Primary Prevention and Risk Reduction Programming for College-Level Sexual Assault Prevention: Illustrating the Benefits of a Combined Approach

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### **Abstract**

Primary prevention and risk reduction strategies for reducing sexual assault on college campuses have generally been treated as distinct categories of programming, with greater emphasis placed on primary prevention in recent years. The authors propose that there is both theoretical justification and measurable benefit to synthesizing or coordinating carefully constructed primary prevention and risk reduction programming. They provide as support a summary of assessment findings from an exemplary program and discuss implications and future directions for program development and testing.

Keywords: sexual assault, primary prevention, risk reduction

Gender-based violence on college campuses, especially as it relates to sexual violence, has been receiving national attention in recent years. Calls for comprehensive programming have been put forth by both the Centers for Disease Control and Prevention (CDC, 2004) and the American College Health Association (ACHA, 2008), federal initiatives have been put in motion by President Obama (Obama, 2014), and numerous research studies on the efficacy of various prevention programs have been published (Breitenbecher, 2000; DeGue et al., 2014; Vladutiu, Martin, & Macy, 2011). Most of this attention has focused on the benefits of primary prevention programming, which aims to prevent initial perpetration through the promotion of healthy relationships, open sexual communication, and respectful sexual environments. One of the principal goals of these programs is to alter social norms that support sexual assault or change bystander cultures that are complicit in acts of sexual violence.

Although primary prevention programs are an important component of efforts to lower incidences of assault, research suggests that risk reduction programs can make a significant contribution as well (Brecklin, 2007; Brecklin & Ullman 2005; Hollander, 2014; Senn et al., 2015). Risk reduction programs seek to teach potential victims how to effectively thwart an assault attempt. While these programs may address larger social issues, their primary focus is on helping victims (usually women) learn to protect themselves from threats by using verbal and/or physical self-protection strategies (Lonsway, 2009).

Research thus suggests that primary prevention and risk reduction programs can effectively address sexual assault on college campuses. Typically, these types of programs are offered separately and in an uncoordinated way—that is, programming efforts either focus on self-defense training for students or on educational seminars that address the social norms and environmental factors associated with sexual assault. A growing body of research, however, also suggests that programming efficacy can be further improved if these approaches are *combined* within a single program (Holtzman & Menning, forthcoming; Menning & Holtzman, forthcoming; Orchowski, Gidycz, & Raffle, 2008). This may be true because a combined model not only integrates best practices from primary prevention and risk reduction into a single program, but, by doing so, it also offers students a holistic curriculum that covers a broad range of possible responses to sexual threats. Thus, as higher education scholars, administrators, and practitioners continue to examine ways to combat sexual violence on college

campuses, it may be fruitful to consider programs that offer both primary prevention and risk reduction components. By way of example, this article further elaborates the benefits of a combined approach and, as illustration, discusses a promising new program called Elemental.

## **Primary Prevention and Risk Reduction Programming**

Although sexual assault prevention programming and research with college populations has been common since the 1980s (Bart & O'Brien, 1981; Johnson & Russ, 1989; Koss, Gidycz, & Wisniewski, 1987), within the last decade efforts have focused almost exclusively on primary prevention approaches. This shift was prompted, in part, by two white papers released by the CDC and the ACHA. Both papers argued that in order to prevent initial perpetration, prevention programming should focus primarily on changing the social norms and campus environments that promote sexual violence (ACHA, 2008; CDC, 2004). Consequently, bystander intervention programs (Banyard, Plante, & Moynihan, 2004; Moynihan & Banyard, 2009), social norming campaigns (Berkowitz, 2003), social marketing campaigns (Potter, 2012; Potter & Stapleton, 2013), and awareness-raising programs, especially for potential perpetrators (Berkowitz, 2002; Foubert, 2000), have proliferated. Research on the efficacy of these programs has found significant positive effects on students' attitudes and intended behaviors, at least in the short term (Banyard, Moynihan, & Plante, 2007; Foubert, 2000; Moynihan et al., 2010). Research is more mixed on the long-term efficacy of these programs, especially with respect to changes in actual, rather than intended, behaviors, but the programmatic focus on shifting cultural norms remains important for the larger goal of eradicating sexual violence (Breitenbecher & Scarce, 1999; DeGue et al., 2014; Heppner et al., 1995; Lonsway & Kothari, 2000; Vladutiu, Martin, & Macy, 2011).

