both versions of the program led to higher numbers of strategies generated within each category, with the AAA program favored to produce physical strategies. However, differential attrition from the programs complicates interpretation of the follow-up periods for the EAAA program group. When tested in the multisite RCT (Senn et al., 2017), the EAAA led to increases in the identification of both forceful verbal and forceful physical tactics and frequencies, which were maintained for all 2 years with one 24-month exception (mention of forceful verbal resistance, 85% vs. 78%,  $p = .06$ ).



Across studies, these findings generally suggest that programming with a minimum of 2 hours of empowerment self-defense instruction, with a focus on strategies that have been found to be empirically associated with rape avoidance, can increase women's awareness of and projected willingness to use effective strategies if they are confronted by a man attempting to sexually assault them. However, it is also important for the evaluators to document that women who participate in such programs are able to utilize these strategies in real-life situations, as there is ample evidence to suggest that intentions and behaviors are often only weakly correlated (Murphy Austin, Dardis, Wilson, Gidycz, & Berkowitz, 2016). Gidycz and Hollander did not assess in their studies whether participants increased their intentions to utilize specific self-defense strategies or not. However, Gidycz and colleagues and Hollander asked about the participants' use of specific self-defense tactics in real situations, which are discussed in the next section.

### ***Real-Life Use of Particular Tactics***

In two of their studies, Gidycz and colleagues asked the participants about their use of specific resistance strategies following program participation. Orchowski et al. (2008) found that women who had completed the program were more likely than women in the control group to report that they increased attention to their intuition, avoided "telegraphing" emotions, and used assertive body language, with a trend suggesting that they were also more likely to use assertive verbal strategies. In a subsequent study, Gidycz et al. (2015) found that program participants reported at the 4-month follow-up that they were more likely to pay attention to their intuition, use yelling and running as a means to escape an attacker, and avoid "telegraphing" their emotions. At the 7-month follow-up, differences were noted in the behaviors evidenced at the 4-month follow-up, and there were also differences between groups on the use of physical self-defense strategies, their attention to body language, and the use of assertive verbal responses. The use of physical self-defense strategies at the 7-month follow-up and not at the 4-month follow-up may be related to the fact that more women with a history of victimization dropped out of the program group at this time compared with the control group women. However, it is also possible that the characteristics of the different assaults also contributed to such findings. Thus, although there were no differences in the rates of sexual victimization for the two groups in the Gidycz et al. (2015) study, the program group women still evidenced greater resistance, which is associated with better psychological outcomes (Ullman & Brecklin, 2003).

Senn et al. (2011) asked the participants whether they had avoided sexual coercion or sexual assault in a dating situation by their actions. Women who received the AAA program reported significantly more of these experiences than women in either the control or the EAAA group. Again, attrition in the EAAA group was likely a factor in the lack of significant findings for this group (given the reductions in sexual victimization in the later study). In general, women's responses suggested they had taken two broad types of actions: (1) early recognition of danger (e.g., a man's implicit or explicit assumptions that sex was going to happen) accompanied by a preemptive action they saw as reducing the chance that the man could proceed (e.g., being assertive about what was not going to happen, asking someone for a ride home) or (2) use of a resistance strategy in response to a man's attempted coercion (e.g., pushed him away and left the situation). Data on tactics used in real-life situations by women who participated in the large trial were gathered but have not yet been analyzed (Senn, 2015; Senn et al., 2017).

Hollander asked the participants at the 1-year follow-up if they had used the techniques and strategies they had learned in the class. Eighteen percent of the participants reported having used the physical techniques, and 96% said they had used verbal and assertiveness strategies. A handful of students reported having been in an assaultive situation; one participant reported successfully fighting off a stranger who attacked her in a parking lot, and another reported escaping from a boyfriend's wrist grab. Several others reported using a yell or a protective stance to interrupt a dangerous situation. The vast majority of the participants reported using nonviolent physical and verbal assertiveness techniques, either to prevent a dangerous situation from escalating or in their everyday lives. More than 70% reported using body language, eye contact, assertive voice, and intuition; about half reported using deescalation strategies, saying "no," recognizing perpetrator ploys, and active listening. Smaller numbers reported using the "broken record" technique or three-part statements in their interactions. More than 20% reported that they perceived that the material they had learned in the self-defense class had helped them stop a potential assault; 11% felt it had helped them lessen the severity of an actual assault; and 90% felt it had increased their safety.

