

# Sexual Assault Prevention Efforts in the U.S. Air Force: A Systematic Review and Content Analysis

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## Abstract

The issue of sexual assault in the U.S. military is problematic and prevalent. All military branches have undertaken an effort to develop and implement sexual assault prevention programs (SAPPs), yet these programs lack a rigorous and independent evaluation process, limiting an understanding of effectiveness. We examined the four official SAPPs that have been used within the U.S. Air Force (USAF) over the past decade by comparing their content and process with best practice suggestions for SAPPs. Content of the four USAF SAPPs was evaluated on 47 different criteria grouped into the following program elements: content, process, and outcome. Independent ratings of the criteria were reliable, and results indicated strengths and opportunities for improvement. Most notably, evidence of an objective program evaluation system is lacking. Recommendations for improving SAPPs are offered.

## Keywords

bystander intervention, sexual assault, prevention, program evaluation, military

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## Introduction

The problem of sexual assault in the military has been elevated to a key critical concern affecting the mission of the U.S. armed forces. Sexual assault in the U.S. military is prevalent and problematic on several levels (Turchick & Wilson, 2010). From an individual standpoint, sexual assault is linked to untoward outcomes for survivors such as problems with physical and mental health (U.S. Department of Defense [USDOD], 2009). Victims of sexual assault have high rates of anxiety and depression (Boyd, Bradshaw, & Robinson, 2013) and many develop posttraumatic stress disorder (PTSD) symptoms and substance abuse and use problems (Elliott, Mok, & Briere, 2004). From a military perspective, sexual assault undermines a sense of safety and unit cohesion, which can disrupt military activities, including recruitment, training, and ultimately operational missions (USDOD, 2009). If military service members do not feel safe within their own ranks, they will likely have difficulty developing and executing the expertise required to function effectively (USDOD, 2009). Clearly, the threat of sexual assault within the military poses significant problems to individuals and the organization.

Sexual assault within the military is far too prevalent. Turchick and Wilson (2010) conducted a comprehensive review of sexual assault victimization in the U.S. military and provided estimates suggesting 9% to 33% of servicewomen and 1% to 12% of servicemen have experienced an attempted or completed rape during their service. Furthermore, men reported sexual harassment rates ranging from 36% to 74% during their time in the military (Bastian, Lancaster, & Reyst, 1996). These figures are alarmingly high when compared with estimates of victimization rates in the civilian sector that are reported to be 1 in 5 for women and 1 in 71 for men (Bostock & Daley, 2007; DeGue et al., 2012).

Although reported sexual assault rates are high, these rates may underestimate the actual prevalence as underreporting is common (Mulhall, 2009). The USDOD reported 5,061 sexual assaults during 2013 (USDOD, 2014). This number represents a 50% increase from 2012. This increased reporting may represent an important shift within military culture, whereby members feel more confident that reports will be taken seriously by their chain of command. Of course, increased reporting is not the end goal of prevention efforts; rather, the prevention of sexual assault is the desired outcome.

USDOD has recently taken an increased interest in preventing sexual assault. For example, the USDOD's research and reporting program (called Sexual Assault Prevention and Response Office [SAPRO] USDOD, 2014) cites the important role of deterrence through prosecution of identifiable perpetrators as well as increased outreach to sexual assault survivors. However, prevention is still the overarching goal.

To better understand how the military has engaged the issue of sexual assault prevention, we conducted a systematic review and content analysis of

such programs in the U.S. Air Force (USAF). Specifically, we collaborated with an Air Force Sexual Assault Response Coordinator at a base located in the Northwest United States and obtained the four formal sexual assault prevention program (SAPP) iterations the USAF has unrolled to date. The objective of our study was to examine the nature of the SAPPs within the USAF in relation to best practices of SAPPs. The assumption that all prevention efforts are helpful is wrong. For example, in a study of a college-based rape prevention program, researchers used audiotapes of both male and female victims describing a sexual assault as part of a prevention program with college-aged males (Berg, Lonsway, & Fitzgerald, 1999). Participants who listened to the female victim endorsed more rape-supportive behaviors (i.e., encouraging females to consume more alcohol with the intention of having sex) illustrating the potentially harmful effect of well-intentioned prevention programs. As a result, most SAPPs now use gender-matched audio and videotapes. Yet, some SAPPs have delivered content that included mock rapes—a feature that might be potentially iatrogenic.

