Chapter 3
Integrated Alcohol and Sexual Assault Prevention for Military Service Members: Conceptual Rationale and Program Models

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3.1 Introduction

Sexual violence – which includes experiences of sexual harassment, unwanted sexual contact, sexual coercion, and rape (Basile et al., 2014) – is a significant public health problem within the United States (Smith et al., 2018). The experience of sexual violence has wide-ranging psychological, health, and economic consequences for individuals (Rees et al., 2011; Martin et al., 2011). In fact, according to the 2011 US National Intimate Partner Sexual Violence Survey, the cost of rape is estimated to be $122,461 per victim, resulting in a population economic burden of 3.1 trillion US dollars (Peterson et al., 2017).

Attention to the prevalence and consequences of sexual violence among members of the US military has increased over the past 10 years (for reviews, see Bell et al., 2018; Castro et al., 2015; Lofgreen et al., 2017; Mondragon et al., 2015; Suris & Lind, 2008; Wood & Toppelberg, 2017). This focus is warranted, given data suggesting that 55% veteran women report sexual harassment during military service (Skinner et al., 2000), 54% of veteran women report some form of unwanted sexual contact during military service (Sadler et al., 2001), and 62% of veteran women report experiences of sexual assault at some point in their lives (Booth et al., 2011). A more recent survey conducted by RAND Corporation National Defense Research Institute (2014) among 560,000 US service members indicated that 4.9% of women and 1% of men serving in active duty experienced a prior year sexual assault. There is evidence that rates of sexual victimization among women in the military are comparable to (Black & Merrick, 2013) or higher than rates among civilian women (Bostock & Daley, 2007; Sadler et al., 2003; Schultz et al., 2006).

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Whereas some risk and protective factors for sexual violence are similar for civilian and military populations, there are several unique aspects of military culture and the military environment that contribute to sexual violence among service members (Castro et al., 2015; Stander & Thomsen, 2016; Turchik & Wilson, 2010). First is the culture of military masculinity which prioritizes physical violence, subordination to others, and dominance (Belkin, 2012; Brown, 2012; Connell, 1985; Hinojosa, 2010; Hooper, 1999; Kurpius, & Lucart, 2000). As Connell (2005) notes, "violence on the largest possible scale is the purpose of the military; and no arena has been more important for the definition of hegemonic masculinity in European/American culture" (p. 213). The importance of hegemonic masculinity within military culture is particularly relevant for understanding the root causes of military sexual violence, given the strong association between adherence to traditional gender role ideology and sexual aggression in civilian populations (Murnen et al., 2002; Tharp et al., 2013). The culture of military masculinity is also rooted in power differentials between men and women in the military. For many years, women in the US military were restricted from participating in specific positions that led to promotion, including combat roles (see Katz, 1992). The emphasis on traditional masculinity in the military also communicates that women are of lesser value than men within military service (Vogt et al., 2007), which serves to justify the harassment and mistreatment of women (Barkalow & Raab, 1990; Katz et al., 2007).

As discussed by Castro et al. (2015), other aspects of military culture create an environment conducive to sexual violence. For example, because military culture values mission accomplishment and performance, leaders may dismiss allegations of sexual violence when the complainant is a low performer, or when the alleged assailant is a top performer. As a result, perpetrators of sexual aggression may deliberately target service members who they believe will not be taken seriously if they reported an assault. Military culture also values resolving conflicts "at the lowest possible level" (Castro et al., 2015; p. 5). As a result, experiences of harassment or assault may not be reported to the chain of command, especially if the harasser/assailant is senior in rank. Because leaders are also held accountable for establishing a safe environment for their unit, leaders also may "dismiss the allegations as unfounded, or convince the service member who has been harassed or assaulted not to formally report the incident" if they fear they will be held responsible for allowing an environment conducive to sexual violence to exist within their unit (Castro et al., 2015, p. 6). Finally, as noted by Castro et al. (2015), to prepare for combat, male and female service members are taught to engage in objectification. Further, aggression is a long-standing and normalized component of combat (Hunter, 2007; Neill, 2000). Whereas objectification may support mission readiness, the capacity to act with diminished empathy can also be misdirected toward other service members and may facilitate sexually aggressive behavior among individuals who feel entitled to sexual activity (Hunter, 2007). Notably, feeling entitled to sexual activity is associated with sexual aggression (Bouffard, 2010) and mediates the association between adherence to traditional masculine norms and rape-related attitudes and behaviors (Hill & Fischer, 2001).

Rates of trauma in childhood and adolescence are also higher among service members compared to civilians (Turchik & Wilson, 2010; Zinzow et al., 2007). For example, Bostock and Daley's (2007) examination of 2018 active duty US Air Force women indicated that most initial experiences of rape (75%) as well as most of the most recent experiences of rape (56%) occurred when the service member was a civilian. Prior victimization is a well-documented predictor of subsequent victimization among service members (Suris & Lind, 2008), and it is believed that the emotional and behavioral consequences of trauma serve to increase risk for subsequent victimization (Jaffe et al., 2019). Alarmingly, women who experience sexual victimization before military service are two to five times more likely to experience revictimization during their time in service (Merrill et al., 1999; Salder et al., 2003).

At the outer layers of the social ecology, perceived acceptance of violence at the organizational level, environmental factors, and military policies also contribute to sexual violence in the military. At an organizational level, the perception that command will not hold perpetrators of sexual violence accountable for the crime (Pershing, 2003) or that victims who report will be met with social or professional retaliation (Campbell & Raja, 1999) dissuades victims from reporting and communicates to perpetrators that they will not be held accountable for sexual violence (see Groves, 2013). Data from the 2005 Service Academy Sexual Assault Survey of Cadets and Midshipmen found that both male and female cadets and midshipmen who experienced sexual victimization had negative views about the leadership's tolerance of sexual violence. Importantly, as reported by Sadler et al. (2017), lower rates of sexual assault are reported in units where leadership is perceived to take the issue of sexual assault seriously, demonstrates a zero tolerance stance toward sexual harassment, and indicates support for service members who seek psychological care. Environmental factors – such as the frequent movement of military personnel across units and the proximity between service members within coed dormitories and barracks (see Sadler et al., 2003) – can also make it easy for perpetrators to opportunistically target service members who they believe would be unlikely to report an assault because they are either new to the unit or are preparing to leave the unit. Policies that make it difficult to report sexual violence – such as polices regarding collateral misconduct at military service academies (see Brubaker, 2009) – also foster continued violence by limiting organizational capacity to hold perpetrators accountable for their actions.

3.1.1 Purpose of the Current Chapter

The high rates of sexual violence among US military service members underscore the importance of the development of comprehensive sexual assault prevention and response efforts which attend to the unique ways that military culture cultivates violence. Whereas sexual assault prevention programs for military service members are growing, the scientific evaluation of these efforts is lacking in comparison to the scientific evaluation of sexual assault prevention programs for

civilians (Gidycz et al., 2018). Efforts to advance the science of sexual assault prevention and response for the military also remain relatively siloed from other efforts to advance the health and resiliency of service members. Arguably, to have a wider-population impact, it is necessary for prevention efforts to target mechanisms that have the capacity for fostering synergistic change in multiple health outcomes (Armstead et al., 2017).

