



Rape Prevention and Risk Reduction: Review of the Research Literature for Practitioners

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For many professionals working in the field of sexual assault, one of the most pressing questions is: “What can we do to prevent it?” Practitioners have been designing and implementing rape prevention programs for decades, and researchers have been evaluating them for almost as long. The purpose of this article is to summarize the answers we have so far, because the good news is that we have learned some important lessons along the way regarding the prevention of adult and adolescent sexual assault. (The prevention of child sexual abuse will not be addressed in this article). For the purposes of this review, the terms “rape” and “sexual assault” will be used interchangeably.

However, it won’t take long for many readers to realize that there are far more questions than answers. The second purpose of this article is to provide concrete guidance for practitioners on how to design, implement, and evaluate rape prevention programs in the real world where we don’t have all the answers from research conducted so far.

In recent years, several resource materials have been published to provide guidance for researchers and practitioners on sexual violence prevention.

- For example, the Centers for Disease Control and Prevention published a document in 2004 entitled *Sexual Violence Prevention: Beginning the Dialogue*.
- Similarly, the National Sexual Violence Resource Center published *Sexual Violence and the Spectrum of Prevention: Towards a Community Solution* (Davis, Parks, & Cohen, 2006).

Both of these documents provide an overview for a comprehensive approach to prevention for

practitioners, including detailed examples of interventions at various levels of influence (e.g., individual, interpersonal, community, societal). The CDC report also offers guidance for agencies to determine which components may best meet their organizational mission, goals, and resources. These documents can help practitioners to carefully think through their prevention strategy and understand where a particular intervention might fit within the larger picture. They can also help practitioners to identify specific goals for interventions that are targeted at different levels of influence and time points when prevention activities can occur. Many people believe that this type of an integrated approach is the most likely to create and sustain changes in broader societal norms.

A Comprehensive Approach to Prevention: Identifying a Target Audience

These resource materials can also assist practitioners in identifying their target audience for prevention programs, by determining whether interventions are universal, selected, or indicated. As summarized by Lee, Guy, Perry, Sniffen, and Mixson (2007):

“A *universal* strategy is one that targets an entire population without regard to their exposure to sexual violence, a *selective* strategy targets those who have a heightened risk of becoming a victim or perpetrator of sexual violence, and an *indicated* strategy targets those who are victims or perpetrators” (p. 15-16, also citing CDC, 2004).

We will use these concepts later in this article as we provide an overview of existing programs, summa-

size what we know about their effectiveness, survey promising practices, and offer recommendations for improving their content and evaluation.

We thus begin our review of the research literature by focusing on prevention programs for men. It is certainly important to acknowledge the presence of male victims of sexual assault by both male and female perpetrators. However, because the vast majority of perpetrators of sexual violence are male, they clearly represent a key target for prevention efforts. In line with current practice, we will refer to programs that attempt to change the behavior of potential perpetrators (i.e., men) as “rape prevention programs” and programs focusing on victimization issues or rape avoidance as “risk reduction programs.” Such terminology highlights the fact that true prevention can only take place by changing the behavior of men as the primary perpetrators of sexual assault; programs designed for women attempt to deter sexual assault by providing information that can reduce an individual’s vulnerability.

Rape Prevention Programs for Men

Only a small percentage of rape education programs are designed specifically for men (8% in one comprehensive review by Morrison, Hardison, Mathew, & O’Neil, 2004). These programs often “focus on men taking responsibility for their own behavior and methods to confront sexually coercive behaviors in others” (Gidycz, Rich, & Marioni, 2002, p. 242). They often include a presentation and discussion, live or taped discussions of survivors, and behavioral interventions including interactive videos, guided imagery exercises, and/or theatrical vignettes (Gidycz et al., 2002).

Conclusions Regarding Impact

At this point, there is relatively little evaluation research conducted with men’s programs. Yet review of this limited body of work suggests three conclusions that we will critically examine.

(1) Some programs have demonstrated success in changing men’s beliefs and attitudes regarding rape (for reviews, see Bachar & Koss, 2001; Brecklin &

Forde, 2001; Breitenbecher, 2000; Flores & Hartlaub, 1998; Gidycz et al., 2002; Morrison et al., 2004). This issue is discussed in greater detail in a later section.

(2) Some programs have also reduced men’s self-reported likelihood to rape (for reviews, see Berkowitz, 2002, 2004; Breitenbecher, 2000; Gidycz et al., 2002). This is an important variable to study because it “is associated with rape supportive attitudes, sexual arousal in response to rape depictions, aggression toward female confederates in a laboratory situation, and a history of self-reported sexually aggressive behavior” (Breitenbecher, 2000, p. 28).

(3) There is evidence to suggest that some prevention programs might reduce men’s actual sexual aggression (Foshee et al., 2004; Foubert, Newberry, & Tatum, 2007; Linz, Fuson, & Donnerstein, 1990). Such findings are certainly promising, and this remains one of the most important research directions in this field. However, there are unique issues that must be considered when reviewing this body of research.

Challenges and Limitations

Evaluation research with rape prevention has been limited by the fact that very few studies measure men’s behavioral sexual aggression. Rather, typical practice is to use other outcome measures thought to be precursors of sexual violence, such as rape supportive attitudes, beliefs about gender stereotypes, knowledge of rape-related information, and behavioral intentions to commit sexual assault. There is a relative lack of research documenting that these characteristics are predictive of sexual aggression (Gidycz et al., 2002).

Almost all of the research in this field is conducted with college students or other convenience samples. This includes low-risk groups and/or groups with limited diversity (see Morrison et al., 2004). The reasons for this are clear: college students are comparatively easy to reach with educational interventions. Although barriers certainly exist in a college setting, they are often considerably more pronounced when attempting to reach younger students or individuals in community groups or

institutions. Other barriers may also be less significant for college students, such as the social stigma associated with the issue, knowledgeable personnel to implement the program/intervention, and no obligation to obtain parental consent as with younger students.

For all of these reasons, it is understandable that most prevention programs have been targeted toward college students. It must be stated in the clearest terms that virtually everything we know in the field of rape prevention is based on research that has been conducted with college students. The obvious concern is whether or not the research findings will generalize to other types of people. One of the most pressing needs in the field is thus to expand our efforts beyond schools and campuses into our wider communities and across age, gender, class, ability/disability, race/ethnicity, sexual orientation, etc. This need is difficult but not impossible to meet.