In contrast to the recent focus on primary prevention programming, risk reduction approaches have received significantly less attention in the last decade. This is true for at least three reasons. First, programs that focus on self-defense training for potential victims are seen as reactionary rather than preemptive (Lonsway, 2009). They do little to help change the societal norms that condone sexual assault and instead teach people primarily how to remain safe within an extant culture that promotes assault. Given the recent shift toward promoting culture change, it makes sense that risk reduction programs would receive less attention.

Second and relatedly, these programs are sometimes seen as a form of victim blaming in that they hold victims (typically women) responsible for their own protection rather than holding perpetrators (typically men) accountable for their bad behavior (Hollander, 2009). While it is unfortunately true that victims have often been condemned for their assaults, it would be a mistake to assume that all self-protection training amounts to victim blaming. Likewise, it would be a mistake to assume that self-protection training has no place in prevention efforts (Hollander, 2014). Primary prevention programs, like awareness-raising campaigns or bystander intervention programs, cannot be expected to eliminate sexual assault on their own. To wit, the efficacy of bystander intervention is limited given that most assaults occur in private settings, such as homes (Abbey et al., 1996), and sexual consent is often communicated in subtle ways that may not be obvious to bystanders and that vary by gender (Jozkowski et al., 2014). Likewise, efforts to raise awareness while reducing male aggression work against a lifetime of socialization by powerful cultural and subcultural forces that promote both male sexual aggressiveness and a sexual double standard that privileges men (Rvan, 2011). Although cultural change is possible in such an environment, it is generally very slow. Self-protection training, therefore, can be an important resource for individuals as they interact in a still-shifting cultural environment.

Third, it is possible that risk reduction programs have been less popular in recent years because evaluation research on existing programs has produced mixed results. For instance, self-defense training among women has been shown to improve self-esteem, increase perceived situational control, and enhance selfefficacy among participants (Brecklin, 2007; Lonsway, 2009), and research has found that although these programs have little impact on rates of attempted assault, they do impact the severity of assaults and significantly lower the rates of completed rapes (Gidycz et al., 2006; Hanson & Broom, 2005; Orchowski, Gidycz, & Raffle, 2008; Ullman, 2007). Despite these successes, however, research has also suggested that self-defense training often does not account for the situational differences associated with stranger versus acquaintance assaults (Norris, Nurius, & Dimeff, 1996; Nurius, 2000; Nurius et al., 2000). Consequently, psychological barriers to using self-protection measures are not always appropriately addressed, and this diminishes the likelihood that such techniques will be effectively used in acquaintance assaults (Breitenbecher & Scarce, 2001; Holtzman & Menning, forthcoming).

Given that both primary prevention and risk reduction programs have been empirically shown to be effective in some instances but not in others, recent programming efforts have attempted to capitalize on the strengths of each approach by combining primary prevention and risk reduction components within a single program. For instance, Orchowski, Gidycz, and Raffle (2008) recently tested a program that couples a two-hour self-defense seminar with programming on rape myths, sexual consent, the role of alcohol in assault, and the psychological barriers to self-protection. Evaluations of the program found that participants not only exhibited attitude and behavior changes that persisted over time, but, relative to a control group, they were also less likely to experience a completed rape. Notably, Gidycz and colleagues had tested the efficacy of various primary prevention and risk reduction programs for more than a decade prior, but they repeatedly found those programs to lack long-term effectiveness (Pizone-Glover, Gidycz, & Jacobs, 1998; Gidyzc, Layman, et al., 2001; Gidyzc, Lynn, et al., 2001). It was only when primary prevention was combined with self-defense training that program efficacy data began to look promising.

# **Elemental: A Sexual Assault Protection Program**

The research suggesting that prevention effectiveness increases when primary prevention and risk reduction components are combined within a single program prompted the design of a new program called Elemental. Originally created in 2011, Elemental combines educational programming on assault, consent, party culture, and party safety with physical and verbal risk reduction training. During the six-hour seminar, students learn how to recognize sexual threats early, give and get consent, communicate with partners about sex, and use a variety of self-protection techniques that vary in intensity and level of violence. Ongoing longitudinal evaluations of Elemental have found that participation in the program has both a direct effect on reducing rates of assault for at least six months post-seminar, as well as an indirect effect by changing a variety of attitudes and beliefs that predict later sexual assault (Menning & Holtzman, forthcoming). We believe this is the case because Elemental incorporates empirically grounded best practices from primary prevention and risk reduction programming. In the following section, we review those best practices and then further summarize the existing evaluation data for Elemental.