Accordingly, the present chapter advances the science and practice of sexual assault prevention efforts for military service members by developing a rationale for integrated alcohol use and sexual assault prevention for service members. In this chapter, integrated alcohol use and sexual assault prevention approaches are operationalized as interventions that include *active alcohol use intervention* administered in combination with sexual assault prevention strategies. Toward this goal, the current chapter will first provide descriptive information on the context of sexual violence in the US military, including the prevalence of assaults among women and men, the characteristics of assaults, consequences of violence, as well as processes of disclosure, help-seeking, and reporting. Next, the chapter outlines the current science and practice of sexual assault prevention in the military, beginning with the prevention approach of the Department of Defense and ending with a review of the state of prevention science. Next, the chapter articulates the rationale for integrated alcohol and sexual assault prevention, by reviewing the rationale for addressing cross-cutting mechanisms for sexual violence and other health outcomes in prevention, as well as the scope of alcohol use in the military. Further, the chapter reviews how prevention can target various ways that alcohol use serves as a risk factor for sexual aggression, risk factor for sexual victimization, and complicating factor in bystander intervention. The chapter concludes by reviewing progress toward developing integrated alcohol use and sexual assault prevention approaches for civilian populations and exploring how these models have been adapted or developed for military populations.

3.2 The Scope of Sexual Assault Among Service Members

3.2.1 Prevalence of Sexual Violence

Sexual violence impacts all service members, regardless of gender identity. A meta-analysis of 59 studies revealed that 15.7% of military personnel and veterans indicate experiencing sexual victimization during military service, including 2.9% of men and 38.4% of women (Wilson, 2016). According to a different meta-analysis of 29 studies conducted by Hoyt et al. (2011), rates of sexual victimization at any point during military service among men range between 0.03% and 12.4% across studies. According to Hoyt et al.'s (2011) analysis of rates of military sexual trauma among men across 29 studies, experiences of sexual victimization were reported by approximately 0.09% of male service members over a year. It is important to note that the

prevalence of sexual victimization during military service varies depending upon the survey sample, as well as the definition of sexual victimization utilized.

The Workplace and Gender Relations Survey of Active Duty Members is administered every 2 years across the entire active duty force (see Rock et al., 2011). The consistent administration of the survey makes it an important source of information for understanding potential changes in the rate of sexual victimization among service members over time. For example, as reported by the Defense Manpower Data Center (2012) survey note of the 2012 Workplace and Gender Relations Survey of Active Duty Military, the rates of unwanted sexual contact (which included attempted or completed sexual intercourse, as well as unwanted touching of the genitals or other sexually related parts of the body) indicated by women and men service members were 6.8% and 1.8% in 2006, 4.4% and 0.9% in 2010, and 6.1% and 1.2% in 2012, respectively. Analysis of the 2018 Workplace and Gender Relations Survey of Active Duty Members reported by the Office of People Analytics (2019) reports similar findings, finding that 6.2% of active duty women and 0.7% of active duty men experienced sexual assault in the past year. Data from the 2019 Workplace and Gender Relations Survey of Reserve Component reported in the Department of Defense Fiscal Year 2019 Annual Report on Sexual Assault in the Military also suggests that the prevalence of sexual victimization for the Reserve Component has remained the same since 2017 (Department of Defense, 2020; p. 21). Whereas the Workplace and Gender Relations Survey is conducted on behalf of the Department of Defense Sexual Assault Prevention and Response Office (SAPRO), studies administered by nongovernment contractors report similar findings. For example, data from the RAND Military Workplace Study (RMWS) among nearly 150,000 service members documented that 1 in 20 female and fewer than 1 in 100 male service members experienced past year sexual assault (Jaycox et al., 2014).

The past 10 years has also witnessed increasing attention to the needs of men who experience sexual victimization during military service (Matthews et al., 2018). There is some data to suggest that the context of sexual victimization varies among male and female service members. Notably, the Department of Defense Annual Report on Sexual Assault in the Military for Fiscal Year 2018 notes that "26 percent of men who indicated experiencing sexual assault said the offense involved hazing, and 31 percent said it involved bullying. In comparison, 11 percent of women indicated their offense involved hazing, and 18 percent said it involved bullying" (Department of Defense, 2019a; p. 11). In addition, whereas women service members identify that the perpetrator of the assault was male (92%), approximately 52% of men report the perpetrator as male, and 13% indicate that the assault was perpetrated by men and women who acted together (Department of Defense, 2019a; p. 10–11). Male service members also face gender-specific barriers in accessing social support and healthcare resources following victimization. For example, qualitative analyses among 18 male veterans who experienced military sexual trauma indicated that men often struggle with intimacy and have relationship difficulties following the experience and receive numerous negative social reactions when disclosing their experience to others (Monteith et al., 2019). Interviews with Midwestern

Active Component and Reserve and National Guard servicemen, actively serving or veteran, who had returned from Iraq or Afghanistan deployments during Operation Enduring/Iraqi Freedom eras also suggest that men generally lack awareness of the occurrence of sexual assault among other men in the military and tend to hold blame and stigma toward men who experience sexual violence (Sadler et al., 2021). As Morris et al. (2014) discuss, there is a need for increased research and clinical attention to the medical and psychiatric needs of men following experiences of military sexual trauma.

3.2.2 Characteristics of Sexual Assaults

Living and working in close proximity to other service members is believed to be a risk factor for sexual harassment and assault in the military. Sexual violence involving active duty service members generally occurs in a military setting (Morral et al., 2014). According to the 2018 Workplace and Gender Relations Survey of Active Duty Members, 62% of women and 57% of men indicated that an experience of sexual assault occurred at a military installation or on a military ship (Office of People Analytics, 2019; p. vii). Further, as evidenced by Sadler et al.' (2003) analysis of women veterans who experienced rape during military service, 51.7% of women were assaulted in the barracks, and 81.9% were assaulted while off duty.

As revealed in data from the 2018 Workplace and Gender Relations Survey of Active Duty Members, "sexual assault in the military occurs most often between junior enlisted acquaintances who are peers or near peers in rank" (Department of Defense, 2019a; p. 4). Earlier data reported by Sadler et al. (2003) also documented that 53.3% of rape victims described the perpetrator as a peer or same/similar rank. Like studies of college students (Cantor et al., 2019), perpetrators of sexual aggression tend to be identified as a "friend or an acquaintance, acting along" (Department of Defense, 2019a, p. 4). According to a national cross-sectional survey of women veterans, only 5% reported an experience of gang rape during military service (Sadler et al., 2005). Other studies indicate that most assaults experienced during military service are perpetrated by another service member, rather than a civilian (Campbell & Raja, 2005; Morral et al., 2014). Regardless of the gender of the victim, service members who experience sexual aggression most commonly identify the perpetrator as male (Department of Defense, 2019a).