Taken together, the results of these studies suggest that these programs have a positive effect on women's use of resistance strategies. The studies are similar in that the program content included a discussion of obstacles to resistance, communicated knowledge about the most effective self-defense strategies, and taught feminist verbal and physical self-defense for at least

2 hours. These components in combination appear to have a positive impact on women's use of resistance strategies with both strangers and acquaintances. We postulate that these effects are likely specific to programs like ours where the unique obstacles of defending oneself against acquaintance sexual assault are acknowledged, and strategies women would use against acquaintances are specifically taught. However, more research is needed to document clearly the effective program components.

## Sexual Assault Outcomes

All studies included measurement of sexual assault outcomes, as these are the ultimate test of whether our programs are effective. All high-quality literature reviews on prevention point out that without measuring these outcomes we know only part of the story—and it is not the most important part. All of us also chose to use the gold standard measure for sexual assault victimization, the Sexual Experiences Survey (SES) (Koss & Oros, 1982) or the revised SES—Short Form Victimization (SES-SFV) (Koss et al., 2007). This increases our ability to compare our studies and their effects.

Only the longer programs produced significant reductions in sexual assault/rape for the whole sample and for at least 1 year. These programs are effective for all women regardless of their sexual victimization history. The 12-hour EAAA program produced 46% and 63% reductions in completed and attempted rape, respectively, and these effects lasted for at least 1 year when tested in a large, multisite, randomized controlled trial (Senn et al., 2015). All other forms of sexual assault were also reduced significantly, except for coercion (24% reduction). Two years later, reductions were still present, though the reduction in completed rape (31%) was no longer statistically significant (Senn et al., 2017). Shorter versions of the same program were less effective; the 7.5-hour version of the 3-unit AAA program produced reductions at 3 months in completed rape (30%) and other sexual assaults (66%), though these did not reach levels of statistical significance (Senn et al., 2007). The expanded 9-hour version of AAA demonstrated reductions in completed rape only for at least 6 months in a smaller sample single-site experiment, when the decrease is evaluated by percentage reduction (66%) rather than by null hypothesis statistical testing (NHST) ( $p < .10$ ) (Senn et al., 2011).

Reductions in completed rape and attempted rape were also large 1 year later for the smaller, but adequately powered, evaluation of the 30+ hour SDIO program: There was a 67% decrease in attempted rape for program

participants, and no program participants reported a completed rape. Owing to the lack of random assignment in the SDIO program evaluation and the smaller  $n$  and resultant cell sizes, the percentage of women experiencing sexual victimization at follow-up could be somewhat misleading. However, when propensity matching was used to account for differences between the samples, the comparison control group was 1.58 times more likely to report sexual assault (all forms collapsed) than women who took the program, demonstrating a strong effect.

In contrast, significant reductions in sexual violence were rarely produced by shorter programs, and when they were, effects were present only for particular subgroups (e.g., never previously victimized women; [Hanson & Gidycz, 1993](#), or only for women who experienced moderate victimization within 2 months after enrolling in the study; [Gidycz et al., 2001](#)). The one exception is the [Orchowski et al. \(2008\)](#) investigation (using the longest version of the SARR program) where analyses found that the program group women were less likely to be victimized over the 2-month follow-up compared with the control group. However, these differences were not maintained at the 4-month follow-up assessment. None of the reductions in sexual violence for the shorter SARR program were replicated in subsequent evaluations even when assessing their sexual assault outcomes without NHST ([Gidycz, Rich, et al., 2006](#); [Gidycz et al., 2015](#); [Hanson Breitenbecher & Gidycz, 1998](#)). We wonder whether the anomaly of the [Hanson and Gidycz \(1993\)](#) study findings should be dismissed given that more than two decades have passed. While it is currently impossible to unravel the confound between length, interactive practice time, and program content, we tentatively suggest that to have a large and sustained impact, resistance, risk reduction, or self-defense programs must be longer than standard workshop length (e.g., half day). The call for the use of longer programs is supported by prevention science across a wide range of health and social issues ([Nation et al., 2003](#)).

