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Sexual Assault Programming on College Campuses: Using Social Psychological Belief and Behavior Change Principles to Improve Outcomes

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Abstract

Sexual assault programming is often delivered without a theoretical framework and does not typically utilize applicable research that could help to induce change among participants. Such interventions may target male and/or female students, although the focus of this review is on men. It is important to examine these programs in light of current theoretical knowledge and empirical findings from the social psychological attitudinal and behavioral change literatures. To this end, current programming efforts and their limitations are briefly reviewed. Three social psychological theories targeting belief and behavior change (i.e., social norms, hypocrisy salience, decision, and deterrence) are discussed and their application to such programming is elaborated. Given this information, recommendations for the research and practice of such interventions are provided.

Keywords

sexual assault, prevention, college, social psychology

Despite considerable variance in estimates of sexual assault prevalence rates on college campuses, due to the manner in which sexual assault is defined and the period of time studied, the consensus is that this crime is unfortunately prevalent. A recent study of sexual experiences among undergraduates at four universities showed that 27% of women reported unwanted or uninvited sexual attention and 5% of women reported unwanted sexual contact in adulthood. Importantly, during the 2-month span between study phases, 5% of the women in the study reported receiving unwanted or uninvited sexual attention and 1% reported being sexually assaulted (Frazier et al., 2009). More broadly, Finley and Corty (1993) estimated that as many as one third of female students will be victims of a sexual assault by their senior year. Alarmingly, these statistics do not capture the actual occurrence of sexual assault, as it is a chronically underestimated crime and many problems (e.g., lack of awareness of what constitutes assault, perceived lack of confidentiality in reporting; Koss, 1992; Koss, Gidycz, & Wisniewski, 1987) further impact reported assault rates.

Given the relatively high rates of sexual assault on college campuses, it is important for these institutions to recognize and address this crime. A Congressional survey of a random sampling of colleges with students who receive federally funded financial aid revealed that approximately 6 in 10 schools reported offering safety-related educational programs; of these programs, only about 60% address sexual assault. This disheartening finding led to the recommendation that all colleges provide comprehensive education about erroneous beliefs about rape, general rape-related information (e.g., common situations in which rape occurs, perpetrator characteristics, and the effects of rape on survivors), prevention strategies, campus resources, and support sources (Gonzales, Schofield, & Schmitt, 2005). Although such a recommendation is valuable, there does not appear to be an available method for assessing these programs at a national level, aside from published articles about piloted interventions, in order to provide subsequent, refined recommendations. Unfortunately, although the majority of published interventions are face valid and intuitively appealing, they lack theoretical grounding and empirically supported components (e.g., Anderson & Whiston, 2005; Bachar & Koss, 2001). Importantly, it is generally unknown what programming is delivered at the collegiate level and it is possible that limited resources result in suboptimal programming. In order to begin rectifying this problem, available information regarding known interventions will be reviewed here, along with an overview of theoretical constructs from social

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psychology that can be used as a framework for such programming. Taken together, this information will be used to provide recommendations for research and practice when developing and implementing future programming, in hopes of affecting positive belief and behavior change among college men.

Existing Programming

Intervention Design

The manner in which sexual assault-related programming occurs varies widely. In their meta-analysis, Brecklin and Forde (2001) described the range of potential interventions, from minimally intensive efforts (e.g., brochures) to more involved programs (e.g., college courses). In the majority of such interventions, students are brought into the laboratory or met with in a preexisting group context (e.g., class and fraternity house) for a 30- to 90-minute program. Typical programming elements include watching a video or presentation, participating in a discussion, or a combination of modalities, and may be administered by a number of different individuals (e.g., professional speakers and peer facilitators). Often, participants are presented with self-report forms to complete prior to, and following, the program in order to obtain measures of attitudinal and behavioral change; some interventions also include follow-up assessment at a later date.

In general, meta-analyses of sexual assault programming have not revealed any significant differences based on the type of intervention administered or the length of programming (e.g., Brecklin & Forde, 2001; Breitenbecher, 2000; Flores & Hartlaub, 1998). The majority of effect sizes of various programming variables (e.g., presentation modality and gender of audience) on attitudinal measures (e.g., acceptance of rape-supportive beliefs) are minimal or small, although some are in the moderate range and few approach the large range (Brecklin & Forde, 2001; Flores & Hartlaub, 1998). Importantly, the effects of these programs generally diminish over time (Breitenbecher, 2000), from moderate effects immediately post-intervention to very small effects 4–6 weeks after the intervention (Flores & Hartlaub, 1998), demonstrating the very transient impact of such programming.