There are also conceptual questions about whether educational programs for college students constitute primary prevention at all, because they are not necessarily designed to prevent the first incident of sexual assault perpetration. Indeed, many people question whether sexual assault can be prevented among college students when the data suggest that first sexual experiences typically occur at a much younger age, that a notable percentage of these first experiences are forced, and that sexual and physical violence occur at alarming rates among middle school and secondary school students (Hickman, Jaycox, & Aronoff, 2004). Clearly, a notable percentage of college or university students already constitute a high risk group for whom the goal of educational programs is not primary prevention, but rather the prevention of repeated experiences of sexual assault victimization or perpetration. Unfortunately, we have largely failed to develop interventions specifically tailored for such high risk groups.

Rape prevention evaluation has been limited in its ability to detect meaningful change due to methodological factors and measurement issues (Gidycz et al., 2002; Morrison et al., 2004). The good news is that we have tools for accurate measurement; standardized measures exist to assess self-reported

sexual aggression and victimization (e.g., the revised Sexual Experiences Survey, Koss et al., 2007).

For any practitioner designing an intervention, we strongly recommend consulting with a social scientist who is well versed in the issues of sexual violence and trained in the methodologies for conducting evaluation research and analysis. Options include working with a professor at a local college or and/or partnering with another organization to leverage resources and possibly expanding the sites for study.

Some authors caution against the typical strategy of evaluating program impact only in terms of group scores because this may make it difficult to see what is going on for various sub-groups of program participants. In other words, the question may not be whether a program works or doesn't work in a generalized way, but rather for whom a particular program is effective—and whether there are participants for whom it is ineffective, counterproductive, or even harmful. To explore this question, evaluation studies must examine not only specific outcomes but also additional variables that might influence a program's impact on individuals. Such variables might include gender, age, racial/ethnic identification, and risk factors for sexual assault perpetration or victimization (Breitenbecher, 2000; see also Foubert and Newberry, 2006; Heppner, Neville, Smith, Kivlighan, & Gershuny, 1999; Schewe and O'Donohue, 1996). These risk factors could include previous trauma and victimization, rape myth acceptance, acceptance of interpersonal violence as a solution for problems, and other cultural beliefs and attitudes that appear to support male sexual violence against women (Heise, 1998). It could also include readiness to change, as measured by Banyard, Eckstein, and Moynihan (in press). Measurement should also be designed to detect negative effects, should they occur.

More detailed analysis is also needed to determine which program components are responsible for facilitating any positive changes that are seen (Morrison et al., 2004). The most important questions for evaluation research in this area may actually be: "Which components of the programs are effective for which groups of participants?" This issue is

discussed in greater detail in a later section of the article.

Risk Reduction Programs for Women

A number of educational interventions have been designed for women-only audiences. These programs typically provide information about risk-reduction techniques, the impact of rape on victims, and local resources (Gidycz et al., 2002). Other types of risk reduction programs have also been developed by practitioners, including educational programs designed to prevent drug-facilitated sexual assault by warning women to “watch their drink,” etc. In fact, most rape crisis centers engage in some type of prevention programming (Campbell, Baker, & Mazurek, 1998), though research has not generally evaluated the outcomes of such community programs.

Self-Defense Training

The development of self-defense training for women has been based on evidence that active resistance strategies can deter the completion of an attempted sexual assault (for reviews of this literature, see Rozee & Koss, 2001; Ullman, 2007). As described by Ullman (2007), these active resistance strategies include:

- Forceful physical resistance (e.g., biting, scratching, hitting, using a weapon, martial arts, or other physical self-defense techniques);
- Nonforceful physical resistance (e.g., fleeing, guarding one’s body with one’s arms, struggling); and
- Forceful verbal resistance (e.g., screaming, yelling, swearing).

On the other hand, nonforceful verbal resistance strategies (pleading, crying, reasoning) and not resisting (e.g., freezing) are not effective in reducing the likelihood of rape completion (Ullman, 2007). Based on this pattern of findings, some recent risk reduction programs for women have been designed to include information on resistance strategies, risky situations, and actual training in self-defense/resistance.

Evidence suggests that women’s participation in risk reduction programs—particularly those including self-defense training—decreases their likelihood of being sexually assaulted in the future (for reviews, see Hanson & Broom, 2005; Ullman, 2007; see also more recent research by Orchowski, Gidycz, & Raffle, 2008). To illustrate, meta-analysis was conducted to explore the outcomes of five risk reduction programs for college women, with data combined from all five studies to increase the sample size and statistical power. The authors concluded that: “Of the 918 women in the treatment groups, 20.3% reported being sexually victimized during follow-up compared to 24.5% among the 868 women in the control groups – a reduction of four sexual assaults for every 100 women attending the program” (Hanson & Broom, 2005, p. 366).

Research also documents other positive outcomes resulting from self-defense training. As reviewed by Brecklin (2007), these include:

- Increased assertiveness
- Improved self-esteem
- Decreased anxiety
- Increased sense of perceived control
- Decreased fear of sexual assault
- Enhanced self-efficacy
- Improved physical competence/skills in self-defense
- Decreased avoidance behaviors (restricting activities such as walking alone)
- Increased participatory behaviors (behaviors demonstrating freedom of action)

There is also some preliminary evidence to suggest that self-defense programs can decrease symptoms of Post Traumatic Stress Disorder (PTSD) and increase self-efficacy among those who have already been sexually assaulted (David, Simpson, & Cotton, 2006).

Limitations and Future Directions

Such findings suggest that self-defense training for women constitutes one of the most promising directions in the field of sexual assault prevention. Yet many of the same issues discussed in the context of men’s programs also apply here. For example,

few studies measure the outcome of subsequent sexual assault victimization; most rely instead on outcome measures tapping related beliefs, attitudes, intentions, and behaviors. Most research on women's programs is also conducted with college students or other convenience samples with limited diversity, and most post-testing is conducted immediately following program participation. Risk reduction programs for women (including self-defense training) are inherently limited by the fact that they do not necessarily constitute primary prevention. Nevertheless, their demonstrated efficacy suggests that they are an important part of an overall strategy for risk reduction.