The one exception to the sexual assault effects for the EAAA program was that it did not produce sufficiently large reductions in completed sexual coercion at any time period to reach the levels of significance. The consistency of this finding suggests that there is something different about this form of sexual violence that the content and practice provided are not sufficiently attending to or that something about resistance in this context requires more learning and practice time. In contrast, women who had completed the much longer SDIO program reported nearly 70% fewer experiences of sexual coercion at the 1-year follow-up than women in

the comparison group. Although the numbers were too small for robust statistical testing, this pattern suggests that either the additional assertiveness material taught in the SDIO program or the additional time for practice allowed these effects to generalize to situations of sexual coercion.

The programs that produced the significant decreases in sexual assault outcomes for the full sample of women for more than a few months always included verbal and physical self-defense instruction (i.e., the Act dimension of the AAA conceptualization). These programs (SDIO and EAAA) had an impact beyond rape, with decreases in attempted rape and other nonpenetrative sexual assaults as well. The even higher reductions in attempted rape suggest that the impact of these programs extends far beyond physical resistance during an assault to include earlier detection of risk, enhanced boundary setting, which may deter perpetrators, and faster decisions to leave a situation before it escalates. These changes may affect the initiation of assaults, not just their outcomes. What we cannot conclude at this point is what specifically must be removed from or added to a shorter program to push the effects beyond self-defense efficacy and the increases in willingness to engage in resistance. Briefer effective versions of the EAAA and SDIO may be possible, but we do not yet know whether this could be accomplished.

## **TENTATIVE CONCLUSIONS ABOUT THE OUTCOMES/EFFECTS RELATED TO PROCESS**

### **Participant Characteristics**

Both SARR and EAAA programs were designed specifically for women students in the age range where the risk of sexual assault is the highest (<25) (Tjaden & Thoennes, 2000). EAAA was explicitly designed for first-year students; SARR focused on the first 2 years at the university. We do not know whether their curricula are appropriate for older students with or without adaptation as yet. SDIO has never been focused on one age group, so there are no reasons to expect that its effects are restricted by age in any way. However, the majority of students in Hollander's evaluation were third- and fourth-year university students. Participants for all SARR and EAAA programs described above volunteered to participate in research on sexual assault or sexual assault prevention and were then assigned to a particular women's program or to a control group. Except for one dormitory study (Gidycz et al., 2015), SARR participants were entirely recruited through Psychology Participant Pools where students sign up for studies and receive bonus points/credit toward their psychology courses.

EAAA studies recruited participants from both Psychology Participant Pools and elsewhere on the campus (e.g., posters in residences and wash-rooms, events, courses, etc.). The majority came from participant pools (e.g., 70%; [Senn et al., 2015](#)), and eligibility was restricted to women under 25 years of age. In contrast, studies focused on SDIO attracted students who selected the course from among other academic for-credit courses and were subsequently recruited for research participation.

Subject selection biases are therefore likely to be different across the three programs. Further, women in the SDIO research were significantly older than in either of the other programs. It does not, at this point, appear that the content and process that lead to positive sexual assault outcomes are specific to one particular age group. However, there could be variations in effects or effect sizes if participants were to self-select for participation in SARR or EAAA programs, as they would do in standard implementation on campuses, rather than being randomly assigned. Research exploring the outcomes of the SARR and EAAA programs when recruitment for the research follows, rather than leads, recruitment for the workshops is needed. An implementation effectiveness trial for EAAA began in 2017.

## Facilitators

### *Women-Only*

All programs are designed for women students<sup>3</sup> and are facilitated by women. This women-only environment is a little discussed process element but may be an important element of the programs' successes as it models women's expertise, strength, and skill in a positive context ([Bandura, 1986](#)). Having women instructors model the physical skills challenges the stereotype that women are innately weak and vulnerable ([Hollander, 2001](#)). Social psychological theories of persuasion (e.g., [Eagly & Chaiken, 1984](#)) suggest that perceptions of personal relevance are important to individuals engaging in deep processing of messages and that perceptions of similarity to the communicator may offer a shortcut to these types of presumptions when shallower engagement is likely. Beyond these impacts, discussions of sexual assault that go beyond "facts" to include personal reflection on students' own obstacles to resistance may not be comfortable for women, particularly survivors, in group sessions led by men.

<sup>3</sup>Broadly defined to include transgender women.