Alcohol is also often involved in sexual violence among service members. As reported by Sadler et al. (2003), 26.8% of women who experienced rape while in military service reported consuming alcohol/drugs at the time of the assault, and 52.5% experienced an assault perpetrated by someone who was under the influence of alcohol/drugs at the time of the assault. These data mirror those reported by the Office of People Analytics (2019) overview report of the 2018 Workplace Gender Relations Assessment, which indicated that alcohol was involved in sexual assault among 62% of women who reported victimization and among 49% of men who reported victimization (p. vii).

3.2.3 Consequences of Sexual Violence

The consequences of sexual violence among military service members include a range of individual psychological and health aftereffects (Street & Stafford, 2002). As reported by Zinzow et al. (2008), women veterans with a history of sexual victimization demonstrate greater psychological impairment in comparison to those reporting other forms of trauma. The effects of sexual victimization in the military are also exacerbated when individuals report victimization at other times during the lifespan (Creech & Orchowski, 2016; Suris et al., 2007).

There is a strong association between sexual victimization during military service and the severity of post-traumatic stress disorder (PTSD; Maguen et al., 2012; Schry et al., 2015; Rosellini et al., 2017a; Sexton et al., 2017). For example, in a sample of women veterans seeking primary care at the VA, Creech and Orchowski (2016) found that PTSD symptoms were positively associated with the number of time periods a woman experienced sexual victimization via force (i.e., childhood, adult premilitary, during military service, after military service), as well as the total number of lifetime experiences of sexual victimization via force. Notably, sexual victimization during military service is also associated with greater PTSD risk compared to victimization at other times in the lifespan (Suris et al., 2004).

Experiencing sexual victimization during military service is also associated with heavy drinking as well as alcohol problems (Fillo et al., 2018; Seelig et al., 2017). Importantly, numerous studies indicate a positive association between alcohol use and PTSD among service members (Davis et al., 2003; Kelley et al., 2013; Maguen et al., 2010, 2012). A study of OEF/OIF veterans found that while combat exposure in and of itself did not increase the risk for alcohol misuse, PTSD symptoms and depression doubled the risk for alcohol misuse (Jakupcak et al., 2010). The self-medication hypothesis posits that individuals use alcohol following sexual victimization to alleviate the negative psychological effects of the trauma (Khantzian, 1997), and studies of military veterans indicate that service members report self-medicating with alcohol to cope with PTSD symptoms (Bremner et al., 1996). Other explanations of the positive association between alcohol use and PTSD have also been proposed, including the negative reinforcement model (Baker et al., 2004), the mutual maintenance model (Kaysen et al., 2011), and the high-risk susceptibility hypothesis (Chilcoat & Breslau, 1998).

Individuals who experience sexual victimization during military service also report other psychological aftereffects, including depression (Maguen et al., 2012; Schry et al., 2015; Sexton et al., 2017), as well as suicidal ideation and suicide mortality (Blais & Monteith, 2018; Kimerling et al., 2016). For example, analysis of Army STARRS data suggests that women who experience a sexual assault during active duty service have increased odds of attempted suicide (Rosellini et al., 2017a).

Sexual victimization during military service is also associated with several physiological consequences. According to Sadler et al.'s (2000) analysis of a cross-sectional telephone survey of 558 women veterans, women who reported experiences of rape during military service were more likely to report chronic health problems,

as well as use of prescription medicine for psychological concerns. Other health concerns reported by survivors of sexual victimization during military service include gynecological symptoms leading to hysterectomy (Ryan et al., 2016), as well as the occurrence of eating disorders (Breland et al., 2018).

In addition to psychological, health, and occupational concerns, some researchers are also now examining the extent to which sexual victimization among service members leads to moral injury (Stein et al., 2012). When sexual violence occurs in the context of one's workplace or community, individuals can also experience institutional betrayal, feeling like the organization/institution meant to protect them failed in their responsibility (Smith & Freyd, 2013, 2014). Thus, because sexual victimization during military service often involves betrayal by other service members as well as military leadership, a growing number of studies document experiences of institutional betrayal among service members who experience sexual victimization (Andresen et al., 2019; Holliday & Monteith, 2019; Monteith et al., 2016, 2021).

3.2.4 Disclosure, Help-Seeking, and Reporting

Relatively few studies have examined the process of disclosing experiences of sexual victimization that occur during military service. According to qualitative research among 20 women veterans conducted by Dardis et al. (2018), which included a sample of women who disclosed experiences of military sexual victimization, 87% told informal sources (i.e., family or friends), 70% told military personnel, and 52% told medical personnel. Further, although many veterans are screened for experiences of sexual victimization during military service, 25% of veterans report not disclosing their true status as experiencing sexual victimization during service (Blais et al., 2018). Importantly, when disclosing experiences of sexual victimization during military service, 50% of women report experiencing at least one negative reaction from others, including retaliation. The negative impact of unhelpful reactions to sexual assault disclosure among civilians is well documented (Dworkin et al., 2019), and emerging research with men who experience sexual victimization during military service also highlight the negative impact of unhelpful responses to disclosure on the process of recovery (Monteith et al., 2019).

The Department of Defense allows for restricted reporting, which provides for confidential reporting without the triggering of an investigation, as well as unrestricted reporting, which facilitates the opening of a criminal investigation. Studies of servicewomen experiencing sexual assault while in the military suggest that approximately 25% formally report the experience (Mengeling et al., 2014). Further, the 2018 Department of Defense Annual Report on Sexual Assault in the Military notes that "in Fiscal Year 2018, 6053 Service members made a report of sexual assault for an incident that occurred during military service, which equates to about a 30 percent reporting rate" (Department of Defense, 2019a, p. 4).

There are numerous reasons why most assaults among service members go unreported. According to Sadler et al. (2005), barriers to reporting sexual victimization during military service include lack of knowledge on how to report (33%), the belief that rape was to be expected during military service (19%), the individual who would take the report was the perpetrator of the assault (25%) or a friend of the perpetrator (33%), feelings of shame about reporting (77%), worry that reporting would have a negative career impact (78%), the belief that reporting would not lead to anything beneficial being done (70%), fear of being blamed for the assault (60%), and worry that reporting would make things worse (79%). There is also a strong emphasis on psychological resiliency among military service members (Meredith et al., 2011), as well as maintenance of unit cohesion (Siebold, 2007). As a result, individuals who experience sexual violence during military service may be reluctant to bring reports of sexual violence forward, believing that seeking help to cope with stress is a sign of weakness (Hoge et al., 2004) or that doing so would betray their unit (Burns et al., 2014). Notably, despite these barriers, there is evidence that reports of sexual victimization have increased over time. Specifically, "the number of reported sexual assaults involving military service members more than doubled from about 2800 reports in fiscal year 2007 to about 6100 reports in fiscal year 2014" (Government Accountability Office, 2015, p. 1). Whereas sexual violence undoubtedly remains underreported, the increase in reporting may reflect greater confidence in the Department of Defense's ability to respond to the needs of victims.

Problematically, rates of help-seeking are relatively low among service members who experience sexual victimization. For example, research among women veterans suggested that following experiences of rape during military service, approximately one-third of women reported seeking medical attention, and one-fifth reported seeking psychological support (Sadler et al., 2005). Further, research by Zinzow et al. (2008) found that only 38% of military personnel with a history of sexual victimization seen within a VA primary care setting sought psychological care in the past year (Zinzow et al., 2008). Help-seeking among male service members following sexual victimization may be even less common. For example, in one study reported by Burgess et al. (2016), none of the men who experienced sexual victimization during military service sought emotional support from a counselor or therapist, in comparison to 53% of women service members who experienced sexual victimization.