Given the promise of risk reduction programs, Rozee and Koss (2001) have sought to provide guidance for future efforts by describing three stages of the resistance process in their *AAA Model* (*Assess, Acknowledge, and Act*). Within this model, the first stage of resistance is conceptualized as assessing the situation as potentially dangerous. The second is acknowledging that the situation is a potential rape, and the third is acting with active resistance strategies. Future research is needed to explore the question of whether such resistance strategies are equally effective for sexual assaults committed by a stranger, acquaintance, or intimate partner. However, it is reasonable to speculate that acknowledging a situation as dangerous is more difficult when the perpetrator is someone the victim knows or shares an intimate relationship with.

Yet the authors emphasize that active strategies do not guarantee successful resistance. In their words, they do not advocate an approach of teaching women to "just say no," because most survivors say "no" and resist but are raped anyway (Rozee & Koss, 2001, p. 300). Rather, they suggest that programs seek to educate women on the early warning signs that are seen among many sexually aggressive men, as summarized in Rozee and Koss (2001): any behaviors indicating sexual entitlement, power and control, hostility and anger, and acceptance of interpersonal violence. Other risk markers among men can include impairment from alcohol or drug use, hypermasculinity and rigid gender roles,

and male peer groups that glorify sexual conquest and even sexual violence (Heise, 1998).

Research suggests that "women with assault histories are between one and a half to two times more likely to be sexually assaulted than are women without assault histories" (Gidycz et al., 2002, p. 246). Women who have experienced past sexual assault victimization thus merit special consideration in the design of resistance training. This is true both because women with assault histories may experience a risk reduction program differently, and also because the impact of the program may be different.

For example, one study documented program impact only for those women who had not previously been raped (Hanson & Gidycz, 1993). However, this finding was not replicated in two other studies, which found no effect of program participation on women's subsequent sexual assault victimization, regardless of whether or not they had been sexually assaulted in the past (Breitenbecher & Gidycz, 1998; Breitenbecher & Scarce, 1999). Some evidence suggests that prior victims are more likely than other women to use passive resistance strategies and less likely to use active resistance strategies during a rape attempt (Norris, Nurius, & Mieff, 1996). Thus, women who have been raped in the past may require training that specifically addresses this issue and provides opportunities for them to plan and practice more active resistance strategies. This is a critical consideration that is often overlooked in the design and evaluation of programs.

In addition, many women who sign up for a self-defense course have been sexually assaulted in the past (30% in one study; see Follansbee, 1982). Some researchers have suggested that the line between treatment and prevention efforts may become blurred in the future as both develop over time (Gidycz et al., 2002).

To better evaluate risk reduction, future studies could include behavioral tests that measure a participant's ability to successfully implement specific resistance techniques (e.g., skills testing). Such behavioral observation would add to the existing knowledge of program impact which is exclusively

demonstrated using various self-report measures. Beyond this rather obvious benefit, the information gained from behavioral testing also has the potential to provide more concrete guidance for the continuous improvement of resistance training programs.

Educational Programs: Single- and Mixed-Gender Formats

While we have sought to differentiate prevention programs for men from risk reduction programs for women, most rape education programs are actually designed for mixed-gender audiences (an estimated 64% of programs, based on the review conducted by Morrison et al., 2004). These programs include some combination of the following elements: (a) defining rape and sexual assault, (b) providing statistics on incidence and prevalence of sexual assault, (c) challenging sex-role stereotypes and prevailing rape myths, (d) discussing the effects of rape on victims, (e) explaining societal pressures and causes of rape, (f) discussing common attitudes and characteristics of victims and perpetrators, (g) promoting victim empathy, (h) teaching risk recognition, (i) identifying consent vs. coercion, (j) teaching safe dating behaviors, and (k) providing information about victim resources (Gidycz et al., 2002, p. 238). Most programs involve a lecture component, but often incorporate other methods as well, including videos, interactive drama, vignettes, and presentations by rape survivors (Gidycz et al., 2002).

Conclusions Regarding Impact

Such mixed-gender programs can be effective in changing rape-supportive beliefs and/or attitudes over the short-term (several months to a year), but they have generally not been successful in changing beliefs and attitudes over the long-term (for reviews, see Bachar & Koss, 2001; Brecklin & Forde, 2001; Breitenbecher, 2000; Gidycz et al., 2002; Morrison et al., 2004). The research also documents other positive effects of these educational programs (for reviews, see Anderson & Whiston, 2005; Breitenbecher, 2000). These include positive changes in rape-related knowledge, which can last

for a period of time. However, changes are not generally seen for the variables of rape empathy or rape awareness behaviors—self-reported or observed behaviors that may reflect heightened awareness of rape, such as differences in dating behaviors or willingness to volunteer for rape prevention efforts (Anderson & Whiston, 2005); although there are exceptions. As with other programs, the impact of mixed-gender programs on actual sexual assault perpetration or victimization is not typically evaluated.

When reviewing the efficacy of educational programs, it is important to note that the research in this area has actually been quite mixed and most changes are seen immediately following program participation. Clearly, this evaluation strategy of immediate post-testing exerts powerful demands on participants to provide the “right” answers to outcome measures. This problem is exacerbated when a pre-test is used, because it trains participants in exactly how to provide the right answers. In fact, several studies have documented positive effects that are apparently due to pre-test assessment (i.e., sensitization effects), when scores of pre-tested participants are compared with those who were not exposed to a pre-test (for a review, see Breitenbecher, 2000).

To address this issue, a number of studies have taken steps to disguise the evaluation measures, such as by contacting participants later with a request or task that is ostensibly unrelated (see Breitenbecher, 2000 for a review). Examples include participating in a second research study that involves making rape-related judgments or calling participants to ask if they would be willing to volunteer time for a women’s safety or rape prevention project. However, these studies have failed to provide consistent evidence of effectiveness.

Suggestions for Evaluation Research

Therefore, it is best not to use a pretest-posttest design with only a single group of participants. Without a control group of individuals who did not participate in the program, the findings from this type of research cannot be interpreted (Cook &

Campbell, 1979). It is also best to avoid conducting any evaluation immediately following participation, because this does not provide a realistic indicator of program impact. While many people use this research design because it is comparatively cheap and easy, it is far better to allocate whatever resources exist toward a meaningful evaluation design, even if it must be modest in its scope.