### ***Career Stage and Expertise***

The SARR program was initially facilitated by a clinical psychology graduate student (and researcher) but developed over time to include a second undergraduate assistant, evolved by 2006 to involve a second graduate or undergraduate student to assist with the demonstrations/videos, and then in 2015 tried pairs of undergraduate student facilitators. The self-defense unit has always been taught by a certified self-defense instructor with the SARR facilitator(s) present in the room but not cofacilitating. All group facilitators have been relatively young, and the self-defense instructor is a woman with many years of experience who is well known throughout the state of Ohio for her feminist self-defense programming.

The EAAA program was facilitated by a pair of graduate students from a range of disciplines such as social psychology, social work, sociology, and law. In the early iterations one facilitator took the lead while the other assisted, but this was changed based on focus group feedback to actively share the script and activity time between the two facilitators. Training by Wen-Do Women's Self Defence, a long-standing Canadian feminist organization allowed the same facilitators to also teach the self-defense component of the program without being certified. Facilitators are, wherever possible, 30 years old or younger.

The SDIO program was taught by a certified empowerment self-defense instructor with many years of experience, hired as an adjunct professor. The discussion groups that accompanied the course were led by trained peers, in most cases current or recent undergraduates, who also served as assistants during the instruction and practice components of the course.

Our analysis of the characteristics of the facilitators suggests two conclusions. First, undergraduate peer instructors may be less effective for this type of sexual violence prevention. The [Gidycz et al. \(2015\)](#) study stands out in the SARR evaluations for its use of undergraduate students to facilitate the SARR curriculum and for the concurrent differential and higher drop out of young women who were survivors from the program arm of the study. This is the only study across programs demonstrating this specific type of attrition. In this case, the SARR program was delivered in intact dormitory settings to first-year students who were younger (almost all 18–19 years) than in the other SARR studies where between 73% and 92% of students were in that age group. We do not know what impact these differences may have had on the dynamic; however, the program's effects on attitudes and skills were still present. Therefore, the question of whether younger (undergraduate) facilitators are advisable may relate to

their comfort and skill at facilitating material related to sexual assault. Given the high proportion of young women who come into our programs and research with prior victimization experiences, this is an important consideration. Indeed, [Anderson and Whiston's \(2005\)](#) metaanalysis of sexual assault prevention programs suggested some caution in the use of similar age peer facilitators as professionals were more successful in effecting change than either graduate students or undergraduates. Our review suggests that highly trained graduate students or empowerment self-defense professionals are current best practice for women's programs.

Second, it may be important to have the same instructors teach all parts of the program. In the EAAA and SDIO studies, the same women who facilitated the content on sexual violence, risk factors, and psychological obstacles to resistance also demonstrated and taught the verbal and physical self-defense tactics, while in the SARR programs, the self-defense components were taught by a different instructor. Social learning theory would suggest that having the same instructors teach all parts of the programs may be a more powerful modeling of whole person empowerment and skill than a hybrid model that (inadvertently) may suggest that special skills are needed for effective self-defense.

## **AGENDA FOR FUTURE RESEARCH, EVALUATION, AND PROGRAM DEVELOPMENT**

### **Replication**

The findings we have summarized above highlight the common effects emerging from these types of interventions for women. [Hanson and Broom's \(2005\)](#) metaanalysis showed the positive outcomes of early studies on sexual victimization when combined despite individual nonsignificant study findings. However, it also has become clear over time that the effects demonstrated appear to vary considerably across different programs with similar philosophies and across variations of the same programs.

We should not really be surprised at these variations, given that intervention studies are particularly difficult to replicate ([Hoffmann et al., 2014](#)), especially for behavioral interventions that have a vast array of dimensions. [Rosenthal \(1990\)](#) suggests we guard against making inappropriate presumptions about failure to replicate given that there are more reasons we would fail to replicate than replicate even under conditions where an effect exists. He would, we think, describe our field at best as filled with "imprecise replications." [Schmidt and Oh \(2016\)](#) would likely point out how sampling errors



across our studies, particularly the many smaller ones, could have had a strong influence on our ability to produce/reproduce significant findings. Another obstacle to replication is that these interventions take many years to develop, pilot, and redesign. This makes them most likely to emerge from a single research laboratory or team, and yet this produces “correlated replicators” (Rosenthal, 1990) and makes experimenter bias in the evaluation studies difficult to avoid (Bornstein, 1990). One piece of good news is that one particular threat to our ability to interpret the findings of these studies, the “file drawer effect” (Rosenthal, 1990), when nonsignificant findings remain unpublished, is largely ruled out because of the consistent publication of both significant and nonsignificant findings from Gidycz’s laboratory. To move forward in our quantitative research, it may be best to follow Rosenthal’s (1990) advice to create a “replication battery” for our complex interventions and evaluations where multiple studies are done, one as close as possible to the original, another less so but using the same intervention, and perhaps yet another with the same intervention, same process, and different target populations.