3.3 Science and Practice of Sexual Assault Prevention Within the Military

3.3.1 Sexual Assault Prevention Strategy

Several publications put forward by the US Department of Defense document strategies to protect the readiness of the force through prevention of sexual violence among service members and timely victim's assistance and advocacy. For example,

in the Fiscal Year 2008 Department of Defense Report on Sexual Assault in the Military, Secretary of Defense Robert Gates identifies four priorities for advancing sexual assault prevention and response, including (1) reducing the stigma surrounding reporting sexual assault, (2) ensuring commander training and accountability, (3) ensuring investigator training, and resourcing, and (4) ensuring prosecutor training (Department of Defense, 2008, p. 29–30). Over time, the scope of recommendations for advancing military sexual assault prevention and efforts has grown. For example, the *Department of Defense 2019–2023 Prevention Plan of Action (PPoA)* highlights the importance of advancing military sexual violence through investing in the engagement of leadership, development of the prevention workforce, enhancing collaborative relationships with experts in the field, prevention-specific policy, development of data systems to ensure institutional accountability, strengthening of prevention-related policy, implementation of a comprehensive prevention approach, and commitment to quality implementation and outcome evaluation (Department of Defense, 2019b).

3.3.2 State of Prevention Science

Despite over a decade of guidance guiding Department of Defense sexual assault prevention efforts, there are relatively few rigorous evaluations of sexual assault prevention programs specific to military populations (Gedney et al., 2018; Gidycz et al., 2018; Orchowski et al., 2018a). For example, a 2018 systematic review completed by Orchowski and her colleagues (2018a) documented only six published outcome studies of sexual assault prevention programs for service members. There are also gaps in the understanding of rigor of existing program evaluations of sexual assault prevention programs for military personnel. When Orchowski et al. (2018a) as well as Gidycz et al. (2018) published their reviews, no existing studies of sexual assault prevention on military posts had assessed whether the program was associated with decreases in rates of either sexual victimization or sexual victimization among program participants. More recently, Griffin et al.' (2021) evaluation of the Cadet Personal Skills (CHIPS) program among cadets at the US Air Force Academy documented that the program was associated with decreases in unwanted sexual contact in comparison to the control group.

Whereas the reasons why scientific evaluations of sexual assault prevention programs for service members lack assessments of sexual violence outcomes among participants are unclear, advancing the science of sexual assault prevention for military service members will require that evaluations include robust assessments of behavioral outcomes (see Gidycz et al., 2011a, b). To ensure that participants can report sensitive information honestly, without fear of the information being linked to their identity in any way, researchers completing evaluations of sexual assault prevention programs for college students have utilized self-generated codes to match anonymous participant surveys across pre- and posttest assessments (Orchowski et al., 2008; Gidycz et al., 2011a). Similar approaches can also be

implemented when evaluating the efficacy of sexual assault prevention approaches for military populations.

The types of sexual assault prevention efforts that have sustained evaluation for service members are wide-ranging and include individual-level interventions, efforts to engage bystanders in changing community norms, as well as social marketing campaigns. For example, one sexual assault prevention program for male service members was tested among men at a US military installation in Germany (Foubert & Masin, 2012). The intervention includes a workshop for men, which addresses rape myths and aims to foster empathy. Because a pre- and posttest designs were utilized (with no follow-up period), no data are available as to whether the program decreased rates of sexual aggression among participants. The Sexual Assault Victim Intervention (SAVI) program has also been evaluated among US service members (Kelley et al., 2005). SAVI includes 3 h of prevention training and 3 hours of content focused on advocacy; however, there are no data available as to whether the program impacts rates of sexual violence among service members. The Bringing in the Bystander program has also sustained evaluation among US Army Europe (USAREUR) personnel (Potter & Moynihan, 2011). Compared to the control group, soldiers who participated in the program were more likely to engage bystander action when faced with situations that posed a risk for sexual violence (Potter & Moynihan, 2011). Finally, a social marketing campaign entitled Know Your Power has also sustained evaluation among service members at USAREUR posts (Potter & Stapleton, 2012). Findings indicated that USAREUR soldiers who were exposed to the campaign were more likely to intervene to address risky sexual assault situations compared to those who were not exposed to the images (Potter & Stapleton, 2012).

To date, one study has examined the preliminary efficacy of resistance training (i.e., self-defense) for women veterans with a history of PTSD and military sexual trauma. Specifically, in a small-scale pilot study to evaluate Taking Charge (David et al., 2006), women demonstrated significant reductions in PTSD and depression, as well as increases in self-defense self-efficacy at posttest. This research is notable considering research in civilian samples suggesting that unwanted sexual and social advances most often stop because of women's verbal and physical resistance, but few advances stopped because of bystander intervention (Orchowski et al., 2021). Although no published evaluations of risk reduction and resistance education training for military service members exist, sexual assault risk reduction and resistance education interventions with civilian populations document reductions in rates of sexual victimization over short-term (Orchowski et al., 2008) as well as longer-term follow-up periods (Senn et al., 2015, 2017).

Research on the efficacy of sexual assault prevention approaches for young adults within US military academies is also limited (Rosenstein et al., 2018). As noted earlier, a recent publication documents the efficacy of the Cadet Personal Skills (CHIPS) program among cadets at the US Air Force Academy, which is a curriculum designed to change social norms and bystander intervention behavior to address sexual violence, increase knowledge and skills relating to sexual consent, educate cadets on the association between alcohol use and sexual

assault, increase interpersonal skills, and foster self-regulation (Griffin et al., 2021). The 7.5-h intervention is administered in groups of 15–20 cadets. As documented by Griffin et al. (2021), at posttest intervention participants were less likely to report unwanted sexual contact in comparison to the control group, after accounting for baseline unwanted sexual contact, alcohol use, and gender. The assessment was limited, however, by not including an assessment of whether the program also reduced perpetration of sexual aggression among program participants. Thus, while military service academies are active in developing and implementing sexual assault prevention approaches (see Caslen et al., 2015), additional research which incorporates assessments of behavioral outcomes is urgently warranted.

3.4 Envisioning Integrated Alcohol and Sexual Assault Prevention Approaches for the Military

The current chapter operationalizes integrated alcohol use and sexual assault prevention as interventions that include active intervention components addressing alcohol use, as well as active strategies for sexual assault prevention. To be considered an integrated intervention for alcohol use and sexual assault, the intervention must address both health concerns in a manner that recognizes the *intersection* between alcohol use and sexual assault. Through this lens, offering two standalone interventions – one addressing alcohol use and one addressing violence – would not be considered an integrated intervention, as such an approach fails to address the intersections between alcohol use and violence.