## **Best Practices for Primary Prevention Programs**

Research suggests that the effectiveness of primary prevention programs is linked to eight factors: comprehensiveness, appropriate timing, length of the program, use of varied teaching methods, facilitator training, promotion of positive relationships among participants, use of a culturally relevant curriculum, and theoretical grounding (DeGue et al., 2014; Nation et al., 2003). Elemental was designed to incorporate each of these features.

## Comprehensiveness

Programs are considered comprehensive if they utilize multiple intervention techniques and are used across multiple settings (Nation et al., 2003). Because there is considerable variety in the ways that potential assaults may unfold, it is important to present participants with a variety of realistic scenarios and a variety of appropriate tools for addressing the range of circumstances that they are most likely to face. Elemental is comprehensive in that it addresses not only individual-level risk factors and behavior modifications but also relationship-level factors and behaviors involving peers and bystanders. The program teaches participants how to recognize and deal with imminent threats, how to alter the influence of peer culture, and how to intervene on behalf of someone else at risk.

### Appropriate timing

Appropriately timed programs are those that reach their target population early enough to be effective and in a manner that is age-appropriate. Research suggests that for sexual assault prevention, that may be as early as the middle and high school years (DeGue et al., 2014). Elemental is designed for those in their late teens and early twenties and has been successfully offered to both high school seniors and college freshmen.

### Length of program

Program length is related to effectiveness (Vladutiu, Martin, & Macy, 2011). Many programs are limited to one or two hours of student contact, yet research suggests that effectiveness is based on contact time that is at least two to three times that length (DeGue et al., 2014). Not only does Elemental incorporate six hours of training, but participants leave the seminar with a set of online video review materials that promote regular practice over the course of the following year.

# Varied teaching methods

Better outcomes are achieved when multiple modes of delivery are incorporated into program design (Paul & Gray, 2011). Thus, programs that utilize lecture formats in conjunction with videos, role-playing exercises, and skill-building practices have been found to be more effective than lecture-only educational programs (Nation et al., 2003). Elemental uses a combination of lecture, guided discussion, video, role-playing, and skill-building practice with other participants, with trained, padded "attackers" and realistic props, including beds and couches.

# **Facilitator training**

Research suggests that better outcomes are obtained when program facilitators are well-trained, stable, and committed staff members who can connect effectively with participants (Mihalic et al., 2004). Elemental instructors complete approximately 25 hours of online training that addresses research on sexual assault, adolescent party culture, the role of alcohol in assault, gender socialization, and contextual issues associated with assault, including how sexual orientation, social norms about sexual consent, and gendered communication styles influence assault. The online modules also introduce instructors to each of the threats and self-defense responses that are taught during the program. Instructors then complete a four-hour, face-to-face testing session with the program creators to ensure they can adequately teach both the self-defense and primary prevention components of the program. Final certification as an instructor is based on successfully completing (with an 80% or better) both the online and face-to-face certification components. Current instructors also have advanced degrees in related social science fields, and many are housing directors, faculty members, and/or individuals with prior martial arts experience.

### Promotion of positive relationships among participants

Programs that foster positive social connections among participants, as well as with parents, peers, and administrators, demonstrate better outcomes (Nation et al., 2003). Elemental encourages building ongoing friendships and interactions among participants beyond the program, fosters proactive bystander awareness, and seeks cooperative relationships in the broader community.

# Use of culturally relevant curriculum

Programs that are culturally relevant to their target audience are more successful in achieving their goals, as are those that are designed with input from the target audience (DeGue et al., 2014; Nation et al., 2003). The design of Elemental was faculty-inspired and student-driven. The program resulted from an interdisciplinary, experiential learning course that involved collaborations among the authors and 15 students from a mid-sized Midwestern university (Holtzman & Menning, 2015). As such, the program accounts explicitly for student voices and perspectives, while also addressing relevant cultural factors associated with assault, including gender, sexual orientation, alcohol, and college hook-up culture.