Intervention Length

A review of sexual assault programming revealed that interventions ranged from 7 minutes to a total of 42 hours (Anderson & Whiston, 2005). The average intervention length found in another review was 31–60 minutes (Brecklin & Forde, 2001), which seems to be a feasible time commitment for students. Interestingly, despite initial findings that shorter interventions were more effective (Flores & Hartlaub, 1998), research conceptualizing time as a continuous, and not categorical, variable (Anderson & Whiston, 2005) supports longer interventions; this is also consistent with attitudinal and behavioral change research (Eagly & Chaiken, 1993).

Delivery Modality

Research has shown that the mode through which a message is delivered can affect program outcomes. Engaging men upon multiple levels (e.g., writing exercises and role-playing) is more likely to result in positive change than using only one modality (Kilmartin & Berkowitz, 2005; Schewe, 2002) and participant interaction during the intervention is associated with greater program effectiveness (e.g., Breitenbecher, 2000; Schewe, 2007). The inclusion of multiple activities increases the likelihood that more participants will be affected, as some may respond better to one technique (e.g., discussion) than another (e.g., written information). Research on attitudinal and behavioral change from social psychology recommends making participants actively work with the message to increase their engagement with it, which is associated with greater levels of persuasion (Miller, Brickman, & Bolen, 1975; Watts & Holt, 1970).

Intervention Recipients

The recipients of a sexual assault intervention can also impact the efficacy of a program. First, with respect to gender, the majority of programming is conducted in mixed-gender sessions (Brecklin & Forde, 2001). Although combining men and women for such programming is intuitively appealing, as it may help men may better understand the impact of sexual assault, research does not support this format. Multiple researchers have shown that interventions for men delivered in a single-sex context are superior (e.g., Brecklin & Forde, 2001; Breitenbecher, 2000). Reasons for this difference include the possibility that single-sex interventions help facilitate more earnest discussion and learning (Ring & Kilmartin, 1992) and can aid the exploration of the socialization that men experience and encourage participants to challenge male peers' negative behaviors (Berkowitz, 1992). Importantly, interventions for men and women have different goals, and mixed-gender presentations may contain information that is not relevant to men and may even increase negative beliefs, given the information provided (e.g., many rapists are not convicted; Brecklin & Forde, 2001; Yeater & O'Donohue, 1999).

Second, the number of participants in this type of programming also affects success. Brecklin and Forde (2001) found a negative relationship between the number of participants and program effectiveness, speculating that smaller groups allow for better tailoring of the intervention. Although some interventions aimed at sizable groups of students have shown preliminary success (e.g., Bruce, 2002; Fabiano, Perkins, Berkowitz, Linkenbach, & Stark, 2003), these programs are often very general and may not be effective for all audiences.

Finally, some individual difference variables are posited to affect participants' likelihood of change following an intervention. A number of factors are associated with the perpetration of sexual violence among college men, including endorsement of erroneous and stereotypical beliefs about sexual assault (e.g., Lonsway & Fitzgerald, 1994; Tieger, 1981), hostile attitudes

toward women (e.g., Abbey & McAuslan, 2004; Abbey, McAuslan, Zawacki, Clinton, & Buck, 2001; Malamuth, Sockloskie, Koss, & Tanaka, 1991), adherence to stereotypical gender roles and hostile masculinity (e.g., Koss, Leonard, Beezley, & Oros, 1985), the belief that alcohol enhances one's sex drive (Abbey et al., 2001), approval of impersonal sex (e.g., Abbey & McAuslan, 2004), attraction toward sexual aggression and other criminal acts (e.g., Voller, Long, & Aosved, 2009), and poor knowledge regarding sexual assault (Berkowitz, 1994). Importantly, high-risk men evidence minimal gains following sexual assault-related programming (e.g., Anderson & Whiston, 2005; Stephens & George, 2009), although an intervention for this group may still be superior to no intervention whatsoever (Schewe & O'Donohue, 1996). In contrast, college men's previous direct or indirect experience with sexual assault (e.g., knowing an assault survivor; Forst, Lightfoot, & Burrichter, 1996) and awareness of the potential impact of rape on survivors is associated with less endorsement of rape-supportive beliefs and self-reported likelihood of perpetration (Hamilton & Yee, 1990) among college men. Thus, it appears that efforts to improve men's attitudes toward sex, relationships, and women more broadly may have a positive effect on perpetration of sexual assault (Abbey & McAuslan, 2004), although the overall utility of programming may differ, due to idiosyncratic beliefs and experiences.