To understand the degree to which USAF SAPPs adhere to best practices, we identified best practice guidelines. General principles of effective prevention programs have been put forward by Nation et al. (2003) in a seminal article that identified nine overarching components found in effective prevention programs. Specifically, effective SAPPs (a) utilize comprehensive approaches that include family, peers, and community; (b) use varied teaching methods; (c) use sufficient dosage; (d) are theory-driven; (e) promote strong or positive relationships; (f) are appropriately timed; (g) use socioculturally relevant material; (h) utilize outcome evaluations; and (i) are administered by well-trained staff. The CDC (2014) currently uses these components as key elements of their public health framework for prevention programs (White House Task Force to Protect Students From Sexual Assault, 2014). These principles have also been recommended for use in a comprehensive report written for the White House for improving SAPPs for college campuses across the United States (White House Task Force to Protect Students From Sexual Assault, 2014).

Other best practice guidelines of SAPPs have been advanced—most notably within university settings. A review of the literature suggests SAPPs should include some of the following characteristics: sociocultural relevance, effective education about the facts and myths surrounding sexual assault, methods to promote empowerment of potential victims, information about why men sexually assault and what factors increase the likelihood of a sexual assault, and, among others, assertiveness skills to prevent sexual assault (see Anderson & Whiston, 2005; Banyard, Plante, & Moynihan, 2004; Brecklin & Forde, 2001; Yeater & O'Donohue, 1999). Recently, the bystander education approach gained national attention by being endorsed by the White House

(White House Task Force to Protect Students From Sexual Assault, 2014). Banyard, Plante, and Moynihan (2004) proposed the following benefits of bystander prevention programs: (a) fostering social change by changing norms regarding sexual assault, (b) broadening the responsibility to the larger community rather than smaller subsets of affected groups and individuals (e.g., victims and perpetrators), and (c) reducing defensiveness among participants by engaging them as collaborators. The military, in particular, may benefit from a bystander approach because military personnel often function in close proximity during in-garrison training, in peacetime while operationally deployed, and in combat settings. Several investigators (e.g., Banyard, Moynihan, & Plante, 2007; Foubert, Godin, & Tatum, 2010) have reported that bystander approaches help change the culture and promote men in general as potential bystanders “who can prevent a rape from occurring” (Foubert et al., 2010, p. 2239). Meta-analysis of bystander approaches also provides empirical support across a wide array of applications (Anderson & Whiston, 2005; Katz & Moore, 2013). Bystander approaches continue to be refined and developed (Banyard, 2014; Coker et al., 2011; Gidycz, Orchowski, & Berkowitz, 2011) and may have application in military settings.

Although best practice guidelines and empirical data on SAPPs are emerging, little is known about what is happening within the military. Most SAPPs are developed and tested in university settings where, like the military, sexual assault is common. Indeed, some applied research teams have attempted to extrapolate university programs in an effort to implement them in military settings (Potter & Stapleton, 2012). This application rests on assumptions of similarity between college/university settings and the military such that both have large populations of emerging adults (18-26 years old) with recent onset of independence and social norms that promote hypermasculinity.

Despite high-level national attention on military sexual assault for the past several years, no known independent and peer-reviewed program evaluation has been conducted on U.S. military SAPPs, although small-scale, internal evaluation efforts have been documented (e.g., Kelley, Schwerin, Farrar, & Lane, 2005; Rau et al., 2011). In this study, we evaluated the four iterations of the Air Force’s SAPPs to determine whether they aligned with best practices. Our study design was a systematic review and content analysis.

## **Method**

### *Identifying SAPPs*

We examined the facilitator manuals for SAPPs used by the USAF and conducted a comprehensive content analysis. We limited our analyses to the USAF because no known study has examined the SAPPs in any branch of the

military and we believe starting small is a reasonable step. The USAF has unrolled four SAPPs in the following years: 2004, 2009, 2013, and 2014. For each SAPP, there were extensive training manuals with the 2009 program having three separate training modules that addressed leaders, men, and women, respectively.

## Coding

A coding scheme was developed to identify key components of the USAF SAPPs. This scheme guided the content analysis. Articles and sources that advanced the best practice guidelines for prevention programs guided development of the scheme. We utilized the nine prevention principle recommendations by Nation et al. (2003) as an overarching framework and grouped them according to the following three categories: content, process, and outcome. Specifically, the following components are recommended in rolling out prevention efforts: content (comprehensive coverage of important concepts and information, a well-specified theoretical framework, sociocultural relevance), process (use of varied teaching methods, promotion of positive relationships between trainers and trainees, delivery that is appropriately timed in development, delivery by well-trained staff, a sufficient dosage to create behavior change), and outcome (use of outcome evaluation).