To illustrate, randomly assigning participants to a program versus control condition eliminates the need for pretesting because the random assignment theoretically balances out various characteristics of participants in the two groups. Of course, this approach works better with a larger sample size, because any pre-existing difference between the two groups will take on greater significance if there are only a few individuals involved. Therefore, every effort should be made to increase the sample size whenever possible. Random assignment is also frequently challenging in the real world, because programs tend to be administered using intact groups (e.g., classes, sports teams, fraternities, sororities, dorm floors) rather than individuals who can be randomly assigned to one condition or the other. However, some researchers have simply assigned participants randomly to a condition within these intact groups. Another option is matching groups that receive the program with comparable groups that do not.

If pretesting is going to be used, it is critical that a control group of individuals not receiving the program be included in the study so their scores at both the pretest and posttest administration can be compared with those who participated in the program. It can also be challenging to create a control group of individuals who do not participate in the experimental program. However, this can often be handled by scheduling the administration of outcome measures before the control group actually participates in the program. Individuals in the control group will then get to participate in the program, they will just have to wait until after the outcome assessment.

Another possibility is to use different materials for the pretest versus posttest. Yet another suggestion is to pretest a sub-sample of the program and control groups and compare them with posttest

scores from a different sub-sample of the two groups.

While these approaches may seem complicated, they are not that difficult to implement and they can avoid the serious limitations of an overly simplistic design. Every effort should be made to schedule the post-test assessment so it does not occur immediately following the program. Given the rebound effects that have been seen with outcomes of rape education programs, longer term follow-up is essential. Specific guidance for conducting evaluation research in real world settings is provided in the classic text on *Quasi-Experimentation* written by Cook and Campbell (1979).

On the basis of this review, we hope it is clear that prevention programs for men, risk reduction programs for women, and educational programs for both genders can yield a wide variety of positive outcomes. Experts are currently considering expanding the range of outcome measures that are assessed to better represent important short- and intermediate-term goals for sexual assault education programs. Examples include:

- Increased knowledge of sexual assault dynamics and community resources;
- Increased discomfort experienced in response to victim-blaming statements;
- Increased empathy and improved response to disclosures by victims;
- Increased likelihood of intervening when rape-supportive attitudes are displayed or when vulnerability markers for victimization are observed;
- Increased ability to execute resistance strategies and self-defense techniques;
- Decreased self-report of actual perpetration behaviors, in addition to intentions;
- Decreased experiences of sexual assault victimization;
- Improved psychological well-being, including self-efficacy; and
- Improved recovery and healing from the trauma of sexual assault victimization.

By expanding the tools we have available to examine a range of outcomes, we may find benefits of prevention programs that current evaluation measures have not detected. However, the selection of

outcome measures must always be guided by the stated goals for the program. For example, if the program does not teach resistance strategies, there is little point to measuring the ability to execute them.

Experts are also pushing to expand our assessment of program outcomes beyond such individual-level variables to assess indicators at the levels of relationship, community, and society. Future studies with rape prevention programs could thus assess community-level variables such as the number of sexual assaults reported to authorities or the number of victims accessing counseling services or other resources. Yet such research must take into account the very low rates of reporting and help-seeking among sexual assault victims. This strategy thus presents a likely outcome for which prevention educators must be prepared: programming might actually make survivors more likely to come forward as the quality of the social safety net improves and community norms become more supportive for disclosures. This would likely result in a community seeing an overall increase in rates of reporting and help-seeking following educational efforts.

Bystander Education Programs

In recent years, one of the more promising directions in rape prevention is to focus on men and women as bystanders to change social norms in a peer culture that supports abusive behavior. A primary component of bystander education involves enhancing the responsibility of both men and women to intervene proactively in order to deter a potential sexual assault from being committed. One particular advantage of this approach is that it can be effectively implemented with mixed-sex audiences including both men and women.

When taking a bystander approach to prevention, audience members are addressed not as potential perpetrators or victims of sexual assault, but as third parties who have an important role to play. This approach may teach participants how to intervene *reactively* after a sexual assault, by supporting a friend or loved one who discloses victimization. Alternatively, programs can instruct participants how to intervene *proactively* by challenging friends who express sexist attitudes or

provide guidance on ways to assist friends or others in risky situations (e.g., when a male friend is bragging about his sexual conquests in the locker room).

Most bystander programs address the full spectrum of potential intervention (before, during, and after an assault). These include the Mentors in Violence Prevention (MVP) Program (Katz, 2007; O'Brien, 2001) and the Bringing in the Bystander program developed by Banyard, Moynihan, and Plante (2007). Others are more specifically focused on reactive bystander training of supportive allies after an assault, such as The Men's Program (Foubert, 2000).

The hope is that these approaches overcome the natural tendency toward defensiveness, thereby increasing potential to effect positive changes. Proactive bystander education programs typically include discussions of very specific behavior, as well as general information about sexual assault, so bystanders are more aware of risky situations and can recognize problematic behavior. For example, program participants may be informed that risky situations frequently involve isolation and the use of drugs or alcohol. Participants may also be taught to identify the early warning signs that have been mentioned previously. Bystander intervention programs also frequently include role modeling exercises and opportunities to practice building bystander skills and efficacy; this type of strategy is recommended for adult learners.

Although promising, there is a limited amount of research demonstrating the efficacy of programs for both reactive and proactive bystander intervention. The few studies that have been conducted to date are encouraging (e.g., Banyard et al., 2007; Foubert & Perry, 2007; Schewe, 2006). For example, Banyard and colleagues evaluated their Bringing in the Bystander program and found that participants demonstrated significant positive changes on a range of outcomes, including sexual assault knowledge, rape myth acceptance, efficacy related to being an active bystander, and actual bystander behaviors. All changes persisted at the 2-month follow-up and many were still seen at a 4- and even 12-month follow-up (Banyard et al., 2007).

Media Facilitated Education

In the past, many people working in the sexual assault field have believed that the most significant impact of the media is its potential to raise awareness. Focusing media messages on raising awareness leaves behavior change to be effected by more interactive, in-person programs. Yet there are highly successful models in the public health literature for media campaigns that have achieved meaningful change in community norms, awareness, and even behavior (e.g., seatbelt use, smoking, drunk driving). Such programs can therefore provide a model for the field of rape prevention.