Facilitator Characteristics

Facilitator characteristics may also differ and research findings are mixed. Peer education is touted as effective, as it may make the presentation more credible and accessible to participants (Flores & Hartlaub, 1998), although a meta-analysis provided support for programming led by professional presenters, as opposed to graduate students or peer facilitators (Anderson & Whiston, 2005). Of note, methodological problems with such studies (e.g., no comparison group and small sample size) confound these results. Yet, attitudinal and behavioral change research reveals a positive relation between perceived facilitator credibility and message persuasiveness (Miller et al., 1975), suggesting that any facilitator who is perceived as credible can administer an effective intervention, regardless of status.

One additional facilitator characteristic that is in need of further examination is the effect of gender. There is little, if any, information in the published literature assessing facilitator gender differences. It is possible that a male facilitator can create a more open forum for discussion in male-only participant groups (Berkowitz, 1992; Ring & Kilmartin, 1992). Alternatively, the use of a pair of male and female facilitators may help capitalize on the potential beneficial effects of both genders (Schewe, 2007).

Targeted Outcomes

Attitudinal outcomes. Sexual assault prevention programming primarily targets participants' attitudes. Most outcome measures utilized are self-report, which introduces its own confounds (e.g., reporting bias). These concerns are particularly troubling when there is a sole reliance on attitudinal measures (e.g., Desai & Saltzman, 2001; Lonsway, 1996), as well as when researchers administer personally developed measures that may not be standardized or validated (Schewe & O'Donohue, 1993).

While there is concern about focusing on attitudinal change alone, as there is no guarantee that changes in attitudes translate into changes in behaviors (e.g., Anderson & Whiston, 2005; Gidycz et al., 2001), Earle's (1996) review of the literature revealed that sexual assault-related attitudes are the strongest predictors of sexually aggressive behavior. Additionally, it is important to remember that attitudinal changes can have positive benefits in and of themselves. Primarily, positive changes in attitudes can contribute to a more accepting, supportive environment for sexual assault survivors and those with whom they interact in a number of situations (e.g., assault disclosure, jury trial, and employment setting). This is particularly important considering that given the prevalence of sexual assault, almost all individuals will interact with a sexual assault survivor at some point (Tjaden & Thoennes, 2000). However, it must be noted that such changes in attitudes must be clinically relevant, aside from their statistical significance. Program evaluation must not only include an assessment of these attitudes but also a functional assessment of reported change, in addition to statistical analyses.

Behavioral outcomes. Many researchers have pushed for an emphasis on behavioral outcome measures (e.g., Breitenbecher, 2000; Yeater & O'Donohue, 1999), which range broadly from self-reported behaviors and sexual assault indices to laboratory aggression paradigms (Malamuth, 1983) and participant responses to a related follow-up task (e.g., volunteer solicitation; Gilbert, Heesacker, & Gannon, 1991). However, these measures may not correlate well with the behaviors in which the participant actually engages and may be contaminated by social desirability and treatment effects (Schewe & O'Donohue, 1993). Further, such measures are not yet well examined, as many programs do not include behavioral outcomes; thus, the lasting effects of sexual assault interventions on participant behavior are unknown (Brecklin & Forde, 2001). However, it is important to continue utilizing these measures and assessing their potential efficacy to enable researchers to best capture sexual assault programming outcomes in the future.

Follow-Up Assessment

Most interventions include an immediate posttest without a follow-up assessment (e.g., Flores & Hartlaub, 1998), which may artificially inflate the results provided due to recency effects and not actual sustained belief change (Lonsway, 1996). Meta-analyses show that studies utilizing a follow-up assessment of 10 weeks or more post-intervention show attenuated effects over time (e.g., Anderson & Whiston, 2005; Brecklin & Forde, 2001). Importantly, this phenomenon is observed with persuasive messages in general (Eagly &

Chaiken, 1993). There are a number of possible reasons for this attenuation, including: (a) it may not be reasonable to expect that a single intervention can result in lasting attitudinal or behavioral change (Brecklin & Forde, 2001), (b) that individual difference variables affect long-term efficacy, and (c) that programs are not utilizing the most effective persuasion techniques available. Again, the results obtained, particularly at follow-up, must be assessed for both their statistical and clinical significance; a practice that is rarely used within this area of study.

Intervention Foci

Sexual assault programming may target a number of different areas and most are characterized as taking a "shotgun approach" to the problem by including many components, in hopes of addressing all of the important issues (Gilbert et al., 1991). A brief overview of some of the more popular intervention targets and the degree of change reflected by those outcomes is presented here.