With these general elements as an organizing framework, we searched the literature for specific findings from the empirical literature regarding effective elements of SAPPs. Most literature on SAPPs comes from university studies. Vladutiu, Martin, and Macy (2011) conducted a meta-review of university-based SAPPs (see Anderson & Whiston, 2005; Bachar & Koss, 2001; Brecklin & Forde, 2001; Breitenbecher, 2000; Flores & Hartlaub, 1998; Lonsway, 1996; Schewe & O'Donohue, 1993; Yeater & O'Donohue, 1999). The Vladutiu et al. review encompasses more than 100 empirical evaluations of SAPPs. A focused literature search was also conducted to locate articles that have been published in the intervening years. A meta-analysis on university bystander prevention programs by Katz and Moore (2013) and the systematic review of prevention programs by DeGue et al. (2014) proved particularly helpful additions with respect to emerging SAPP outcome measures. Military-based SAPPs also informed the coding system (e.g., Turchick & Wilson, 2010; Williams & Bernstein, 2011).

From this process, we identified 47 specific recommendations or "best practices" for delivering a SAPP that were integrated into the nine major categories of prevention programs recommended by Nation et al. (2003) and further conceptually organized into the three broad themes: content, process, and outcomes (see Tables 1, 2, and 3, respectively).

Next, each USAF SAPPs was reviewed and compared with this standard (*Note.* The 2009 program with the three nested programs for leaders, men and women were treated as if separate). Each of the 47 recommended components were coded as “present” or “absent.” Coding on a binary system allows for a descriptive analysis and shows the relative strengths and struggles of the different programs. If specific content could not be identified for a particular item, it was assumed to be absent.

Ratings were made independently by two research team members who have PhD-level training and uniformed military experience, which proved useful for interpreting military terminology and assessing other salient aspects of the programs in context of the military culture. Interrater reliability suggested high agreement (overall  $\kappa = .90$ , 95% confidence interval [CI] = [0.85, 0.95]). Disagreements were resolved through consultation.

## Analysis

Raw data were simple 1 (“present”) or 0 (“absent”) ratings. After discrepancies were resolved, the final “present” codes were summed and divided by the total number possible. For instance, the 2005 SAPP was coded to have 6 out of a possible 23 points in the area of *comprehensive content* resulting in a total score of 0.26.

## Results

In an effort to understand the degree to which USAF SAPPs align with best practices, we present several analyses. First, a short narrative of each program is provided. Second, descriptive statistics on overall scores for each program by major component are presented. Later, we present descriptive statistics on the more nuanced areas of training as suggested by Nation et al. (2003) and organized into the three areas of content, process, and outcome.

### Program Narratives

*2005 program.* This program delivered content focused on education (e.g., role of alcohol, male victims, trauma and healing, cycle of violence, reporting guidelines and barriers, etc.). There was a commander’s statement emphasizing the importance of sexual assault prevention as part of the 90-min mandatory training video, which contained the content noted above. This video, along with a short question and answer session, was held in mass formations at base theaters across the USAF and comprised the totality of the first iteration of USAF sexual assault prevention training. Unfortunately, there was a scenario-based teaching segment wherein a mock rape occurred which may

have been triggering (see Berg et al., 1999). No formal or informal assessment or evaluation was conducted.

**2009 program.** The second SAPP is distinct in part for the production of three separate training programs, one for leaders, males, and females, respectively. This program introduced the bystander intervention theme, relied on scenarios and discussions to teach concepts. Again, the session was 90 min in duration and included scenarios, including rape scene visualization exercises, with accompanying small-group discussions. The stated objective of each of the 2009 program modules was to motivate bystanders to act to prevent sexual assault. No formal or informal evaluation occurred.

**2013 program.** The stated objectives for the 2013 programs were to increase awareness/knowledge of sexual assault, develop problem-solving skills, become empowered to act, and reduce risk of sexual assault. A 90-min session with various group sizes was used to conduct this training. The training reverted to mixed-gender audiences, and attendance was mandatory; however, a disclaimer announced that if the training seemed troublesome, for any reason, members were free to leave. Reporting mechanisms were emphasized in this iteration of training for the first time. No evaluation of any kind for this program was conducted.