There are a variety of media facilitated programs for rape prevention (e.g., the MyStrength campaign, Red Flag Campaign, White Ribbon Campaign, Coaching Boys Into Men Campaign). However, these interventions have not generally been evaluated. This is partly due to the fact that evaluation methods for media interventions are complex and difficult to implement (for exceptions, please see Potter, Stapleton, Moynihan, & Banyard, in press; Potter, Stapleton, & Moynihan, 2008). It is therefore recommended that any such effort be undertaken in consultation with experts in fields such as social science, marketing, advertising, public health, public relations, and media communications. Although not always possible for individual practitioners, evaluation may be accomplished through social and organizational networking.

For More Information: For more information on the media campaigns mentioned here, please see the following websites:

MyStrength Campaign: <http://www.mystrength.org/>

Red Flag Campaign: <http://www.theredflag-campaign.org/>

White Ribbon Campaign: <http://www.whiteribbon.ca/>

Coaching Boys Into Men: <http://www.coaches-corner.org/>

Bringing in the Bystander: <http://www.know-your-power.org/>

Some programs incorporate a media campaign into a larger prevention strategy which includes other types of intervention; this approach offers significant potential for maximizing positive impact. One example is the Bringing in the Bystander program, which includes both educational workshops and a variety of media outreach efforts. There is some preliminary research suggesting the effectiveness of this program on improving attitudes by using posters that depict positive bystander behaviors in relationship to dating violence and especially sexual violence (for information on the pilot study of this poster campaign, see: <http://www.unh.edu/preventioninnovations/>). A DVD series is also available that uses a reality-TV format with college students from Greek organizations (fraternities and sororities) who are brought together to have unscripted discussions about bystander behavior. A second video of role-playing interventions is also available in DVD format (see www.beck-company.com).

In the related field of domestic violence prevention, there is at least one example of a comprehensive public education campaign that has been evaluated to determine its impact on community members. The campaign included television advertisements that were developed by the Family Violence Prevention Fund (FVPF) in collaboration with the Advertising Council. Surveys conducted by telephone with community members over a two-year time period revealed an improvement in attitudes toward domestic violence and awareness of local resources (Klein Campbell, Soler, & Chez, 1997; cited in Wolfe & Jaffe, 2003). A similar example in the field of sexual assault is the Dangerous Promises campaign. Woodruff (1996) describes this media advocacy campaign designed to reach community members with a message against sexist images in alcohol advertising and promotions.

The advertising industry has done a profound job of demonstrating how to effectively adjust beliefs and attitudes and translate these into actual behaviors. Based in large part on persuasion theory, research in this area has documented many specific, well-tested, and empirically supported practices for creating behavior change. To illustrate, a considerable body of research documents the fact that

persuasive communications (such as advertising messages or rape prevention messages) are more likely to influence beliefs, attitudes, and ultimately behavior, if they:

- Grab and hold the attention of audience members;
- Overcome the clutter of other media messages, particularly in related areas;
- Highlight the personal relevance of the issue for the target audience;
- Provide information in clear terms that can be readily understood;
- Increase the likelihood that participants will remember the message; and
- Emphasize arguments that are found to be strongest during pilot testing (see, for example, Eagly & Chaiken, 1993).

Future Directions

As we look toward the future of media facilitated education, we can probably expect that the explosive growth in communication technologies seen during recent years will continue. As a result, increased creativity may be required to effectively reach students and community members with messages of rape prevention.

Clearly, a comprehensive media campaign can no longer be seen as including only public service messages on the radio and television. New venues and formats must be explored such as interactive websites, social networking sites, user built sites such as Wikipedia and Second Life, and other forms of computer-based learning. This will require meaningful collaboration with students, computer experts, and a broader range of citizens and other partners. As a promising example, the United States Air Force is already in the process of implementing system-wide an interactive computer-based learning program for rape prevention that incorporates key elements of the Mentors in Violence Prevention (MVP) bystander-based approach (Katz, personal communication; see also <http://www.jacksonkatz.com/aboutmvp.html>).

One innovative program has utilized media to advertise an interactive performance hosted in a community venue. The program is known as Sex Signals, and it is typically hosted by colleges, univer-

sities, and military bases. Some performances have also been hosted in the community, and the level of attendance suggests that audiences can be drawn to participate in such a program if it is designed and marketed effectively. Based on the program's own description, Sex Signals "blends a unique combination of improvisational comedy, education, and audience interaction to provide a provocative look at dating, sex, and the issues of consent." It consists of a 75 minute, 2-person play. (For more information, see: <http://www.catharsisproductions.com/>.)

Media literacy is an essential component of violence prevention so that young people can critically evaluate the "gender ideology that is transmitted to young people through media, and plays such a powerful role in their understanding of what it means to be a man or a woman" (Katz, 2006, p. 252). As Katz (2006) so poignantly asks:

"How much can things change if successive generations of men are taught that part of being a man means dominating and controlling women? And how can we change that sexist and oppressive definition of masculinity unless we address the 24-7 media culture that reinforces it?" (p.252).

Media facilitated education may be one of the most promising directions for reaching populations other than college students. This is particularly true as the definition of media expands and the strategies and their effectiveness improve at a rapid pace. Many prevention programs have already adapted videos developed by the Media Education Project that examine relationships, gender roles, violence, sexual behavior, and depictions of men and women in popular culture.

Social Marketing Strategies

By drawing upon marketing research and psychological theories of behavior change, many people in the field are also developing social marketing strategies to achieve the goals of sexual violence prevention (Lee et al., 2007). As these authors describe, key components of such a strategy include: orienting the campaign toward a specific target audience, conducting research to formulate and pre-test effective messages, and developing

strategies to overcome barriers to adopting the desired behaviors (Lee et al., 2007, citing Lefebvre & Flora, 1988). This type of strategy was used to develop the MyStrength Campaign currently underway in California. It clearly requires collaborative effort with the types of experts we have already described (e.g., advertising, media). (A description of the MyStrength campaign and pictures of the media materials that have been used appear in the review by Lee et al., 2007. More information on the campaign is also available at <http://www.mystrength.org/>.)