Rape myth acceptance (RMA). Rape myths (i.e., stereotypical or false beliefs about rape, rape survivors, and rapists; Burt, 1980) are the most common intervention target (Breitenbecher, 2000; Schewe, 2002). As discussed previously, higher rates of RMA are associated with greater levels of reported likelihood of sexual aggression (e.g., Hamilton & Yee, 1990) and sexually aggressive behaviors (e.g., Earle, 1996; Koss et al., 1985), making it a valuable correlate for actual sexual aggression. Although this target is associated with more successful programs (e.g., Anderson & Whiston, 2005), these gains may be due in part to a brief follow-up assessment interval (Breitenbecher, 2000) and the accessibility of measures that directly assess RMA (Schewe, 2002); thus, the actual effectiveness of such programs is hard to determine. Yet, this area is an important focus in working with men, as they report greater RMA than women (Anderson, Cooper, & Okamura, 1997) and often overestimate their male peers' acceptance of rape-supportive beliefs and underestimate their peers' healthy attitudes toward women and sex, which can influence their behavior (Fabiano et al., 2003).

Survivor empathy. Encouraging empathy for survivors includes helping participants recognize and understand the thoughts and emotions that come with being raped, as well as post-assault sequelae (Schewe, 2002). While many researchers have touted this focus as critical to preventing sexual assault, and such a focus is consistent with the literature on attitudes toward sexual assault (e.g., Forst et al., 1996; Hamilton & Yee, 1990), a review of the current research findings shows mixed results. Efforts in this regard appear to be less effective with men (e.g., Anderson & Whiston, 2005; Breitenbecher, 2000), although data from a 5-month follow-up of an empathy intervention showed promising results (Foubert & Perry, 2007). One specific concern when using this target is assuming that the narratives presented will engender empathy in participants; surprisingly, manipulation checks of resultant empathy are rare.

Negative consequences of rape. Schewe (2002) reviewed the current research assessing the effects of emphasizing the negative consequences of sexual assault. He found strong theoretical support for this intervention target but mixed empirical support. However, its applicability may be with high-risk populations, as research has shown that college men who engage in sexually coercive behaviors, or report a higher likelihood of raping, tend to underestimate the potential risks of their choices (O'Donohue, McKay, & Schewe, 1996).

Rape-related attitudes. This domain does not focus specifically upon rape but on those factors that may contribute to it (e.g., stereotypical sex roles and adversarial sexual beliefs). Although this area has not been well-examined in previous meta-analyses, Anderson and Whiston (2005) found significant positive changes in attitudes following these types of interventions, particularly when attitudes were explored within the context of the culture of masculinity and the socialization practices with which men grew up.

Attitudinal and Behavioral Change Theories and their Application to Interventions

As described above, the effects of reviewed sexual assault-related programming are suboptimal, particularly when examined over time (e.g., Brecklin & Forde, 2001; Breitenbecher, 2000). Yet, as sexual assault remains an unfortunately prevalent problem on college campuses (e.g., Finley & Corty, 1993; Fisher, Cullen, & Turner, 2000), it is imperative that such programming is further refined and developed. One way to make improvements is to include contributions from established attitudinal and behavioral change theories to ensure that programs are created using an optimal theoretical and empirical framework. As discussed, the majority of programs implemented across college campuses are developed without guiding theoretical underpinnings (e.g., Anderson & Whiston, 2005; Yeater & O'Donohue, 1999), indicating that there is no particularly substantive rationale for program components. There are numerous compelling attitudinal and behavioral change theories and mechanisms that might fruitfully be brought to bear on this problem (e.g., Elaboration Likelihood Model, Petty & Cacioppo, 1986; social learning models, Bandura, 1986; belief system theory, Grube, Mayton, & Ball-Rokeach, 1994), but it is not possible in the context of a single review to give adequate treatment to all such perspectives. Although creative implementation of alternate promising perspectives should be encouraged, for practical reasons, this review necessarily focuses on just a few particular promising theoretical approaches. The theories presented below were selected because of their success in inducing belief and behavior change in other domains (e.g., condom use and recycling), as well as their initial promising findings within sexual assault-related programming.