**2014 program.** This latest SAPP iteration focused on recognizing offender-grooming methods. Objectives included the following: recognizing negative impacts of sexual assault, identifying offender-grooming behaviors, and demonstrating strategies for effective bystander intervention. The 2.5-hr sessions were conducted in small groups of 20 to 25 members facilitated by a peer-trained facilitator. A key component of this training was a 6-min video depicting “Jack the rapist,” whereby an actor talked about how he acknowledged using common grooming tactics to include coercion and power, to subdue his victim and ensure he had sex with her. The video concluded with a subject matter expert discussing the victim grooming tactics used by the offender. The 2014 program also contained a cursory 10-question survey, which assessed whether or not participants recalled specific information from content delivered during the small-group discussions. This assessment tool did not assess program prevention effectiveness.

### *Descriptive Statistics: Overall*

Across the 47 best practice components, some progress appears to be made across time as compliance rates rise with subsequent iterations. However, there is no evidence that the USAF has made strategic or systematic efforts to

increase compliance with components found in best practices literature or how theory shaped new SAPP iterations. The 2005 iteration had only 19.57% compliance, whereas the 2009 iteration had 37.23% compliance for the leaders' module, 46.81% for the men's training, and 58.51% for the women's training. The 2013 training showed 54.26% compliance and the 2014 had 60.64% compliance. There was no evidence that SAPP development is guided by theory. That is, changes that occur from one iteration to the next are not supported by citing theory or research.

### *Descriptive Statistics: Nuanced Findings*

To better understand the nuances of the training programs, we next organized outcomes within the nine recommended areas (Nation et al., 2003) by rollout year (see Table 1) and within the areas of content, process, and outcome evaluation (see Tables 1, 2, and 3, respectively). Recall that if the training manuals did not cover particular information, we coded it as absent. In Table 4, overall statistics are provided collapsing the 47 specific items into the nine key categories identified by Nation et al. (2003). As can be seen from Table 4, all SAPP iterations were the strongest in the areas of comprehensive content and sociocultural relevance. The weakest components included utilizing professionally trained educators and both evaluating program outcomes and developmentally appropriate delivery (delivered early in service members career and at all levels of the USAF). Other components had varying levels of compliance across the years. To support Tables 1, 2, and 3, we provide brief narrative responses in question and answer format for training content, process, and outcome evaluation in order.

*Do the USAF SAPPs effectively address general education?* With regard to facts and myths about sexual assault, the USAF is generally on track, especially with its 2013 and 2014 iterations. Similarly, the USAF appears to be adequately addressing the role gender socialization has on sexual assault. Of course, the degree to which general education delivered in the trainings is impacting USAF service members is not known.

*Do the USAF SAPPs effectively address potential victim empowerment?* The USAF has made significant strides by including information that could help potential victims avoid or prevent a sexual assault. While earlier iterations of the USAF did not include information about general risk factors of sexual assault or how to identify risky situations, later programs have done so. Furthermore, the current program directly discusses the role alcohol may have on sexual assault. Our coding scheme defined victim empowerment as any

**Table 1.** Best Practices of SAPPs: Training Content.

Major Areas and Specific SAPP Guidelines	Year					
	2005	2009-L	2009-M	2009-W	2013	2014
Comprehensive coverage of concepts						
General audience education						
Facts/myths about sex assault	Yes	No	No	No	Yes	Yes
Gender role socialization	No	Yes	Yes	Yes	Yes	Yes
Empowering individuals						
Risk factors: General education	No	No	No	Yes	Yes	Yes
Risk factors: Situations, context	No	No	No	Yes	Yes	Yes
Rape avoidance techniques	No	No	No	Yes	Yes	No
Identifying perpetrator behaviors	No	No	No	Yes	Yes	Yes
Assertiveness training to prevent assault	No	No	No	Yes	No	No
Alcohol use	Yes	No	No	Yes	Yes	Yes
Bystander empowerment						
Risk factors: General education	No	No	Yes	Yes	Yes	Yes
Risk factors: Situations, contexts	No	Yes	Yes	Yes	Yes	Yes
Rape-deterrence techniques	No	Yes	Yes	Yes	Yes	Yes
Identifying perpetrator behaviors	No	Yes	Yes	Yes	Yes	Yes
Bystander skills to prevent sexual assault	No	Yes	Yes	Yes	No	No
Alcohol use	Yes	No	yes	Yes	Yes	Yes
Perpetrator intervention						
Rape-supportive attitudes addressed	No	Yes	Yes	Yes	Yes	Yes
Men's understanding victim experience	Yes	Yes	Yes	Yes	Yes	Yes
Men's motivation to sexually assault	No	No	Yes	No	Yes	Yes
Men's anger and desire to hurt	No	No	No	No	No	No
Military-specific content training						
Uniform Code of Military Justice education	No	Yes	Yes	Yes	Yes	Yes
Commander buy-in and involvement	No	Yes	Yes	Yes	Yes	Yes