As described in the popular book *The Tipping Point* by Malcolm Gladwell (2002), social diffusion theory suggests that the attitudes and behaviors of a given community can be altered most efficiently by reaching a small percentage of the most socially influential members. Change strategies can therefore be designed to identify and influence this small group of popular opinion leaders because the rest of the community will follow suit. This strategy is particularly critical in those communities where opinion leaders have historically perpetuated social norms condoning violence against women.

Social marketing programs have also been informed by the social norms approach, which is based on the assumption that men often have misperceptions regarding the attitudes and behaviors of other men, especially pertaining to the topic of sexual violence (Berkowitz, 2004):

“For example, men think that other men are more sexually active than themselves, are more comfortable behaving in stereotypically masculine ways, are less uncomfortable with the objectification of women and violence, are more homophobic and heterosexist, and are more likely to endorse rape myths. Because of the powerful influence that men have on each other, correcting these misperceptions can free men to act in ways that are healthier and more aligned with personal values” (p. 4).

Thus, programs based on this approach include “media campaigns that portray men in positive, non-violent roles or through social norms marketing

campaigns that provide data about the true norms for men’s behavior” (Berkowitz, 2004, p. 4). Current research is being conducted to evaluate the impact of such programs in the community. At this point, however, efficacy data is not available.

For More Information: A good place to start accessing information on the social norms approach to sexual violence prevention is the Family Violence Prevention Fund: <http://toolkit.endabuse.org/Resources/TheSocial.html>. In addition, an activity designed to help youth ages 11-14 understand social norms regarding gender and violence can be found in the White Ribbon Campaign In a Box which is available at: <http://www.whiteribbon.ca/ciab/default.asp>.

Other programs based on a social norms approach include programs for adolescent males that help them to identify and explore the pressures they experience to endorse “traditional (and often violent) ideas about masculinity” (Lee et al., 2007, p. 18). These programs then “show them how to resist these pressures to find their own positive identities, and build their skills as peer leaders to show other the link between the norms these pressures create and sexual violence. In short, these initiatives empower young people, particularly young men, to shift the behaviors of their peers” (Lee et al., 2007, 18). Examples of this type of program include the Men of Strength Clubs (Lee et al., 2007) and Mentors in Violence Prevention (Katz, 1995). While clearly promising, there is only preliminary evidence supporting the efficacy of these programs at this point. (Preliminary evidence supporting the effectiveness of the MyStrength Campaign is described in Lee et al., 2007. Evidence for the efficacy of the MVP Program is available at: <http://www.sportinsociety.org/vpd/mvp.php>).

For More Information: The Men of Strength (MOST) Clubs are described on the same website as the MyStrength Campaign (<http://www.mystrength.org/>) as well as the main website for Men Can Stop Rape <http://www.mencanstoprape.org/>). The Mentors in Violence Prevention (MVP) Program is described at: <http://www.jacksonkatz.com/aboutmvp.html>.

Partnerships and Targeted Prevention

Another area in which the public health literature can inform rape prevention is in the focus on capacity building and creating community partnerships. One promising approach is to engage in more collaborative work with other health promotion programs that have clear intersections with the problem of sexual assault, such as sexual disease prevention. As far as we know, there are currently no studies that have examined how this type of integrated program might compare to dedicated rape prevention education on outcomes. However, there might be potential benefits for both fields by leveraging resources and integrating educational messages to potentially maximize their impact.

A second trend in which considerable effort has already been directed— but more is required— is the development of programs specifically tailored for high risk groups including individuals who (1) are involved in drug and/or alcohol use; (2) are already victimized or offending, (3) belong to groups such as college athletics and fraternities or sororities, or (4) are younger than college age. The existing research with each of these higher risk populations will be discussed in a moment. At present, there is no research documenting the effectiveness of interventions with other groups of individuals who are at particularly high risk for sexual victimization, including those who (1) have physical, developmental, or mental disabilities, (2) are homeless or in transient housing situations, or (3) are involved in the sex trade. These are examples of selected interventions with high risk populations that could be tailored to

constitute an indicated intervention for those who have already perpetrated or experienced a rape.

Alcohol and Drugs

The research generally suggests that alcohol or drugs are involved in approximately one-third to two-thirds of all sexual assaults (Tjaden & Thoennes, 2006; Ullman, Karabatsos, & Koss, 1999). Findings from the National Violence Against Women Survey show that nearly 20% of female and 40% of male victims report being under the influence of alcohol and/or drugs at the time of their rape (Tjaden & Thoennes, 2006). Approximately half of all perpetrators of sexual assault are under the influence of alcohol at the time of the assault, with estimates ranging from 30-75% (see Abbey et al., 2004 for a review of this literature). These figures are even higher for sexual assaults committed on a college or university campus (Mohler-Kuo et al., 2004).

Clearly, there is a strong link between sexual assault and the use of alcohol and drugs, especially on college campuses. Yet there appears to be very little collaboration between those working to educate students about drugs and alcohol and those seeking to prevent sexual assault. As a result, research has not been conducted to explore whether interventions in each domain have any synergistic impact on the other. This is therefore an area where experts in both fields can better coordinate their efforts. (See Abbey, 2008 and Norris, 2008).

Sports and Fraternities

Many experts have also argued for a heightened focus for prevention efforts on those students who participate in athletics or belong to Greek organizations (i.e., fraternities and sororities). Some evidence suggests heightened perpetration by athletes in revenue generating sports (Koss & Gaines, 1993) and elevated victimization among sorority members (Mohler-Kuo et al., 2004). Indeed, college and high school student-athletes have been a particular focus of some rape prevention programs such as Mentors in Violence Prevention.

Whether or not members of Greek organizations or student athletes are high risk groups, they nonetheless represent high status community members who are visibly prominent and could serve as key leaders in changing social norms around these issues (Katz, 2007; Moynihan & Banyard, 2008). The focus on these student groups is therefore likely to be justified. Yet evaluation research with these groups is limited, often showing change in attitudes but no impact on behavior (Anderson & Whiston, 2005; Foubert, 2000; Foubert et al., 2007; Moynihan & Banyard, 2008; McMahon, unpublished manuscript).

Younger Students

While the focus of this review is primarily on college students because this is where most of the programming and research has been conducted, another promising direction for future work is to provide prevention education to younger students.