Whereas alcohol use and sexual assault are recognized among civilian and military populations as critical public health issues, sexual assault prevention and response programs often fail to recognize how alcohol use and sexual violence intersect (i.e., Lund & Thomas, 2015). Some sexual assault prevention programs do indeed include *some mention* of the role of alcohol as a risk factor for violence (i.e., through the incorporation of content, or scenarios that depict alcohol-related victimization). However, such information alone – without incorporation of alcohol use intervention – is likely to be insufficient to foster robust change in personal alcohol use patterns. As will be reviewed below, there are few sexual assault prevention approaches which include *active alcohol intervention*, or *active alcohol use prevention* strategies (see Orchowski et al., 2017, 2018b; Gilmore et al., 2015, 2018a, b; Creech et al., 2021).

Integrated alcohol and sexual assault prevention approaches have the potential to attend to multiple risk and protective factors across the social ecology. As discussed in the Centers for Disease Control and Prevention's *Connecting the Dots: An Overview of the Links Among Multiple Forms of Violence,* there are numerous risk and protective factors across the individual, interpersonal, community, and societal

levels of the social ecology that can be targeted as a part of efforts to reduce sexual violence (Wilkins et al., 2014). An integrated approach to alcohol intervention and sexual assault prevention can also be universal, selective, or indicated in nature. While all types of prevention are necessary for preventing the occurrence of sexual harassment and assault, true primary prevention of sexual violence requires population-based strategies which foster environmental, systems-level, and policy-based changes and actions that "get to the left of violence" and stop it from initially occurring (Wilkins et al., 2018). A recent publication of the Division of Violence Prevention at the Centers for Disease Control and Prevention (2016) highlights the importance of developing intervention approaches with the potential for cross-cutting impact on multiple health outcomes. Further, public health strategies for violence prevention are shifting toward addressing risk and protective factors at the community and societal levels of the social ecology, which are likely to have a synergistic and broad-scale impact preventing multiple types of violence simultaneously (Armstead et al., 2017).

A case for integrated alcohol use and sexual assault prevention can be made when recognizing that rigid adherence to traditional gender role norms is a social-level factor that intersects with problematic alcohol use (Iwamoto et al., 2011; Mullen et al., 2007; Wilkinson & Wilkinson, 2020) as well as sexual aggression (Armstead et al., 2018; Tharp et al., 2013). There are also numerous ways that alcohol use and violence intersect in some constructions of masculinity, such that alcohol-related violence is conceptualized among some men to demonstrate dominance and control in relationships with women (Peralta et al., 2010). Given the disproportionate representation of women in the US military (Patten & Parker, 2011) and historical emphasis on traditional masculine norms within the military, prevention approaches that target the ways in which adherence to traditional masculine norms intersects with health outcomes may be especially relevant for military populations.

Problematic alcohol use is also a concern in and of itself within the military. In an analysis of survey data collected by the Centers for Disease Control and Prevention from over 27,000 individuals across 25 different industries, the Delphi Behavioral Health Group found that military service members consumed alcohol an average of 130 days per year, ranking the military as the professional with the highest rate of alcohol use in the United States (Delphi Behavioral Health Group, 2021). Survey data suggest that the prevalence of heavy drinking among military service members from 1980 to 2005 was estimated to be 15 to 20% (Bray & Hourani, 2007). Young adults in military service are also more likely than their same-age civilian peers to engage in heavy alcohol use (Ames & Cunradi, 2004). For these reasons, alcohol is an important health outcome to address in military populations. As articulated in the sections that follow, alcohol use is also an important risk factor for sexual aggression and sexual victimization and a complicating factor in bystander intervention, which has important implications for prevention.

3.4.1 Alcohol Use and Sexual Aggression

Research among civilian and military samples suggests that alcohol use is positively associated with sexual aggression perpetration. For example, sexually aggressive men report greater daily alcohol use (Borowsky et al., 1997), heavy drinking (Neal & Fromme, 2007), and alcohol problems (Abbey et al., 2006) compared to non-sexually aggressive men. Further, data from the Historical Administrative Data System of the Army STARRS indicates that severe emotional-substance problems precede perpetration of nonfamily sexual assault among service members (Rosellini et al., 2017b). This is not to say that men who perpetrate sexual aggression are under the influence of alcohol each time they perpetrate. Rather, research by Parkhill and Abbey (2008) examining a sample of civilian men found that 47.8% perpetrated only when sober, 26.8% perpetrated only when drinking, and 25.4% perpetrated both when sober and when drinking alcohol. Thus, the way in which alcohol intersects with sexual aggression is multifaceted and may be related to a complex interplay of individual, interpersonal, and situational drivers.

The Integrated Model of Sexual Assault is a multicomponent model of sexual aggression which highlights individual, interpersonal, situational/environmental, and community influences as important considerations on men's proclivity to perpetrate sexual aggression (Berkowitz, 1994, 2003). As discussed by Berkowitz (2003), a perpetrator's attitudes, early experiences, and perception of peer norms interact to facilitate sexual aggression, where situational or environmental drivers – *such as alcohol use* – can serve as "releasers" for the expression of sexual aggression. The Integrated Model of Sexual Assault also places a high emphasis on the role of misperceptions of peer support for sexual aggression (Lynch et al., 2004; Bohner et al., 2006; Dardis et al., 2016), which foster engagement in sexual aggression by pressuring men to engage in coercive behavior and inhibiting bystander intervention by suppressing men's discomfort with other men's inappropriate behavior (Berkowitz, 2003). Given the high emphasis on perceived norms embedded within the theoretical framework of the Integrated Model of Sexual Assault, sexual assault prevention programs grounded in the approach often include the provision of normative feedback (Gidycz et al., 2011a, b), an intervention approach which is also common in alcohol intervention (Larimer & Cronce, 2007; Scott-Sheldon et al., 2014).

Alcohol increases risk for sexual aggression in several potential ways. First, the myopic and psychological effects of alcohol (Steele & Josephs, 1990) interact with personal beliefs and situational factors to facilitate sexual aggression. Specifically, drinking decreases an individual's ability to appraise cues in their environment (Sayette, 1993), reduces the capacity to make decisions (Curtin & Fairchild, 2003), and lowers levels and individuals' overall level of tension and anxiety (Greeley & Oei, 1999). These myopic cognitive effects and disinhibiting psychological effects can increase proclivity for sexual aggression by increasing the likelihood that an individual fails to attend to or disregards a partner's refusal of sexual activity (Abbey et al. 2004). Notably, there is strong research to document that when intoxicated,

individuals are apt to misinterpret signs of sexual interest (George & Stoner, 2000; Parkhill & Abbey, 2008), which is positively associated with perpetration of sexual aggression (Bridges & McGrail, 1989; Muehlenhard & Linton, 1987). An individual's expectancies or beliefs about how alcohol use will influence their behavior (Goldman et al., 1999) are also relevant to sexual aggression. Specifically, individuals who believe that alcohol use increases sexuality, aggression, and liquid courage may consume alcohol, intentionally or unintentionally, to facilitate engaging in uninhibited or aggressive behavior (George & Stoner, 2000; Tedor et al., 2018). Misperceptions regarding peer approval for aggression when intoxicated may serve to normalize sexually aggressive behavior or foster a sense that they can mitigate culpability for acting aggressively by "blaming it on the alcohol" (Hochstetler et al., 2014). Shared associations between alcohol use and other personality factors which are associated with rape proclivity may also contribute to the association between alcohol use and sexual aggression (Abbey, 2008). For example, individuals with antisocial traits or high levels of impulsivity are likely to consume alcohol as well as engage in sexual aggression (Lansford et al., 2003; Moffitt et al., 2002). Taken together, these studies highlight the importance of addressing alcohol use as one part of a constellation of factors that increase risk for sexual aggression. Given that alcohol use is one of the many risk factors for sexual aggression suggests that stand-alone alcohol intervention may be insufficient to reduce proclivity for sexual aggression. Sexual assault prevention programs that fail to include active alcohol intervention may also be lacking attention to the range of influences that increase proclivity to rape.