(continued)

**Table 1. (continued)**

Major Areas and Specific SAPP Guidelines	Year					
	2005	2009-L	2009-M	2009-W	2013	2014
Sexual assault reporting system	Yes	Yes	Yes	Yes	Yes	Yes
Military-specific sociocultural relevance						
USAF-specific terminology and culture reviewed	No	Yes	Yes	Yes	Yes	Yes
Gender-specific trainings for men and women	No	No	Yes	Yes	No	No
Program is clearly supported by commanders	No	Yes	Yes	Yes	Yes	Yes
Theory-guided approach						
Program specifies the theories and strategies used	No	No	Yes	Yes	Yes	No
Bystander theory and philosophy						
Program emphasizes bystander's role	Yes	Yes	Yes	Yes	Yes	Yes
Developmentally appropriate						
Program introduced early in career trajectory	No	No	No	No	No	No
Program is implemented at all levels	No	No	No	No	No	Yes

Note. SAPPs = sexual assault prevention programs; 2009-L = training manual for leadership; 2009-M = training manual for male service members; 2009-W = training manual for female service members; USAF = U.S. Air Force.

program component that promotes awareness (e.g., identifying general risk, identifying risky situations) and skills (e.g., specific rape avoidance techniques, assertiveness, and social skills training). We found considerable overlap between victim and bystander empowerment interventions as many program components were used for both goals. With this overlap in mind, we note that later iterations of the SAPPs pursued more of a bystander focus and less of a victim empowerment focus. Given the overlap between the two objectives, however, we cannot conclude that victim empowerment has been neglected; as it is possible that victim empowerment can still be promoted when using a bystander focus.

*Do the USAF SAPPs effectively address bystander empowerment?* Starting in 2009, all USAF SAPPs have developed a clear focus on the importance of engaging bystanders in preventing sexual assault. That is, such programs

**Table 2.** Best Practices of SAPPs: Process Variables.

Major Areas and Specific SAPP Guidelines	Year					
	2005	2009-L	2009-M	2009-W	2013	2014
<b>Varied teaching methods</b>						
Experiential methods used	No	Yes	Yes	Yes	Yes	Yes
Didactic methods used	Yes	Yes	Yes	Yes	Yes	Yes
Videos used to promote training	Yes	Yes	Yes	Yes	Yes	Yes
Computer-based training available	No	No	No	No	No	No
Mass media used to promote SAPP	No	No	No	No	No	No
<b>Sufficient time/dosage of information</b>						
Program delivered in more than one session	No	No	Yes	Yes	No	No
If single session, sufficient time provided	No	Yes	Yes	Yes	Yes	Yes
<b>Well-trained staff</b>						
Professionally trained presenters	No	No	No	No	No	No

Note. SAPPs = sexual assault prevention programs; 2009-L = training manual for leadership; 2009-M = training manual for male service members; 2009-W = training manual for female service members.

cover information about how service members could identify risky situations, develop rape deterrence techniques, and identify how possible sexual perpetrators act. Furthermore, such programs focus on how alcohol can lower the inhibitions of perpetrators and reduce judgment, thereby becoming a risk factor. Of interest, our results suggest that the 2013 and 2014 programs do not adequately cover specific social skills that would help bystanders intervene to prevent sexual assault. That is, it seems as though the critical last step in a bystander program, intervening to help potential perpetrators stop or potential victims to be safe, is not being adequately addressed.

*Do the USAF SAPPs effectively address perpetrator interventions?* There is a mixed approach to dealing with educating individuals about men’s attitudes toward rape, their motivation to rape, and men’s understanding of a victim’s experience. In short, there has been a trend to include such information in trainings over time such that the 2013 and 2014 programs address men’s rape-supportive behaviors, motivation to rape, and understanding of the

**Table 3.** Best Practices of SAPPs: Outcome Evaluation.

Major Areas and Specific SAPP Guidelines	Year					
	2005	2009-L	2009-M	2009-W	2013	2014
Competency-related outcomes						
Changes in skill or attitude versus attendance only	No	No	No	No	No	No
Bystander-related measures						
Bystander efficacy: Perceived competence	No	No	No	No	No	Yes
Bystander's intent to help if in position to do so	No	No	No	No	No	No
Bystander helping behaviors posttraining	No	No	No	No	No	No
Rape-related outcome measures						
Rape-supportive attitudes: Reduction in	No	No	No	No	No	Yes
Rape proclivity: Attitude adjustment	No	No	No	No	No	No
Sexual assault behaviors posttraining: Self-report	No	No	No	No	No	No
Sexual assault incident: Official report	No	No	No	No	No	No
Outcome assessment process						
Independent evaluation of program effectiveness	No	No	No	No	No	No

Note. SAPPs = sexual assault prevention programs; 2009-L = training manual for leadership; 2009-M = training manual for male service members; 2009-W = training manual for female service members.

victim's experience. Of interest, none of the iterations dealt with the question of men's desire to inflict pain and anger in relation to sexual assault (Schewe & O'Donohue, 1993).