Developmentally, it makes sense that rape prevention programs should be delivered to students during, or even before, the time when they begin their sexual development. Indeed, Schewe (2006) found a significant linear relationship between student age and program outcomes, such that freshman high school students changed their attitudes, beliefs, and behavioral intentions regarding sexual assault significantly more than high school seniors. Other promising practices for younger audiences have also been identified by Schewe (2006); they include using a male/female team of prevention educators (instead of a single presenter) and using multiple, short (less than 60 minute) sessions rather than one longer presentation. For a discussion of the goals, challenges, and barriers in working with high school populations, including a number of specific case studies, see Berkowitz, Jaffe, Peacock, Rosenbluth, and Sousa (2004).

It is worth noting even in this brief discussion that it is often very challenging to reach younger students with programs addressing topics such as rape prevention, given the barriers to access in schools and other groups or institutions where younger students participate. Any such program

must also be designed to address sensitive issues of confidentiality and prepare program facilitators to respond effectively to disclosures of victimization. Guidance can be found from the programs that have already been established in classroom settings, which often address both sexual violence and physical dating violence. One example is the Safe Dates program that was cited in one of the few studies documenting changes in actual self-reported sexual assault perpetration (Foshee et al., 2004). Information on the Safe Dates program, including how to order materials, is available at <http://www.hazelden.org/web/go/safedates>. Another is the Choose Respect program funded by the Centers for Disease Control (more information is available at: <http://www.chooserespect.org/scripts/index.asp>).

For More Information: Although most interventions have been designed for college students, it is critically important to implement and evaluate programs for younger students. Information and all program materials are available for six classroom interventions that have been evaluated by the Illinois Coalition Against Sexual Assault at http://www.icasa.org/docs/Inside_the_classroom_Order_Form.doc. A list of existing programs and contact information is also available from the Colorado Coalition Against Sexual Assault at <http://www.ccasa.org/documents/SV%20prev%20catalog%20of%20educ%20materials.pdf>.

School-Based Judicial Responses

Collaboration with campus law enforcement and institutional disciplinary processes also offers great potential for future growth in order to present a unified message to prevent and respond to sexual assault. For example, an innovative program for restorative justice has been implemented in one large U.S. city to handle selected sexual assault cases. Evaluation research of the program using qualitative methods has demonstrated positive changes in increased offender responsibility and heightened empathy for the victim. This evaluation effort is

ongoing, and future work will be used to determine whether there is any positive impact in victim outcomes such as increased satisfaction, reduced distress, and increased perceptions of fairness and control of the offender sanctions (Koss, 2006).

Extending this work to higher education, a campus judicial process based on restorative justice has also been implemented at one of the most highly regarded universities in the U.S. (Karp & Allena, 2004; also see Koss, 2006). In general, a restorative justice process is not limited to the victim and offender and relies less on finding fault. Instead, it involves a broader circle of the campus community and focuses on acknowledging responsibility, repairing harm done, and preventing future reoccurrences. These approaches are consistent with the educational mission of such institutions, yet they have not been evaluated in terms of their impact on outcomes related to sexual assault. Such reform efforts thus offer an important area for future evaluation.

Unfortunately, this type of reform is not often seen as prevention, because it does not constitute primary prevention. In fact, the lack of institutions to provide victims redress and hold perpetrators accountable can be seen as one of the many societal causes of violence against women. However, if such reforms improve the likelihood that campus and community systems will respond appropriately to victims and hold more offenders accountable, then it may constitute secondary prevention, given the fact that most sexual assault perpetrators commit more than one rape. It may also increase the impact of primary prevention as potential perpetrators recalculate the cost benefit ratio of their behavior and potential victims develop better awareness of what constitutes an unwanted sexual experience to which the campus authorities can be expected to respond affirmatively.

For More Information: Up-to-date information on improving the criminal justice and community response to sexual assault is available through the On-Line Training Institute (OLTI) hosted by EVAW International. OLTIs modules offer concrete guidance for law enforcement professionals and others on the successful investigation of non-stranger sexual assault, as well as other topics related to a coordinated criminal justice and community response system. The OLTIs can be accessed at the EVAW International website at: <http://www.evawintl.org>

Summary and Conclusions

The research literature offers suggestions regarding which specific components of educational programs are associated with positive changes. For example, research documents the most positive changes in programs designed for women only and characterized as risk-reducing rather than empathy-focused (Anderson & Whiston, 2005). Educational programs that are longer also appear to have more significant impact than shorter ones, as well as those facilitated by professionals rather than students or peers (Anderson & Whiston, 2005). Other studies have found that repeated exposure to programming increases its impact (Banyard et al., 2007; Lonsway & Kothari, 2000). Multi-component plans are also showing promising results.

On the basis of such findings, experts are currently exploring the potential for more comprehensive programs and additional booster sessions that are designed to be synergistic and reinforce the central message over time. Multiple methods might include awareness education, community-based activities, coordinated media messages, targeted primary prevention, and policy changes. This type of strategy is endorsed by the CDC and NSVRC.

Although research on rape prevention has evaluated only a few program components, there is a much wider body of knowledge from other fields. Lee et al. (2007) suggest that educational interventions are best designed to:

- Include multiple sessions of sufficient length and intensity
- Incorporate opportunities for follow-up
- Take place before risk factors arise
- Be developmentally appropriate for participants
- Engage participants in modifying the curriculum for diverse populations
- Vary teaching methods to reach participants with different learning styles
- Include interactive activities
- Offer opportunities to practice new skills
- Reinforce and expand upon previous material with any new material
- Be delivered by “prepared, competent facilitators who are able to foresee potential controversies and strategically create learning opportunities” (Lee et al., 2007, p. 16).

These recommendations are consistent with suggestions offered by experts in adult education (Knowles, Holton, & Swanson, 1998). Knowledge gained in this field is all too often overlooked as an asset by those designing, implementing, and evaluating rape prevention and health promotion.

Similarly, the implications for incorporating media facilitated education and social marketing strategies into sexual violence prevention are limitless, but they can only be realized when we reach across disciplinary boundaries to establish collaborative partnerships with experts in changing attitudes and behaviors (e.g., social science, marketing, advertising, public health, public relations, and media communications). This type of collaboration has been used to develop some of the media campaigns discussed in this review (e.g., the MyStrength Campaign), but it represents a critically important direction for future work in this area. Often the best ideas come from professional cross-pollination where we remain open to ideas from fields that seem totally different from our own. Possibilities include viral campaigns such as those used by political candidates, internet games designed for social change purposes, word-of-mouth campaigns targeting those with an influence in our daily lives (e.g., hairdressers, bartenders), and efforts to saturate a

specific community or smaller social setting with a particular communication message.