Social Norms

According to this theory, individuals behave in accordance with their perceptions of expected behavior, whether the behavior is objectively positive or not (Berkowitz, 2003). Problems may arise when individuals misperceive the norms they are trying to follow. Two types of cognitive errors may lead to these misperceptions. First, people may display pluralistic ignorance, in which they make an absolute error with regard to estimating others' behavior; risk-taking or negative behavior is often overestimated while prosocial, positive behavior is often underestimated (Miller & McFarland, 1987, 1991). This phenomenon was demonstrated in a series of studies conducted by Prentice and Miller (1993), in which college students reported significantly lower personal comfort levels with the drinking habits of other college students than the comfort level that they estimated for the average student. Yet, when reported comfort was assessed across an academic semester, men reported significant increases in their own level of comfort with drinking behavior on campus over time, bringing their perceptions more in line with their estimates of peers' comfort levels, although their own comfort levels remained lower than estimated peers' comfort. Importantly, men's reported drinking behavior also increased somewhat over this time period, revealing a behavioral shift that accompanied this attitudinal change and demonstrating that normative misperception can affect both beliefs and behaviors. Of note, people may abide by misperceived social mores, even if they are not accurate (Prentice & Miller, 1993) and are counter to one's personal beliefs (Miller & McFarland, 1991).

This framework is easily translated for use with sexual assault-related issues. For example, men may be asked if they expect sex from a woman who invites them to her house after a date. While a large percentage of men may disagree with this belief, they may report that their peers do not object to it. Men could then be presented with corrective information; namely, that most men disapprove of this belief. Thus, the appropriate attitudes and behaviors (e.g., not expecting sex in this situation and objecting to men who state an expectation of sex) become the new norm. The provision of this corrective information is critical, as men may not voice opinions counter to negative or stereotypical beliefs or behaviors if they perceive that others do not object to them. As seen in the study by Prentice and Miller (1993), a more worrisome possibility is that men may begin, instead, to think and act in accordance with the negative attitudes and behaviors.

Second, the false consensus effect can lead to normative misperception, in that men may assume that others think and act as they do, leading to an overestimation of the prevalence of a behavior for the general population (Ross, Green, & House, 1977). This cognitive error has been studied at the collegiate level with respect to substance use (e.g., students using marijuana are significantly more likely to believe that other students are also using, compared to students who deny using; Wolfson, 2000). With regard to sexual assault, this cognitive error may allow for perpetrators to rationalize their sexually aggressive actions as being typical behaviors (Baer, Stacy, & Larimer, 1991). For example, men who do not personally believe that it is important to get consent before engaging in sexual activity may be more likely to believe that their peers also do not value consent, regardless of others' actual beliefs and behaviors. This misperceived consensus about the negative behavior may increase the likelihood that men continue to devalue consent because they perceive themselves to be in the majority.

Exposing men to information about actual norms regarding sexual assault is believed to correct these misperceptions and changes in attitudes and behavior are expected to follow (Berkowitz, 2003). This assumption is not surprising, given the aforementioned relation between sexual assault-related attitudes and behaviors (Earle, 1996). More recent research also shows a relation between perceptions of others' beliefs and reported sexual aggression, in that individuals who perceive acceptance of sexual aggression among their peers report higher rates of aggression (e.g., Eyssel, Bohner, & Seibler, 2006; Loh, Gidycz, Lobo, & Luthra, 2005). Additionally, perceptions of peers' attitudes toward sexual aggression also predict men's reported willingness to intervene against sexual aggression (Brown & Messman-Moore, 2010).

Although the majority of men experience discomfort in response to sexist comments and behaviors (Bruce, 2002), they underestimate other men's distress, thus seeing themselves as more sensitive than others. They are then less likely to object to these negative acts (Kilmartin & Berkowitz, 2005), demonstrating pluralistic ignorance and its effects. Providing men with corrective information, then, may not only combat misperceptions but also help men effectively express disapproval of peers' behaviors because they learn that others are also uncomfortable with such acts. Of note, preliminary success was shown using this approach with beliefs about rape (e.g., Berkowitz, 2010; Fabiano et al., 2003). While Kilmartin and Berkowitz (2005) caution that this approach is not a panacea for the problem, it can be a useful adjunct to other components.

One example of this approach is Kilmartin et al.'s (2008) brief intervention, designed to increase the accuracy of peers' perceptions of sexual assault. Participants reported on their own attitudes toward sexual assault, as well as the attitudes they perceived among other participants in small group laboratory sessions. They were then provided with information about attitudinal misperceptions in general, including immediate corrective feedback about the perceptions of others in their group. Participants initially overestimated others' rape-related attitudes but became more accurate in their perceptions of others' beliefs following the intervention and at a 3-week follow-up assessment. The effects of this brief intervention on perceptions of others' beliefs are promising and should continue to be expanded upon (e.g., variety of outcome measures and larger groups).