*Do the USAF SAPPs effectively address how sexual perpetrators will be handled in the military?* The USAF has taken a clear approach to educating service members about the consequences of committing sexual assault. Since 2009, all SAPPs have clearly delineated that sexual assault is a crime within the Uniform Code of Military Justice and all programs have emphasized that commander involvement and ownership of sexual assault programs to promote a sense of seriousness about sexual assault. Furthermore, all programs have delineated the mechanisms by which sexual assault can be reported. Of

**Table 4.** Best Practice Ratings<sup>a</sup> for USAF SAPPs.

Prevention Program Components <sup>b</sup>	USAF SAPPs						M	SD
	2005	2009-L	2009-M	2009-W	2013	2014		
Content	0.26	0.50	0.65	0.83	0.83	0.81	0.65	0.23
Content is comprehensive	0.26	0.50	0.61	0.83	0.83	0.89	0.65	0.24
Is theoretically driven	0.00	0.00	1.00	1.00	1.00	0.00	0.50	0.55
Socioculturally relevant	0.33	0.67	0.83	0.83	0.83	0.50	0.67	0.21
Process	0.18	0.36	0.41	0.45	0.27	0.41	0.35	0.10
Delivery is appropriately timed in development	0.00	0.00	0.00	0.00	0.00	0.25	0.04	0.10
Employs well-trained staff	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Is of sufficient dosage	0.00	0.50	0.75	1.00	0.00	0.50	0.46	0.40
Teaching methods are varied	0.40	0.60	0.60	0.60	0.60	0.60	0.57	0.08
Promotes positive relationships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Outcome	0.00	0.00	0.00	0.00	0.00	0.22	0.04	0.09
Uses outcome measures	0.00	0.00	0.00	0.00	0.00	0.22	0.04	0.09
Total	0.19	0.37	0.47	0.59	0.54	0.61	0.46	0.16

Note. USAF = U.S. Air Force; SAPPs = sexual assault prevention programs; 2009-L = training manual for leadership; 2009-M = training manual for male service members; 2009-W = training manual for female service members.

<sup>a</sup>Best practice ratings are based on independent ratings of the 47 items on the code sheet used in this study. Scores range from 0 to 1.00.

<sup>b</sup>Prevention program components are proposed by Nation et al. (2003).

note, the 2005 iteration did not address commander involvement or clearly communicate that sexual assault is a crime within the military; thus, progress has been made.

*Do the USAF SAPPs effectively tailor their message to USAF terminology and culture?* Yes, it appears that all training programs have engaged language that is specific to the USAF, a touch that should promote the credibility and relevancy of the programming. For instance, examples for small-group discussions and scenarios used throughout the programs include elements familiar to military personnel to include mention of military formations, recreation facilities, chow halls, chain of command references, officer and enlisted club settings, and other commonly used military jargon specific to the military population.

*Do the USAF SAPPs effectively address male and female audiences?* Results are mixed on this front, which is important given research suggesting that SAPPs are more effective with segregated audiences, particularly for women in all-female groups (Anderson & Whiston, 2005; Bachar & Koss, 2001; Brecklin & Forde, 2001). Some of the content in 2009 was tailored to men and women. However, the 2013 and 2014 programs seem to have gone back to one-size-fits-all approach, which may not be as effective.

*Do the USAF SAPPs effectively demonstrate support from commander level leaders?* Since 2009, all SAPPs have specifically emphasized that commanders are behind the SAPPs. Such overtly stated support is presumed to emphasize the importance of sexual assault prevention.

*Do the USAF SAPPs effectively rely on theoretical perspectives to guide program development and delivery?* We found mixed evidence in using a theoretical foundation to guide program development and delivery. For example, the 2013 and 2009 SAPPs appear to be based on a theoretical foundation whereas the others do not. Having a theoretical foundation seems important because such a foundation can be used to determine what material should be included in a prevention effort as well as facilitate decision making about how information should be most effectively delivered to service members. Ironically, it is expected that most military activities are guided by sound theory and understanding of the mission; the same standard should be applied to internal affairs of such importance.