3.4.2 Alcohol Use and Sexual Victimization

Numerous studies also document a positive association between alcohol use and sexual victimization (see other chapters in this volume for further discussion). Studies of civilians as well as military samples suggest that women who report sexual victimization are more likely than non-victimized women to report heavy drinking and alcohol problems (Benson et al., 2007; Booth et al., 2011; Merrill et al., 1999; Windle, 1994). As Farris and Hepner (2014) report, rates of heavy alcohol use are positively associated with rates of sexual victimization across branches of the military. Individuals who experience sexual assault are likely to abuse alcohol to mitigate post-assault distress (Kaysen et al., 2006; Miranda et al., 2002; Ullman & Najdowski, 2009; Ullman et al., 2006), which increases risk for revictimization (Messman-Moore et al., 2009; Testa et al., 2000). One prospective study of civilians documented that women with a history of sexual victimization who reported heavy drinking habits were ten times more likely to experience revictimization compared to women with a history of victimization who identified as light or nondrinkers (Gidycz et al., 2007). These data underscore the importance of reducing the role of alcohol use as a potential risk for sexual victimization and revictimization.

There are ways in which alcohol increases risk for sexual victimization. Alcohol consumption interferes with the ability to evaluate high-risk situations (Fromme et al., 1999), including those that pose a risk for sexual assault (Testa et al., 2000). Numerous studies suggest that alcohol use makes it difficult for an individual to recognize that a situation poses a risk for victimization (Abbey et al., 2003; Abbey et al., 2006; Davis et al., 2004; Davis et al., 2009). Individuals who consume alcohol attend to a restricted range of information in social situations and can take longer to comprehend, synthesize, and respond to signals (Lannutti & Monahan, 2004). As a result of the myopic effects of alcohol (Steele & Josephs, 1990; Taylor & Chermack, 1993), the most prominent cues in an environment are heightened when drinking, which may turn women's attention away from risk cues (Davis et al., 2007). Alcohol consumption is associated with reductions in tension and anxiety (Greeley & Oei, 1999), which can decrease the ability to appraise stress-related cues (Sayette, 1993). Studies of civilian women suggest that individuals report that they are less likely to be attuned to whether a dating situation is unsafe when drinking (Norris et al., 1996, 1999). Decision-making in sexual situations tends to be generally less self-protective when individuals consume alcohol (Abbey et al., 2005; George et al., 2009). Therefore, even if women notice risk in dating situations, alcohol consumption may decrease the likelihood women respond to risk self-protectively (Stoner et al., 2007). Alcohol use can also make it difficult to physically fight back against an attacker (Harrington & Leitenberg, 1994; McCauley & Calhoun, 2008). Alcohol use in bar and party settings also increases women's exposure to potential perpetrators, who may opportunistically target women who are drinking (Parks & Zetes-Zanatta, 1999; Testa & Parks, 1996). Perpetrators of sexual assault also report tactical use of alcohol to decrease a woman's ability to resist an unwanted sexual advance (Kanin, 1985). Taken together, these data suggest that approaches that include alcohol intervention may be especially relevant for reducing victimization among populations who engage in heavy drinking, given that such activities increase risk for alcohol-related sexual assault (Farris & Hepner, 2014; Testa & Livingston, 2009).

Scholars argue in regard to both military populations (Farris & Hepner, 2014) and college women (Testa & Livingston, 2009) that reducing heavy episodic drinking can potentially lead to reduced rates of sexual victimization, especially rates of sexual assault that occurs when the victim is incapacitated. However, as discussed by Testa and Livingston (2018), "in general, women's alcohol use has rarely been addressed as a primary intervention target and in general, there seems to be a reluctance to even talk about the role of alcohol, out of a concern that this is victim-blaming or deflects blame from the perpetrator" (p. 148–149). Yet, as the authors articulate, "it would be foolish and unethical to ignore the fact that women's heavy episodic drinking (HED) plays a significant role in sexual victimization vulnerability out of an outsized concern that it is victim-blaming to do so" (Testa & Livingston, 2018; pp. 158).

To address the concern that talking about the intersection of sexual victimization and alcohol use conveys victim blame, it is essential that integrated prevention approaches convey that nothing an individual does – including drinking alcohol – fosters culpability for sexual victimization. Responsibility for sexual violence rests

solely with perpetrators of sexual aggression, and their decision to take advantage is under the influence of alcohol, or who is incapacitated as a result of drinking. Indeed, ensuring that responsibility is clearly and solely placed on perpetrators of violence is at the heart of feminist sexual assault risk reduction programs (Orchowski & Gidycz, 2018). There is also ample evidence to suggest that risk reduction interventions serve to empower victims to more appropriately allocate blame for sexual assault onto perpetrators (Gidycz et al., 2006). Women who experience sexual assault after engaging in a risk reduction program also report lower levels of self-blame compared to women who do not receive such training (Gidycz et al., 2015). Ensuring that outcome evaluations of prevention programs include assessment of self- and perpetrator-blaming among participants following the intervention is one strategy for ensuring that programs continue to be well-received by participants with histories of victimization and that participants who experience victimization following an intervention allocate responsibility to the perpetrator.

3.4.3 Alcohol Use and Bystander Intervention

In addition to considering the role of alcohol as a risk for perpetration and victimization, there is growing attention to how alcohol use intersects with an individual's ability to intervene to address risk for sexual violence in social settings. Although individuals who engage in heavy drinking are likely to be present in environments where there are opportunities to intervene to address risk for sexual violence (Haikalis et al., 2018; Oesterle et al., 2018), there is also evidence that individuals also often fail to intervene when they are in bar settings (Graham et al., 2014). As discussed in a conceptual review by Leone et al. (2018), there is reason to believe that alcohol use can interfere with each step that a bystander must take to address a potential risk for sexual violence, including (1) noticing risk; (2) labeling the situation as problematic; (3) taking responsibility for addressing the situation; and (4) possessing the skills to intervene. Pugh et al. (2016) also report that bystanders experience more barriers to intervention when a victim is intoxicated.