There are some important considerations when using this theoretical framework. First, it is important to address the two types of norms originally described by Cialdini, Kallgren, and Reno (1991): descriptive (i.e., what people actually do) and

injunctive (i.e., what people generally approve or disapprove). Presenting descriptive norms (e.g., rape statistics and misperceptions about rape) alone may actually increase the prevalence of undesirable attitudes and behaviors because participants may become aware that such acts are more common than previously thought, undermining the impact of the injunctive norm (i.e., these are not socially appropriate behaviors). This idea may help explain the mixed results of social norms campaigns, as individuals who engage in the negative target behavior more than their peers may decrease that behavior, while a boomerang effect may be observed among those individuals who participate in the behavior less than their peers and then increase it in order to avoid deviating from the norm (Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007). In contrast, aligning both descriptive and injunctive norms capitalizes on the motivational influence of both messages (Cialdini, 2003) and minimizes this boomerang effect (Schultz et al., 2007). For example, men may be asked to reflect on times that they and their peers have tried to get a woman drunk in order to have sex (i.e., descriptive norms for self and others), followed by a discussion of society's disapproval of this behavior (i.e., injunctive norm) using information from both local (e.g., student body) and general (e.g., broader society) sources to emphasize that this is a practice of which most do not approve.

Second, in order to optimize the presentation of social norms, it is recommended that the norms presented are unambiguous and include all individuals (e.g., peers on campus and fraternity members), not just high-risk groups (e.g., sex offenders). Third, these norms should be stated multiple times through different mediums in order to increase the salience of their presentation (Perkins, 2003). Finally, an important caveat to this approach is that strict caution is needed when using social norms with high-risk populations, as one study reported an increase in the acceptance of interpersonal violence following this type of intervention (Schewe & O'Donohue, 1993). However, these results may be explained by the exclusion of injunctive norms in programming content, as was acknowledged by the researchers.

A social norms intervention could include a number of the components described above. Among these, RMA is well suited for this framework, as it may combat the aforementioned cognitive errors of pluralistic ignorance and the false consensus effect. Similarly, other rape-related attitudes (e.g., adversarial sexual beliefs) and beliefs regarding survivors (e.g., victim empathy) could be presented and discussed to provide participants with corrective information.

Hypocrisy Salience

Attitude change can be influenced by a number of variables, including message content. Messages that are similar to preexisting attitudes increase persuasion (Wood, 2000), while information that is not consistent with participants' own beliefs is less well retained than consonant information and results in feelings of dissonance (Festinger, 1957). Research by Stone and Cooper (2001) suggested that dissonance may also occur when an individual does not behave according to existing standards. These standards can be ones that the individual himself holds and reflect how he wants to be, or those of society in general, which can dictate behaviors that may lead to negative consequences.

Similar to the construct of cognitive dissonance, hypocrisy salience occurs when participants are made to endorse a position that they support while being made aware of times that they have not behaved in accordance with that stance (Fried & Aronson, 1995). By doing so, dissonance is brought about, even though the advocated target message is consonant with one's attitude. In order to alleviate this state of tension and repair one's self-integrity, behavior is theorized to move toward the target message (Aronson, 1992) in a form of self-induced persuasion (Aronson, Fried, & Stone, 1991). Aronson and colleagues (1991) examined this approach with condom use among college students by asking participants to make a tape that would allegedly be used to educate high school students about safe sex. Prior to taping, some participants were asked to think about previous situations in which they had not used condoms in order to induce hypocrisy salience. This group reported a significant increase in their intent to use condoms in the future, as well as subsequent actual condom use, compared to conditions that did not require participants to reflect on their own behaviors. Similar approaches with respect to sexual assault could require participants to think about times that they have acted in a sexually aggressive manner (e.g., verbal coercion to have sex) or have not objected to another acting in this way. A similar speech task could then be used to further emphasize the intended message.

Hypocrisy salience could prove to be a powerful method of inducing behavioral change among intervention participants, particularly when combined with a social norms approach that requires men to reflect on their own descriptive norms and then evaluate their behavior in reference to those norms, including times that they have not behaved in accordance with them. The subsequent presentation of injunctive norms may differ, depending upon participants' descriptive norms. For men who are already disavow rape-supportive beliefs and behaviors, injunctive norms should be included to prevent a boomerang effect, but the focus should be on personal descriptive norms (e.g., remind men of times they have not actively supported sexual assault-related causes). For men who endorse rape-supportive attitudes and beliefs, and who may therefore be at high risk for committing a sexual assault, emphasis should be placed on injunctive norms to communicate the message that most men do not behave in this manner. Given the need to address these groups differently, it would be useful to conduct a pre-intervention screening of attitudes toward rape to allow for the delivery of appropriate intervention content, as well as to control for such beliefs when determining programming effectiveness.