Some strategies that will probably not work are fear-based messages, such as programs designed to scare men about the possibility of being accused of rape. Nor will messages that implicitly insult participants. This type of dynamic is seen when participants are given a quiz on the facts of sexual assault, and then informed during the presentation that many of the facts they endorsed actually constitute myths. Others have cautioned against using lectures or warnings (Wolfe & Jaffe, 2003).

Single-Gender Programs Recommended

Perhaps the most robust conclusion in this area is that single-gender programs are more effective than mixed-gender ones (Anderson & Whiston, 2005; Brecklin & Forde, 2001; Schewe, 2006). In fact, many experts have suggested that it violates common sense to provide sexual assault education to mixed-gender audiences, given the very different relation of men and women to the issue (Berkowitz, 1992; Lonsway, 1996; Schewe & O’Donohue, 1993). The exception may be the type of program that addresses men and women as potential bystanders to a sexual assault, rather than victims or perpetrators.

While some of the goals for rape education are the same for men versus women (e.g., increased awareness of sexual assault dynamics and community resources), others are only appropriate for one gender or the other. In fact, Ullman (2007) notes that some information should specifically be excluded from men’s programs to avoid providing potential perpetrators with more ideas about how to successfully commit a sexual assault and avoid detection. A detailed discussion and comparison of goals for programs targeting men and women appears in Gidycz et al. (2002).

Clearly there are differences in the content that is most appropriate for men’s and women’s programs when they are provided in single-gender format. There are also likely to be differences in the process of what takes place in programs designed for men versus women, further strengthening the argument for separate gender programs. As

Berkowitz (2002) describes, all-male programs offer the potential for:

- reducing the defensiveness and polarization that often arise among men during mixed-gender workshops;
- creating a comfortable environment that encourages men to be open and honest in expressing their opinions;
- expanding the diversity of opinions that are expressed by men; and
- encouraging safe disagreement among participants, and allowing men to exert pressure on each other to create positive change.

In all-male programs, it may also be easier for workshop facilitators to avoid discussions that focus on assigning responsibility for sexual assault to women; such discussions are common in mixed-gender programs (Berkowitz, 2002).

While these advantages are discussed in the context of all-male programs, similar types of benefits may be seen in all-female programs. Women in single-gender programs may feel more comfortable expressing their honest thoughts, encouraging a wider range of opinions and exerting positive pressure for change on other women—without diverting their attention toward challenging or protecting male participants.

Future Directions

Finally, this review offers guidance for policy and future practice. To advance the goals of rape prevention, there must be funding mechanisms that support innovation. However, this may include smaller awards for program planning and small-scale implementation, and rewards for practitioner-academic collaborations with strong evaluation plans. Clearly, one goal is to build on existing work and advance knowledge in the process described as action research, where programs are implemented, evaluated, and revised in an ongoing process of continuous improvement.

To that extent, practitioners seeking to implement programs for rape prevention or risk reduction do not have to start from scratch by designing their

own—they can use or adapt material from the existing programs that are cited throughout this review. By evaluating the impact of the components on the desired reduction in the identified problems the program targets, over time strong components can be retained, moderately successful ones strengthened, neutral or ineffective components can be dropped, and innovative new components can be tested. All these activities help achieve dynamic, data-based, field-tested, and effective rape prevention.

While acknowledging this progress, it is also clear that the field has not yet been successful in achieving its stated purpose: reducing sexual violence in our schools and college campuses, let alone within our larger communities. This article was thus written to provide an overview of some steps that can be taken to bring us closer to this goal. These steps include designing more comprehensive programming, developing targeted programs that can be tailored for specific groups, expanding the range of delivery modes for prevention messages, and incorporating both bystander intervention training and/or resistance training.

Endnotes

¹ After the first author, all of the remaining authors are listed in alphabetical order.

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In Brief:
Rape Prevention and Risk Reduction:
Review of the Research Literature for Practitioners

Only a small percentage of rape education programs are designed specifically for men, but review of this limited body of work suggests three primary conclusions. First, some programs have demonstrated success in changing men's beliefs and attitudes regarding rape. Second, some programs have also reduced men's self-reported likelihood to rape. Third, there is evidence to suggest that some prevention programs might reduce men's actual sexual aggression. Such findings are certainly promising, and this remains one of the most important research directions in this field. However, there are unique issues that must be considered when reviewing this body of research.

A number of educational interventions have also been designed for audiences of women only. At this point, there is a rather persuasive body of evidence to suggest that women's participation in risk reduction programs (including self-defense training) decreases their likelihood of being sexually assaulted in the future. Research also documents other positive outcomes resulting from resistance training for women, including increased assertiveness, improved self-esteem, decreased anxiety, increased sense of perceived control, decreased fear of sexual assault, enhanced self-efficacy, improved physical competence/skills in self-defense, decreased avoidance behaviors (restricting activities such as walking alone), and increased participatory behaviors (behaviors demonstrating freedom of action). Because women with assault histories are at increased risk to be sexually assaulted in the future, they merit special consideration in the design of risk reduction programs.

Most rape education programs are actually designed for mixed-gender audiences, however, and the primary conclusion from evaluation research is that such programs can be effective in changing rape-supportive beliefs and/or attitudes over the short-term (several months to a year), but they have not generally been successful in changing beliefs and attitudes over the long-term. The research literature also offers suggestions regarding which specific components of educational programs are associated with positive changes. For example, educational programs that are longer appear to have more significant impact than shorter ones, as well as those facilitated by professionals and those that involve repeated exposure to programming. However, perhaps the most robust conclusion in this area is that single-gender programs are more effective than mixed-gender ones. In fact, many experts have suggested that it violates common sense to provide sexual assault education to mixed-gender audiences, given the very different relation of men and women to the issue.

This review thus provides suggestions for practitioners to design, implement, and evaluate rape prevention and risk reduction programs. These include designing a comprehensive prevention strategy with intervention at various levels of influence and careful consideration of program goals and methods for evaluating positive impact.