# Theoretical grounding

Finally, programs that are grounded in theoretical perspectives on behavior change are more likely to achieve their goals (Paul & Gray, 2011). Elemental was developed on a foundation of scientific testing and inquiry. The program creators examined published research on sexual assault prevention and fielded three original surveys to gather information on student party culture, common sexual assault situations, and victim responses to sexual threats. This information was used in consultation with several prevention experts to design a program that addresses the complexities of assault not only for females but for male students and sexual minority students as well (Holtzman & Menning, forthcoming).

Thus, effective primary prevention programs are comprehensive, appropriately timed, and facilitated by trained instructors who use a variety of teaching methods and offer programs of sufficient length. Such programs also promote positive relationships among participants, use a culturally relevant curriculum, and are theoretically grounded. Elemental incorporates each of these principles.

### **Best Practices for Risk Reduction Programs**

A number of factors have been suggested as important for effective risk reduction programming. These include providing participants with contextual awareness skills, offering both verbal and physical response options, and addressing the contextual and psychological factors that impede a person's ability to use self-protective strategies (Breitenbecher & Scarce, 2001; National Coalition Against Sexual Assault, 2014). Elemental was designed to incorporate each of these features.

# Contextual awareness training

Programs are more effective when they increase students' contextual awareness skills and teach them to recognize threatening situations early (Rozee & Koss, 2001). Elemental uses both videos and simulations that are based on common, real-life situations ranging from stranger assaults to those committed by friends, acquaintances, and intimate partners in both public and private interactions. Participants evaluate the warning signs present through collective discussion, and they practice appropriate early intervention techniques.

# Verbal and physical response options

Programs that include both verbal and physical, and violent and non-violent response options for threatening situations are more effective (Ullman, 2007). Elemental's curriculum incorporates a variety of simple and effective verbal and physical strategies that are based upon research in social psychology, linguistics, and martial arts. The program was designed to account for the fact that different circumstances engender different *feelings* by individuals. That is, in some circumstances a person may feel confident forcefully confronting an aggressor, while in another he or she may want to exit the situation without a direct confrontation. Elemental, therefore, teaches participants four different responses for each threat discussed during the seminar. These responses are linked to the person's feelings at a particular moment, and they vary in intensity and level of violence. This allows participants to tailor responses in ways that make sense to and feel right to them.

### Address psychological barriers to self-protective responses

Research suggests there are a number of factors that impede a person's willingness to use self-protective strategies, including gender socialization norms for females that emphasize politeness and meeting the needs of others (Breitenbecher & Scarce, 2001; Nurius, 2000). Similarly, when an aggressor is a long-term friend, boyfriend, girlfriend, or classmate, individuals are sometimes unwilling to use strong physical responses, even if they might be otherwise warranted (Norris, Nurius, & Dimeff, 1996; Nurius, 2000; Nurius et al., 2000). Elemental addresses these issues not only through the varied response options it offers but also through awareness training on the effects of gender-role socialization and discussions about how an acquaintance assault can alter one's feelings about threatening situations.

Effective risk reduction programs therefore equip participants to recognize threatening situations early, understand and overcome barriers to resistance, and feel comfortable with a variety of response options. Elemental incorporates each of these principles.

#### **Evaluation Data for Elemental**

Elemental's use of best practices in both primary prevention and risk reduction programming is important because we believe it is responsible for the effectiveness data the program is generating. Since Elemental's inception, we have collected data from both participants and non-participant control groups. These data have served as the foundation for program evaluation and refinement, and the associated research findings have been reported in both published and forthcoming journal articles (Holtzman & Menning, forthcoming; Holtzman & Menning, 2015; Menning & Holtzman, forthcoming). In the next section, we briefly summarize these research findings. Although we provide a short description of our data here, please see Menning and Holtzman (forthcoming) for a more complete discussion of the data collection methods, research design decisions, and specific statistical tests we have used.

#### Methods

### Research participants

Evaluation data for Elemental are based on pre-test, post-test, six week, and six month longitudinal follow-up surveys from program participants as well as cross-sectional surveys from non-participant control groups. Students were recruited to participate in Elemental via a series of emails and announcements circulated to all incoming freshmen at two postsecondary institutions in the Midwest (one large university and one small liberal arts college). Although the program is open to both male and female students and is purposively inclusive of sexual minority students, to date most participants (78%) have self-identified as exclusively or predominantly heterosexual women. A small number of male students, most of whom have self-identified as gay or bisexual, have participated, but their very small numbers make it impossible to evaluate any variations in program effectiveness by biological sex and sexual orientation. Consequently, all reported efficacy data are related to female students. Data were collected between 2012 and 2014. The size of the sample used in the analyses varies depending on survey

and item response rates and the waves at which specific measures were taken, but the sample size ranges from 35 to 237 students.