## Measurement Issues

A number of measurement issues became apparent as we conducted this review. Measures that present a list of possible reactions or behaviors may suggest options to participants that they may not have otherwise generated, whereas open-ended requests for what a participant might or would do in a given situation are unlikely to do so. Dichotomous versus ordinal scales may change the impact of the question type on the participants’ responses. We know these things because they are common wisdom in measurement theory, but in this specific subject area, there may be unique influences on women respondents as well in relation to sexual assault content and context. We need future research using more participant-centered methods (e.g., cognitive interviewing strategies similar to those used by Krebs et al., 2016) to help us develop better measures and to understand how being faced by these types of measures affects our participants. It may also be helpful to provide space for participants to describe their reactions to the measures or any confusions or ambiguities they have with them. Furthermore, we need to know whether the impact of a specific measurement issue differs depending on whether the participant is assigned to a program or is in the control group. It is logical that being asked about whether you “telegraphed your emotions” in an upsetting situation you experienced in the last 3 months might be different depending on whether that concept has been explained in a supportive atmosphere previously or not.

To expand our understanding of the scope and limits of effects from programs for women, additional measures could be included in our future research. These include a measure of perception of body strength and capability (tested in Hollander's study) that goes beyond self-efficacy to anchor effects in women's experiences of their physical bodies. In the pilot evaluation of the SDIO program, for example, women reported significantly increased perceptions of their own physical competence and strength after taking the class (Hollander, 2004). There is likely also benefit in going beyond our quantitative measurement of attempted rape using the SES-SFV to include other more qualitative measures of women's own judgment of their "close calls" or near misses (Testa, VanZile-Tamsen, Livingston, & Koss, 2004). These were productive in capturing a more nuanced view of effects in Senn et al. (2011) and Hollander (2004, 2014). Open-ended qualitative measures may also help us to understand the processes by which these interventions produce the effects we have described earlier, as well as other effects on participants' lives not captured by existing quantitative measures.

### **What Program or Process Elements Lead to Decreases in Experiences of Sexual Assault?**

We provide a number of conjectures here that could be tested in future research. EAAA and SDIO both have effects on sexual assault outcomes for women with and without a victimization history; SARR has inconsistent findings. Partially as a response to the early failure of the 90-minute SARR program for survivors (Hanson & Gidycz, 1993), content was added to make it more relevant to young women who have already been victimized. This strategy was not successful (Hanson Breitenbecher & Gidycz, 1998); however, later iterations of the program kept survivors' realities in mind. As a result, SARR has the highest proportion of content focused on vivid survivors' stories, effects, and resources of the three programs. Although there are other differences between the programs that may influence this outcome (e.g., length of program, opportunity for practice, or participants' readiness to engage the material), it is possible that the creative strategy for presenting vivid vignettes based on women's real experiences inadvertently reinforces survivors' (and other women's) focus on their vulnerabilities rather than their strengths and undermines the empowerment messages necessary to put knowledge into action. Anecdotal feedback from participants suggests they find the video powerful and important; thus, our speculation remains an empirical question. The veracity of this hypothesis could be tested by

replacing the 30-minute video with another interactive way of presenting the content and discussion on risk factors prior to making any other changes to the program.

Length of the program appears to matter, but currently length and interactivity are confounded. It may be that shorter programs (e.g., the SARR program with the best sexual assault and other outcomes ([Gidycz et al., 2006](#); [Orchowski et al., 2008](#))) could be expanded to incorporate more time for practice or elaborated material with practice (e.g., more time to help women overcome their personal emotional obstacles to resistance) or to practice applying the knowledge and skills together in a session following the self-defense unit.