*Do the USAF SAPPs target service members early in their careers?* Unfortunately, there appears to be no guidance on when service members receive a SAPP. Introducing an SAPP should, theoretically, occur early in a person's career to both socialize individuals and emphasize importance (Katz & Moore, 2013).

*Do the USAF SAPPs target all levels and ranks of military personnel?* Relatively little information is known about this question. Prior to 2013, there is no mention of who should receive this training—leading to an assumption that there was not an emphasis on pushing the material to the senior leadership level. The 2013 program suggests that the information is not intended for senior leadership, whereas the 2014 program suggests that all levels and ranks of personnel should receive SAPPs.

To this point, the content of the SAPPs has been covered. We now turn to how the SAPPs are delivered or the process of training as can be found in Table 2.

*Do the USAF SAPPs utilize recommended delivery mechanisms?* Since 2009, the programs have utilized experiential training methods, which is a departure from using solely didactic methods. Using varied teaching methods is recommended in the delivery of prevention programs (Nation et al., 2003). Furthermore, all iterations of the program have utilized videos and workshops that emphasize didactic methods of imparting information rather than relying simply on lectures. Of interest, none of the program has engaged computer-based programs as part of the SAPP, which could afford individualized training and feedback, especially in cases where high-risk personnel might be identified. Furthermore, it is not known to what degree SAPPs link with in-house mass media campaigns that are designed to raise the consciousness of service members about the issue. That is, the training materials we reviewed did not show evidence of a coordinated message with a larger media effort.

*Do the USAF SAPPs take enough time to deliver the message?* This question is impossible to address because it is not known whether the programs are effective. That said, information does exist on whether the program is delivered in more than one session. With the exception of 2009, none of the SAPPs are delivered in more than one session. The relative lack of continuity of training is problematic on several levels. To begin, it is likely difficult to change attitudes in a single, short session. Also, delivering this important message in a single session may symbolically express to service members the idea that sexual assault prevention is relatively unimportant. Furthermore, there is mixed evidence that the training sessions, if only given in one session, are sufficiently lengthy to be effective.

*Do the USAF SAPPs rely upon professionally trained presenters?* This question could not be addressed from the materials we reviewed at any time point. From discussions with trained facilitators, the concept of “train the trainer” is being used for the majority of the training sessions now that training is conducted in small groups of 20 to 25. With some bases having over 20,000 personnel, it does not seem feasible that professionally trained presenters could be made available to conduct such extensive training sessions in the time frames allotted. Training is typically delivered only a month or two each year after the latest iteration of the prevention training is rolled out from Air Force headquarters.

We now turn to the degree to which the USAF has evaluated the effectiveness of their programs.

*How effective are SAPPs?* To our knowledge, there is no way of knowing how effective SAPPs are in realizing their objective. The 2014 SAPP administrators

cursory assessments of both rape-supportive attitudes and bystanders' sense of efficacy in responding to a sexual assault risk. Otherwise, none of the programs, current or past, competently assess the impact of the trainings. Thus, it is simply not known whether the efforts are effective in impacting bystander's intent to help or actual help behaviors. Furthermore, little is known if the behaviors, attitudes, or proclivities of potential perpetrators have shifted due to the trainings.

## **Discussion**

This is the first known independent review of the content of a military SAPP. Our results suggest that the USAF is slowly moving into compliance with recommendations that largely come from university settings. There is a strong and increasing emphasis on bystander interventions which aim to change the climate of tight-knit groups such that communities begin to experience a call to stop sexual violence rather than simply suggesting potential victims and/or potential perpetrators change behaviors. Such a move is gathering support from various groups at the time of this writing, including from our Nation's Commander-and-Chief, President Obama.

Further positives include that the USAF has consistently targeted material judged to be important in preventing sexual assault such as information that can help potential victims understand and protect themselves from potential harm. The USAF is also commended for clearly communicating how sexual perpetrators will be handled through presenting the two methods of sexual assault reporting as well as discussing relevant laws in the Uniform Code of Military Justice. The combined efforts of discussing reporting guidelines and how sexual perpetrators will be handled may be linked to the recent increased reporting of sexual crimes (USDoD, 2013). In a similar manner, the USAF appears to effectively tailor their message to their audience by using USAF terminology and unique cultural references and by emphasizing commander support for such programs.