#### Variables and measures

Our analyses focus primarily on three variables: program participation, sexual assault attitudes, and incidences of assault. Regarding program participation, students who completed Elemental were compared to non-participants from the control group.

To measure attitudes, program participants and control group students were asked to rate the degree to which they agreed or disagreed with a series of statements about sexual assault, sexual consent, personal confidence, contextual awareness, and boundary setting. These statements included the following: "I am comfortable saying, 'no' when I do not want something"; "I know what to look for to tell if a situation puts me at risk of sexual assault"; "When it comes to sex, I am confident in my ability to communicate what I want and do not want"; and "I do things because I feel obligated to do them, even if it is not good for me personally." These statements were used to create a 17-item scale, referred to as the Sexual Assault Self-Protection Scale (SASPS) (Cronbach's  $\alpha$  ranges from 0.83 to 0.91, depending on wave and subsample). The resulting scale score is an average of the individual scores of these 17 items and, accounting for negative scoring for the items that increase rather than reduce danger, has a theoretical range of -0.88 to 7.00.

To measure incidences of assault, students were asked if they had experienced unwanted sexual contact or activity that was awkward, dangerous, and sexually charged since starting college (i.e., the control group) or since taking Elemental (i.e., the program group at follow-up). Demographic control data for sex, sexual orientation, ethnic minority status, academic year, sexual assault prior to college, and previous martial arts experience were also collected. (Complete pretest, posttest, longitudinal, and control questionnaire instruments are available upon request.)

## **Findings**

As measured by the SASPS, Elemental participants show strong, significant changes in their level of comfort saying no and standing up for themselves; their ability to recognize threatening situations as well as set personal boundaries; their capacity to defend themselves in situations involving strangers,

acquaintances, and intimate partners; and their understanding of sexual consent as well as alcohol and party dangers. These same measures are associated with significantly reduced chances of assault for at least six months post-seminar (Holtzman & Menning, forthcoming; Menning & Holtzman, forthcoming; Menning & Holtzman, 2015).

More specifically, Elemental participants initially have significantly *lower* scores on the SASPS than do students in the control group (3.30 vs. 3.57 for freshman women, p < 0.05). This suggests that they tend to enter the program less prepared to address a potential assault than their peers (a difference that persists when controlling for the effects of sex, academic year, previous assault, sexual orientation, racial-ethnic minority status, and martial arts background). However, at post-test (measured immediately following the conclusion of the seminar), Elemental students have significantly higher scores on the scale than do their control-group peers (4.10 vs. 3.57, p < .05). By six weeks post-seminar program participants' scale scores drop somewhat (to 3.68), but they stabilize and remain statistically unchanged through six months post-seminar (at 3.70). Moreover, even with this slight attenuation, participants' attitude scores remain significantly higher than their pre-test scores and at least equivalent to the scores of students in the control group. This suggests that participation in Elemental not only imparts long-term change in knowledge and attitudes to students, but it brings participants' knowledge and attitudes to a level that is at least comparable to that of students in the control group. This is noteworthy given the self-selection of lower-score students into the program (Menning & Holtzman, forthcoming).

Moreover, participants' SASPS scores are predictive of later assault, such that those with higher scores have lower odds of assault six months after the program. In short, program participants' attitudes regarding sexual assault are impacted by participating in Elemental, and those attitudinal changes are associated with a lower risk of assault; binary logistic regression results suggest that a 1-point increase in the SASPS translates to 60% lower odds of assault, with the influence of other variables held constant (p < 0.01) (Menning & Holtzman, 2015). This indirect effect on assault rates is important given that few, if any, existing programs have been able to demonstrate a link between attitude change and reduced assault risk. In fact, research on existing protection programs has consistently found that they have only short-term effects on students' attitudes about assault and have almost no impact on rates of assault (Breitenbecher &

Gidycz, 1998; Breitenbecher & Scarce, 1999, 2001; Frazier, Valtinson, & Candell, 1994; Gidycz, Layman, et al., 2001; Gidyzc, Lynn, et al., 2001; Heppner et al., 1995; Lonsway & Kothari, 2000).