The EAAA decreased sexual coercion by approximately 24% across 1 year, but this was not sufficient to reach significance. It therefore stands out as the one type of sexual violence that is not being sufficiently impacted by the otherwise effective EAAA program. Senn ([Senn et al., 2015](#)) has hypothesized that resistance to sexual coercion within longer term sexual and/or romantic relationships may be qualitatively different, and women may encounter additional obstacles or need more time to process and practice new skills; research by [Testa and Dermen \(1999\)](#) supports this hypothesis. Although the evaluation was much smaller, participants in the SDIO program reported nearly 70% fewer incidents of sexual coercion at follow-up than the comparison group. It may be that aspects borrowed from the SDIO program related to nonverbal and verbal boundary setting, and learning skills for stating one's own needs (across situations) should be added to enhance the effects further, particularly for women in long-term relationships. If expansion of original programming hours would not allow this addition, a booster session near the end of the first year may be an ideal time developmentally to refresh memories and introduce additional material. As we argue at greater length below, more research is needed to assess which components of these programs are central to the various outcomes; such research would provide a solid foundation for making choices about what to include in core and booster sessions.

Given that the EAAA has only a relatively small proportion of physical self-defense content compared with SDIO, it is possible that this aspect of the SDIO curriculum could be abbreviated and effects maintained. SDIO has unique content related to women's voice, standing up for one's own needs and feelings, and setting and enforcing nonverbal and verbal boundaries, which would likely need to be preserved in light of the positive findings with sexual coercion highlighted earlier. ESD instructors currently teach briefer versions of the SDIO curriculum, as well as similar curricula,

that incorporate heavily padded mock attackers, though these have not yet been evaluated. A test of whether the sexual assault outcomes are present for shorter versions of SDIO and other ESD curricula could address the question of how much instruction in physical self-defense is necessary to produce significant reductions in sexual assault. SDIO still requires testing in an experiment with random assignment in the future.

RECOMMENDATIONS FOR UNIVERSITIES

We began this chapter by noting the increased focus on prevention of sexual violence on college campuses, at least partially due to federal mandates. Although this increased focus is good, it is our belief, based on our own experience and through talking with our colleagues in higher education, that there is a tendency for universities to “check the box” when it comes to addressing sexual assault on their campuses. In an effort to respond to mandates, there is a push to do something, but efforts are often made without sufficient attention to the scholarly literature. Increasingly, universities are offering brief programs (often online) in the hope of both addressing federal mandates and preventing sexual violence. However, all three of the writers of this chapter have been involved in higher education for decades and have seen no appreciable decreases in sexual violence during our tenure. Given how difficult it has been to produce decreases in sexual assault with in-person interventions, there is limited evidence that online programs will be successful. On the basis of our review of our programs, we have the following recommendations and considerations for university personnel. These are also summarized in [Table 11.3](#).

Although there is currently increased attention to bystander intervention programs on college campuses, we still see very limited implementation of women’s programs and, in some instances, explicit disregard or dismissal of

Table 11.3 Summary of recommendations for universities

1.	Include risk reduction/resistance/self-defense interventions for women as one component of any comprehensive prevention plan
2.	Use longer programs to maximize effectiveness
3.	Include a minimum of 2 hours of empowerment/feminist self-defense
4.	Facilitators should be highly trained graduate students or self-defense professionals where possible
5.	Use other effective sexual violence interventions to simultaneously attempt to reduce perpetration and change culture on campus

such programs. Some critics contend that programs for women may lead to self-blame. However, the research we have reviewed here clearly shows that such programming does *not* increase self-blame for women who are victimized after participating in such programs. On the contrary, in most instances it leads to lowered self-blame and heightened offender blame. Universities need not fear that empowerment-based programs will lead to self-blame. Some critics also contend that programs that focus on women implicitly place the burden of prevention on the targets and victims of violence. As Hollander has argued elsewhere (2016a), the fact that women are *capable* of preventing violence against themselves does not mean that it is their *responsibility* to do so, and self-defense, risk reduction, and resistance programs are only one component of the comprehensive prevention efforts necessary to reduce violence against women.

Relatedly, we believe that one of the major reasons that effective women's programs do not lead to self-blame is that they situate sexual violence in the context of a patriarchal society that encourages and facilitates the sexual exploitation of women by men. It is important in this context for women to have the opportunity to discuss the barriers and obstacles that they may face when they begin to act in a way that is different from their socialization. Such deliberate problem solving for addressing obstacles to behaving differently and utilizing self-defense skills when necessary is likely critical to programs' success as well.