Whereas research addressing the intersection between alcohol use and bystander intervention is still relatively sparse, several quantitative and qualitative studies provide insight into ways that alcohol could influence each of the steps in bystander intervention. Qualitative research presented by Oesterle et al. (2018) found that although college men perceived themselves to be more likely to have the "liquid courage" to intervene, they might be at risk to intervene using more aggressive strategies when intoxicated. Research from alcohol administration studies is mixed. Further, a laboratory study involving an alcohol consumption task among participants found that whereas intoxication influenced participants' ability to notice an event, and perceive greater risk/need for intervention, alcohol did not influence participants' engagement in the later steps of the bystander intervention model (Ham et al., 2019). A different pattern of results was reported by Leone and Parrott (2019b), who documented in a laboratory-based alcohol administration study that

alcohol intoxication was associated with decreased likelihood and intervention among men who reported intentions to help. Differences in the study sample and approach to measuring bystander intervention across these studies may in part be responsible for these variations in findings, and additional research is needed to elucidate the mechanisms through which acute intoxication influences bystander behavior in real-world contexts. To date, findings from one field study found that participant intoxication decreased the accuracy of recalling a situation in a hypothetical sexual assault scenario, as well as assessment of risk in the scenario and need for intervention, but was not associated with ratings or one's personal responsibility to intervene, choice of strategy to intervene, or confidence in intervening (Melkonian et al., 2020).

Although studies report that engaging in heavy episodic drinking is associated with a lower likelihood of engaging in bystander intervention to address risk for sexual assault among men (Fleming & Wiersma-Mosley, 2015), there is also reason to believe that underlying beliefs relating to sexual aggression may influence both alcohol use and likelihood to intervene. For example, Orchowski et al. (2016) found that men who engaged in heavy drinking are less likely to engage in proactive bystander intervention, and this association was mediated by men's endorsement of peer approval of sexual aggression, their own comfort with sexism, and engagement in coercive sexual behavior. Other studies among community men also point to the importance of adherence to masculine norms among heavy drinking men as a contributing factor to bystander intervention. Specifically, Leone and Parrott's (2019a) analysis of survey responses from 148 men between the ages of 21 and 30 revealed that among heavy drinking men, but not non-heavy drinkers, avoidance of stereotypical feminine activities was negatively associated with engaging in bystander intervention to help friends. Because all of the aforementioned research addressing alcohol use and bystander intervention is among civilian samples, research is needed to examine the extent to which these findings generalize to service members. There is also a question of what populations are best to target with integrated interventions that address alcohol use and bystander intervention. Arguably, integrated alcohol and sexual assault interventions which focus especially on bystander intervention may be particularly relevant for individuals who frequent bar and party environments, where risk for violence is likely to occur (Oesterle et al., 2018).

3.5 An Overview of Integrated Approaches

3.5.1 Interventions for College Populations

Integrated alcohol and sexual assault prevention programs for military populations can draw from lessons learned developing, piloting, and evaluating prevention approaches for college students. To date, several integrated interventions exist for

different target audiences, including women, men, and all college students at large. These intervention approaches are outlined below.

3.5.1.1 Approaches for Women

Through funding from the NIAAA (R01 AA014514), Testa et al. (2010) examined the efficacy of using parent-based intervention to reduce alcohol-involved sexual victimization for first year college women. The parent-based intervention (PBI) was designed to increase alcohol-specific communication between mothers and daughters, as well as general communication. The study examined four conditions: alcohol-based PBI, enhanced alcohol and sexual victimization PBI, a control condition, and an unmeasured control condition. Both the alcohol PBI and the enhanced PBI were associated with a lower incidence of incapacitated rate among first year college women in comparison to the control condition. The researchers note that "intervention effects were relatively modest, and we did not observe a direct effect of the intervention on college [heavy episodic drinking]. Likewise, the enhanced intervention did not increase daughters' sexual assertiveness or reduce sexual victimization relative to the alcohol-only intervention" (Testa et al., 2010; p. 316). Because PBI must be delivered from mother to daughter, the potency of the intervention is variable, and the information must be relayed between mothers and daughters in a way that can be readily perceived and acted upon. Researchers also have little control over the fidelity, intensity, and style through which individuals convey the PBI to others. Thus, Testa et al. (2010) note that "the impact of PBI is likely to be more modest relative to more intensive or investigator-delivered interventions" (p. 317).

Gilmore and her colleagues (2015) also received funding through NIAAA to evaluate the efficacy of a web-based combined alcohol use and sexual assault risk reduction program for college women who engaged in heavy episodic drinking. This intervention is grounded in the Assess, Acknowledge, and Act (AAA) model of sexual assault risk reduction and resistance education (Rozee & Koss, 2001). The web-based intervention provides women with personalized feedback on alcohol use as well as self-protective strategies for sexual victimization and includes sexual assault risk reduction strategies. This intervention was effective over a 3-month follow-up at reducing heavy episodic drinking and victimization among women with more severe sexual assault histories (Gilmore et al., 2015). The sexual assault risk reduction content of the intervention was also associated with decreased alcohol-related blackouts as well as incapacitation, whereas the combined alcohol use and sexual assault risk reduction program reduced alcohol-induced blackouts (Gilmore et al., 2018a, b). These findings document the potential for brief web-based integrated alcohol and sexual assault prevention programs to show effects on both alcohol use and sexual assault outcomes.

Although the approach would not meet the proposed operational definition of an integrated alcohol and sexual assault prevention program, it is worth noting that several studies have examined whether reducing drinking alone is sufficient to

reduce risk for sexual victimization among college women. Clinton-Sherrod et al. (2011) found that motivational interviewing, personalized normative feedback, and a combination of both were associated with reduced reports of sexual activity when women were "too intoxicated to prevent it." Because the reduction in incapacitated sexual assault was not mediated through reductions in alcohol use, it is possible that women were at reduced vulnerability to sexual assault as result of enhanced ability to recognize risk for victimization. Brahms et al. (2011) found that Brief Alcohol Screening and Intervention in College Students (BASICS) intervention was equally effective among college women with and without a history of sexual victimization. The effects of the intervention on sexual assault were not examined. Taken together, these studies suggest that standalone alcohol interventions may be effective in reducing alcohol use for women with and without a history of victimization, but reductions in alcohol use may not be sufficient to reduce victimization risk.

There are a few broad conclusions that can be drawn from the aforementioned research. First, integrated approaches for alcohol and sexual assault prevention among college women are limited, focusing to date on first year college women and heavy drinking college women. Second, as integrated interventions are developed, attention should be paid to whether interventions are effective among survivors of sexual victimization. Whereas some studies demonstrate reductions in women with a history of victimization (Gilmore et al., 2015), other research shows that interventions are ineffective in reducing drinking among women with a history of sexual victimization (Clinton-Sherrod et al., 2011). There is also a lack of data to address the assumption that interventions that include active alcohol intervention could directly or indirectly imply that victims are to blame for assaults that involve voluntary consumption of alcohol use. Future studies which incorporate measures of self-blame among participants who participate in interventions can help to ensure that interventions have no iatrogenic effects for survivors, or individuals who experience victimization following program participation.