Decision and Deterrence Theories

Decision theory holds that individuals make choices based upon the information that they have about the potential

outcomes of that choice (O'Donohue, Yeater, & Fanetti, 2003). Deterrence theory states that people make decisions that maximize benefits and minimize negative consequences because they are rational beings (Brown & Esbensen, 1988). Taken together, decision making may be affected by an individual's subjective perception of punishment and reward, as opposed to a more objective standard. Thus, providing individuals with corrective information about the outcomes of a behavior may help them act in accordance with an objective view of potential consequences.

Decision and deterrence theories can be used to explore possible misconceptions of rape consequences. If men perceive sexual assault as resulting in high rewards with low cost and little likelihood of punishment, they will be more likely to engage in the act (O'Donohue, McKay, & Schewe, 1996). Although this perception may be relatively accurate, given that many assaults go unreported to formal or informal sources (e.g., Kilpatrick, Edmunds, & Seymour, 1992; Walsh, Banyard, Moynihan, Ward, & Cohn, 2010) and there are generally low prosecution rates for sexual assault cases (e.g., Frazier & Haney, 1996; Tjaden & Thoennes, 2006), it is believed that the provision of the negative outcomes of sexually coercive behavior may result in change in future situations that could involve sexual aggression (O'Donohue et al., 2003). Specific information provided to highlight the negative consequences of sexual assault may vary from vivid portrayals of a perpetrator who is prosecuted and subsequently imprisoned to information regarding the physical and psychological effects that sexual assault has on survivors, incorporating survivor empathy. Making presented negative outcomes as vivid as possible can help increase their salience for participants, thus hopefully increasing their impact.

This approach clearly focuses on the negative consequences of rape and the inclusion of social norms may help enhance its effects. For instance, men may be asked to think about the pros and cons of sexual assault and then receive corrective information about its consequences. Incorporating injunctive normative data is also warranted, as it could be used to show men how others perceive individuals who engage in sexual aggression, as well as those who do not object to it. The combination of these approaches along with hypocrisy salience may be particularly useful when working with men who endorse rape-supportive beliefs, as it allows them to explore their own attitudes, receive corrective information about others' attitudes and behaviors and the consequences of assault, and engage in a persuasive activity. Again, confronting inaccurate beliefs must be conducted with care to ensure that corrective information is retained.

Recommendations

Clearly, much can be done to improve upon the current state of sexual assault-related programming at the college level. It is hoped that the development and dissemination of effective interventions will increase the likelihood that they are used by colleges as a superior alternative to not providing any programming at all or delivering suboptimal interventions. To this end, recommendations for both research and practice are provided. Given that colleges have varying resources and audiences, these recommendations are presented individually so that researchers can include those appropriate for their purposes.

Research Recommendations

Possible confounding factors. As discussed above, a number of factors may influence the results obtained in a given intervention. Unfortunately, the majority of existing research does not measure or acknowledge these variables. With respect to individual differences (e.g., previous experience with sexual assault and personal beliefs), efforts should be made to determine if there are preexisting differences between intervention groups and to evaluate whether such factors moderate outcomes. More broadly, it is important to acknowledge variables that might affect participant responses, despite the outcome measures utilized. Breitenbecher (2000) explored some of these issues, including the artificial inflation that can result from demand characteristics both during and after the study and sensitization to rape-related issues that may influence follow-up measures. Researchers must be aware of these concerns and mindful of whether the changes reported by participants are both statistically and clinically significant when evaluating and reporting program effectiveness (Breitenbecher, 2000; Yeater & O'Donohue, 1999).

Random sampling and assignment to conditions. An additional shortfall in this field is the lack of random sampling and group assignment. The decision to not include this methodological consideration is likely due to the desire to target a specific group, which, while admirable, limits the obtained results. For those who do make an effort to use random selection, it is common for a population to be selected and random selection to occur at the group level (e.g., class and fraternity) versus the individual level (e.g., Anderson et al., 1998; Fonow, Richardson, & Wemmerus, 1992). There are obvious benefits of convenience to this decision and most studies compare the groups to determine if there are any differences between them, but random assignment of individuals to conditions would result in a more rigorous design.