Notably, when we tested for direct effects of program participation, we found that not only do the SASPS scores predict the odds of assault in a binary logistic regression, but program participation itself also directly lowers the odds of assault net of the effects of other variables (Menning & Holtzman, forthcoming). In addition to providing direct support that the program has longterm effectiveness on assault rates, this finding also suggests that there are important benefits to program participation that are independent of the attitudinal changes measured by the SASPS. For the moment, participant self-selection effects, the potential for complex interactions, and related issues complicate our ability to simplify the total effect of program participation. It is possible that the program works differently for participants with different backgrounds and life experiences. These effects will be further explored in future research. For now, we can say that Elemental brings students who start with lower understandings of sexual assault to a place where their understandings are higher than or at least on par with their control-group peers, that this effect is maintained for at least six months post-seminar, and that participation in Elemental is associated with lower rates of assault.

# **Implications**

Although the data for Elemental are quite promising for the program itself, we suggest there are larger, more general implications for higher education as well. Elemental's success serves as an illustration for the broader assertion that it is the combination of primary prevention and risk reduction within a single program that generates the outcomes prevention experts seek. If long-term attitudinal changes and significant reductions in assault rates are the goal, then Elemental and other similar programs suggest that programs utilizing a combined approach should be added to existing campus efforts.

Colleges and universities already have a large number of programs in place, in part because they have been asked to respond directly to the legislative requirements associated with Title IX, the Clery Act, and the SaVE Act. For instance, in recent years universities have added Title IX compliance officers to their staff, established offices specializing in services for assault victims, created

peer victim advocate programs, revised sexual misconduct policies and established sexual misconduct boards, instituted online training courses that aim to increase sexual assault and domestic violence awareness for all students and staff, and funneled resources into various educational seminars, counseling center programs, and even self-defense seminars like RAD (Rape Aggression Defense) that are taught by university police departments.

These efforts by colleges and universities are important and they represent both primary prevention and risk reduction strategies. Notably, however, the primary prevention programs outnumber risk reduction efforts by a large margin; as a consequence, students do not receive both kinds of training equally. Moreover, and perhaps most importantly, these programs are instituted independently of one another. This means students are not necessarily exposed to both curricula and each curriculum remains disparate and uncoordinated in relation to the other. Given that most primary prevention programs do not impact students' attitudes about sex and assault for the long-term and that most risk reduction programs do not fully account for the realities of acquaintance assault, it seems clear that some coordination among programs—and within programs—is warranted. Students need something more than a potpourri of unrelated seminars.

This is not to say that institutions should abandon their current programming altogether; instead, they should look for ways to add programs that use a combined approach and find ways to coordinate and dovetail their programming so that common themes are reinforced through multiple channels. Seminars that simultaneously offer both primary prevention and risk reduction training can work with and complement, rather than supplant, existing efforts. Effectively combatting sexual assault requires a multi-faceted approach, and that approach can, and should, include not only the kinds of efforts universities currently engage in but those that the research on Elemental and similar programs suggests are promising as well.

In short, the dichotomy between primary prevention and risk reduction is a useful heuristic device and is important from the standpoint of advocacy, but that division need not—and perhaps should not—always map onto a prescriptive division in programming. Regardless of what specific combination of curricula is implemented by a given institution, we suggest that there are a number of caveats that bear attention. It is critical, of course, that such programming incorporate best practices of both program types. Moreover, the balance of content should be set at

a level that is appropriate for the context of the institution and the needs of its students. As is the case for related types of social interventions, what may work well in one environment can be less effective (and perhaps even counterproductive) in another, depending on the original conditions (Sambrano et al., 2005). Therefore, colleges and universities must dedicate themselves to ongoing assessment of outcomes and make adjustments as needed. In the process of that assessment, campuses may find answers to remaining questions, such as why a combined approach works (i.e., is it the coordination that matters, the comprehensiveness, or something else?), if it can be expected to be equally effective for all at-risk groups, how specific variations in institutional contexts interact with programming to shape outcomes, and whether specific subcategories of primary prevention and risk reduction programming are more effective than others. It is through such assessment that approaches to primary prevention and risk reduction will become more refined and better tailored, and ultimately bring institutions to the solutions they seek.

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