While positives exist, there certainly is room for improvement. For example, our results suggest a need for more training in specific skills that individuals can use to protect themselves and effectively intervene if they find themselves in a bystander role witnessing a situation that might result in a sexual assault. A move toward competency-based training and learning might promote the USAF's goal of reducing the incidents of sexual assault. Furthermore, the USAF might consider not abandoning training designed to help potential perpetrators change their attitudes and behaviors; just because efforts are being directed to bystanders, attention should not be removed from those at risk to sexually assault which seems to be the case in the most recent

SAPP. Another concern is that while the 2009 SAPP iteration delivered content separately to males and females, the USAF seems to have since abandoned this approach. Evidence from university settings (Anderson & Whiston, 2005; Bachar & Koss, 2001; Brecklin & Forde, 2001) suggests that returning to a method of delivering training to men and women separately might promote effectiveness, though the evidence is mixed. We recommend that the USAF have their programs objectively tested in the following formats: mixed-gender versus separate gender, against each other to determine what holds most true for this population. Such data would provide a much-needed contribution to the understanding of effective military sexual assault prevention training.

Yet another recommendation for improvement might include tailoring programs to match the individual characteristics of the participant. These differences may include personality, rank, cultural background, Air Force specialty code (job code), and gender. This supports the suggestions that different subgroups within the military, with different social and cultural backgrounds should have an SAPP tailored to meet their needs. This lends additional support for single-gender trainings, potentially different trainings for officers and enlisted personnel, and potentially the use of culturally specific trainings for various ethnic and racial groups.

Of course the best way to determine whether a program is effective is to design and implement a high-quality evaluation of the program that uses sexual assault as the primary outcome measure. While the authors maintain that this is imperative and that rigorous research on SAPP in the military must be a priority, we also understand that experimental research projects can be daunting, as well as costly and difficult to implement. This research provides valuable information about SAPPs and highlights both the strengths and limitations of these programs when viewed through an evidence-informed lens. We also make some suggestions for improvement based on the evidence from nonmilitary SAPPs (Anderson & Whiston, 2005; Banyard, Plante, & Moynihan, 2004; Brecklin & Forde, 2001; Yeater & O'Donohue, 1999), and the research from the fields of criminal justice (Andrews & Bonta, 2010) and prevention literature (Nation et al., 2003).

One of the consistent themes across all these literature bases is the need for not only outcome evaluation but also ongoing process evaluation and a quality improvement process.

Research states characteristics of effective programs are grouped into five main categories: leadership and development, staff characteristics, quality assurance, assessment, and intervention (Lowenkamp, Latessa, & Smith, 2006). These five areas generally conform to the categories that emerged in this research, and implementation of a program evaluation and quality improvement process for SAPP has the potential to inform the development of increasingly effective SAPPs.

A combination of not having a robust outcome assessment approach and the lack of a clear theory to direct SAPP content and delivery mechanisms is worrisome. Four programs have been launched in a 10-year span; what evidence or theory guides such changes and adjustments? For example, when and how often should SAPPs be introduced to service members? How might military-wide campaigns be integrated with such programs? Could computers or other technologies be utilized to promote and enhance training efforts, including demonstration of certain competencies? Is enough time being dedicated to SAPPs? How might training be improved if professionally trained educators were involved? Each of the questions advanced in this paragraph is linked to a deficit in the USAF's history of SAPPs based on our review. To confidently move forward, the USAF would benefit from systematically assessing outcomes and testing some of the unique components in their programming.

All studies have limitations and this one is no exception. To begin, we based our systematic review only on programs within one military branch limiting our implications to the USAF. Future studies may examine what SAPPs have been delivered in other military branches. Also, our analyses are based on very few programs and training manuals. A more detailed description of SAPPs could come from gathering information from those who participate in or deliver the programs. As more information about military-based SAPPs arises through reporting, it is expected that such limitations could be overcome.

Recommendations for future research could also include observing the current Air Force training program to gather additional information regarding the fidelity of the implementation of this training. It is one thing to read a training manual and come up with analysis and conclusions about the program but quite another by actually observing training sessions. Perhaps a small qualitative study could be undertaken to interview not only participants but also trainers and Air Force leadership regarding their impressions of the training, which could be used to further refine the content and implementation of the program. In addition, conducting a rigorous experimental study of the most current version of the Air Force sexual assault training compared with other prevention programs that have been shown as effective according to the literature would be a positive step toward creating the most effective program possible. Last, although this review concentrated specifically on the Air Force programs, each of the military branches could embrace a similar research agenda and then publish and share the results of their reviews so that all members of the military community benefit from this DoD-wide approach to reduce and eventually eliminate sexual assault from the ranks.

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