Control group. Many researchers do not utilize control groups in their design (e.g., Foubert & Perry, 2007; Heppner, Neville, Smith, Kivlighan, & Gershuny, 1999), thus eliminating the ability to determine differences between those who participated in the intervention and those who did not. Changes seen in interventions targeting college freshman, for instance, may be owing to maturation or socialization effects that naturally occur by virtue of being on a college campus. Without a control group it is impossible to know that the intervention promoted changes above and beyond these possible confounding effects.

Manipulation checks. Few studies use manipulation checks, despite their importance in determining which procedures actually result in the attitudinal and behavioral changes that, to this point, are primarily based on assumptions. This methodological consideration is particularly warranted when studying more abstract concepts (e.g., survivor empathy).

Methodological description. When examining published research regarding sexual assault interventions, many of the procedures are vague at best. While researchers must be concise in their descriptions, some procedural statements are so brief that it is impossible to determine exactly what occurred during the intervention (e.g., Gilbert et al., 1991; Lenihan & Rawlins, 1994). Providing a sufficiently detailed description of study participants and conditions will allow the field to more accurately assess the given effects of certain variables, as well as conduct future replication studies.

Practice Recommendations

Targeted intervention foci selection. Despite the understandable appeal of including multiple intervention targets to address a host of attitudes and behaviors, programs that focus on fewer issues allow for a more in-depth exploration of a topic, instead of a superficial overview of many topics (Anderson & Whiston, 2005), increasing potential intervention effectiveness. Thus, it is incumbent on researchers to select the components that are the most relevant to their selected population, as well as those that most centrally address the issues that they desire to change.

Measurement selection. In order to fully assess the effects of an intervention, it is clear that a number of attitudinal and behavioral outcomes should be measured. Yet, discretion is needed when selecting standardized, reliable, and valid measures in order to avoid overwhelming participants with assessments, which could compromise the results obtained. To accomplish this aim, researchers should select complementary measures that inform each other and provide a comprehensive view of participants' attitudes and behaviors while avoiding circularity in assessment (i.e., assessing a specific construct with only one measure directly targeting that construct; Lonsway, 1996).

Intervention session design. The aforementioned research shows that longer interventions may be more effective than shorter ones (e.g., Anderson & Whiston, 2005; Eagly & Chaiken, 1993). To this end, it may be useful to divide longer interventions into multiple sessions. This recommendation has been made both within the sexual assault programming field (Anderson & Whiston, 2005; Schewe, 2002, 2007) as well as in the general literature regarding memory retention (Dempster & Farris, 1990), as multiple sessions help to keep participants engaged and avoid overwhelming them with information. This consideration is likely to make more intensive, and likely more effective, interventions feasible on college campuses.

Assessment timing. Research is divided over the use of pretesting, with the most rigorous studies comparing outcome measures between groups who are pretested with those who are not, to assess the potential effects of sensitization or demand characteristics on outcomes (e.g., Foubert, 2000; Lenihan, Rawlins, Eberly, Buckley, & Masters, 1992). Given the accessibility of obtaining participants through university research pools, pretesting may be conducted during a mass screening assessment well in advance of the actual study, lessening demand characteristics. The potential effects of pretesting are rarely addressed, though, and should continue to be examined in the future.

One of the most prominent concerns regarding current intervention practice is the lack of adequate follow-up. Researchers need to continue tracking attitudinal and behavioral change over longer periods of time and determining variables that might affect the durability of these changes by presenting all original outcome measures at the follow-up period. It may also be useful to include adjunct measures (e.g., behavioral intention inquiries) at follow-up, as well as an assessment of events that have occurred since the intervention (e.g., received an assault disclosure). Follow-up assessment must be conducted in order to allow for an examination in changes over time and is critical as research in this regard continues to grow.

Facilitator factors. Given the lack of training that some intervention facilitators receive, this is an important area in which programs may be improved. Inadequate training may have detrimental effects on program outcomes, given the need for participants to see facilitators as credible (e.g., Miller et al., 1975). Future research should focus on the effects of the facilitator's gender and training, as well as participants' perceptions of the facilitator, as these variables have not been well studied to date.

Conclusion

Significant steps are being made with regard to developing effective sexual assault-related programming, although much work remains. The extant literature provides a number of complementary findings and recommendations, which should be used to develop effective sexual assault-related interventions. The theoretical grounding provided by attitudinal and behavioral change research can be woven into a coherent intervention, along with recommendations from current programming, to create interventions targeted toward collegiate audiences. Importantly, so long as this rich body of work continues to be utilized, we will continue to develop and refine effective interventions that can be used to address sexual assault and related problems.

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