It is likely that brief programs that are limited in scope will not lead to consistent reductions in sexual violence. As the results of our own programs illustrate, only longer programs are consistently associated with reductions in sexual violence. What we cannot yet say, however, is whether there is a critical length for programs, as it is hard to disentangle program length from other program components. The longer programs were also more interactive, which should theoretically lead to greater information processing. The next generation of research with women's programs must begin to identify the key components of the programs and assess if it is possible to shorten the more effective programs and still maintain the positive outcomes. In the meantime, we highly recommend against users "picking and choosing" from among elements of the effective programs to reduce the length of administration; these actions are likely to reduce or eliminate effectiveness.

On the basis of this review, we also believe that for women's programs to be most effective, they need to include an empowerment-based self-defense component. We can conclude from the literature that active verbal and physical resistance is more likely to lead to sexual assault avoidance than passive

strategies (e.g., see Christina Dardis and her colleagues' chapter in this volume). Although it is important to challenge the myth that women cannot defend themselves against men's violence, it is unclear whether providing this information without teaching the necessary skills to be able to defend oneself will have the same impact or produce significant reductions in sexual violence. As indicated in this review, knowledge change is unlikely to lead to behavioral change without time to practice and learn new behaviors.

Over the past 20 years, there seems to be a widespread practice of using same-age peers to facilitate prevention programs (e.g., bystander workshops, [Senn & Forrest, 2016](#)). Although there are some good reasons for selecting peers (e.g., models who are similar to the participants), our review suggests that it might be that more experienced individuals like highly trained graduate students or professionals (i.e., empowerment self-defense instructors) might be the most effective facilitators of programs for women that address more complex issues. Although we cannot say definitively whether same-age peers can be effective or not, we do recommend that institutions be cautious when using peers to facilitate such programs and not necessarily assume that this is "best practice."

Finally, even though these programs have led to reductions in sexual violence (particularly SDIO and EAAA), none of the studies have found that the intervention eliminated sexual violence in the program group, nor would we expect this to occur. It is unlikely that any individual program will eradicate the problem of sexual violence, on college campuses or elsewhere. Thus, as argued by others ([Banyard & Potter, 2017](#)), universities need to move away from implementing prevention programs to developing and executing comprehensive prevention plans. To address the problem of sexual violence, multipronged approaches are necessary. Because they are the only approach to sexual violence prevention that has shown significant decreases in sexual assault, empowerment-based women's programs must be a critical piece of such approaches ([Hollander, 2016a](#); [McCaughy & Cermele, 2015](#)). Including such programming as an essential component of universities' prevention plans is long overdue.

## CONCLUSIONS

After more than a decade of research on sexual assault resistance and self-defense programs for women, there is good evidence that such programs effectively reduce the rates of sexual victimization among women when they include evidence-based content, provide opportunity for practice, and

are longer than workshop length. Nearly all programs increase women's self-defense self-efficacy and knowledge of and willingness to use effective self-protective strategies, while not increasing—or even reducing—self-blame. Longer programs increase women's assertiveness in sexual situations and throughout their lives and reduce the fear of violence at follow-up.

Despite these advances in knowledge, there is still much that we do not yet know. We do not fully understand *how* the programs reviewed here produce these outcomes. We have speculated about some of the mechanisms above, but we need focused research to be sure. Other unanswered questions include these important issues: What is the minimum effective “dose” of these programs? What are the key elements that must be included? Are the outcomes of women's programs the same for all groups of women—women of different ages, racial and ethnic groups, sexual identities, social classes, and cultures? Are they equally effective for women who have survived different forms of violence? What are the long-term effects of these programs—do they continue to reduce women's risk of violence after 2 years, which is the maximum follow-up period studied to date? How do these programs affect other aspects of women's lives beyond the risk of violence, and how do they affect others in women's social environments? There remains much work to be done to fully understand these programs. As we analyzed the three programs we discuss in this paper, it quickly became clear to us that individual research studies on individual programs cannot answer the questions we need to ask to move the field forward. To fully answer these questions, we need large, comparative studies that assess multiple programs simultaneously.

What is clear now, however, is that these programs have substantial and positive effects, including on victimization. Among sexual violence prevention programs, *only* women's programs have been found to have these important effects on sexual assault. Therefore, we believe that although universities should implement comprehensive and multifaceted plans for preventing sexual violence, women's programs—with a self-defense component—must be a part of those plans.

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