3.5.1.2 Interventions for Men

Through a treatment development grant from NIAAA (R34 AA020852), Orchowski and her colleagues designed and tested an in-person intervention to reduce perpetration of sexual aggression among college men who report heavy drinking (Orchowski et al., 2018b). The intervention included an individually administered brief motivational intervention (BMI) with a personalized feedback report (PFR) addressing alcohol use, alcohol use in sexual situations, alcohol-related sexual consequences, consent, and bystander intervention. The BMI with PFR was followed by a sexual assault prevention workshop grounded in social norms intervention and bystander intervention that shows evidence for reductions in sexual aggression perpetration among college men (Gidycz et al., 2011b). For this integrated intervention, the workshop was revised to address the intersection of alcohol use and sexual aggression more rigorously. Preliminary findings suggest that the in-person approach is

feasible, acceptable, and promising to facilitate change in attitudes relating to violence and foster safer alcohol use consumption (Orchowski et al., 2018b).

3.5.1.3 Interventions for Men and Women

Researchers have also received funding from NIAAA to develop and evaluate an integrated *web-based* alcohol and sexual assault prevention program for college students which integrates the programs developed by Orchowski et al. (2018b) and Gilmore et al. (2015) into an integrated web-based approach for all students (R34AA025691: Gilmore, PI). The alcohol and sexual assault prevention program (+ change) includes personalized normative feedback addressing alcohol use and its intersection with sexual aggression, sexual victimization, as well as bystander intervention. The web-based intervention approach addresses concerns relating to the feasibility of implementing single-gender approaches for men and women and is also unique in its inclusion of content tailored to sexual and gender minorities. Results from an open pilot trial of the intervention suggest that the intervention has high feasibility, acceptability, and utility among college students (Gilmore et al., 2020).

There is also increasing attention to whether protective behavioral skills (PBS) to reduce alcohol-related harms may protect against sexual victimization (see Scaglione et al., 2015). For example, greater engagement in protective behavioral skills is negatively associated with sexual victimization (Neilson et al., 2018). Currently, an intervention development study is underway through the support of NIAAA funding to pilot an integrated PBS intervention for alcohol use, sexual risk, and sexual assault among college students (Napper et al., 2018; Napper & Kenney, 2018). The Sex Positive Lifestyles: Addressing Alcohol & Sexual Health [SPLASH] Intervention is tri-pronged, targeting alcohol use, risky sexual behavior, and bystander behavior to address both alcohol-related and sexual assault-related risks. The intervention includes live, interactive group-based normative feedback designed to reduce discrepancies between perceived and actual norms addressing alcohol use and sexual risk. The intervention addresses the intersection between alcohol use and sexual risk, providing skills training to increase sex- and alcohol-related protective behaviors. The intervention also includes bystander intervention training to increase protective action.

It is also important to note that other interventions for men and women reference the intersection of alcohol use and sexual violence, but do not incorporate evidence-based alcohol intervention. For example, using pre-, post-, and follow-up assessments, Zinzow and her colleagues (2018) evaluated an intervention that included an education program designed to address knowledge, attitudes, and bystander intervention relating to alcohol use as well as sexual assault. Although content addressing the intersection of alcohol use and sexual violence is woven across the intervention, the publication does not describe specific intervention strategies designed to reduce participant drinking, making it unclear whether the approach fits the proposed definition of an integrated intervention. Notably, whereas the 70-minute

educational intervention had an impact on rape myth acceptance, program participants did not maintain gains in alcohol risk reduction strategies over time.

3.5.2 Programs for Service Members

Two studies are underway which seek to adapt the integrated alcohol use and sexual assault prevention approaches for college students for utilization in military samples. In 2014, Orchowski and her colleagues received funding from the Department of Defense Congressionally Directed Medical Research Programs (PT140100) to revise the promising integrated alcohol and sexual assault prevention program for heavy drinking college men (Orchowski et al., 2018b) for use among male soldiers who report at-risk alcohol use. This research has resulted in a standardized protocol to provide personalized normative feedback to reduce alcohol use and sexual assault among male service members who engage in at-risk alcohol use. Findings of the open trial found that soldiers were receptive to the intervention content, with most soldiers reporting that the intervention met their needs (Orchowski et al., 2017). Given the tendency for soldiers to move frequently, challenges emerged in maintaining enrollment in an in-person intervention which was administered over multiple time points.

Orchowski, Gilmore, and Walters (joint PIs) have also received funding from the Department of Defense Congressionally Directed Medical Research Programs to adapt the web-based alcohol and sexual assault prevention approach for college men and women described above (Gilmore et al., 2020) for use among sailors. In addition to active alcohol intervention, the intervention also addresses the intersection of alcohol use with sexual perpetration, sexual victimization, and bystander intervention. The treatment development study now underway utilizes a normative survey as well as a series of iterative qualitative intervention development activities to refine the web-based alcohol and sexual assault prevention to meet the needs of sailors (Orchowski et al., 2020a, b). With an eye toward eventual implementation and dissemination, the study also engages a military advisory board to guide the intervention structure and content.

3.5.3 Interventions Among Veterans

One study has examined intervention approaches for preventing sexual revictimization among women veterans who experienced sexual victimization during military service by concurrently targeting alcohol use. Specifically, Creech et al. (2021) report on the preliminary efficacy of Safe and Health Experiences (SHE), a computerized intervention to reduce hazardous drinking, intimate partner violence, and PTSD among women veterans with a history of sexual victimization. The study was funded by the Congressionally Directed Medical Research Program and included an

open pilot trial, as well as a small, randomized pilot trial. The findings of the open pilot trial were promising. Women were satisfied with the program and reported reductions in hazardous drinking, intimate partner violence, as well as PTSD over a 4-month follow-up. Given the high rates of revictimization among survivors of sexual violence, intervention approaches that address the consequences of sexual trauma and concomitantly seek to reduce risk for future harm are an important component of victims' assistance.

3.6 Summary and Future Directions

This chapter sought to articulate the need, rationale, and status of integrated alcohol and sexual assault prevention for military personnel. Integrated approaches to alcohol and sexual assault prevention are growing among civilian populations and, given the high rates of alcohol use in military settings, represent an emerging and relevant focus for military populations as well. To date, a limited number of integrated alcohol use and sexual assault prevention programs exist for military populations, representing a significant gap in prevention science. Alcohol intervention researchers have worked for decades to hone effective alcohol intervention strategies, and sexual assault prevention scientists and practitioners would benefit from "reaching across the aisle" to foster collaborations outside of what can often be a siloed discipline.

To increase the cross-cutting impacts of prevention efforts on multiple behavioral outcomes among service members, integrated interventions should draw from best practices in prevention. As delineated by Nation et al. (2003), prevention approaches should be comprehensive in nature, address peer influences, implement varied teaching methods, be of sufficient dosage, maintain grounding in sound theory, promote strong or positive relationships, be appropriately timed, be socioculturally relevant, incorporate outcome evaluations, and be administered by well-trained staff. Integrated alcohol and sexual assault prevention programs should also be viewed as one of the many necessary strategies for reducing risk of sexual violence in the military and be implemented in conjunction with other efforts to change cultural norms and bolster victim services. As articulated in the Department of Defense, 2014–2016 Sexual Assault Prevention Strategy, "due to the complex nature of the problem, it is important to conduct a number of interventions (actions) that span multiple levels to achieve the greatest, lasting impact" (Department of Defense, 2014; p. 8). Environmental interventions focused on policies that restrict access to alcohol and lead to decreased consumption may also reduce risk for sexual victimization (Farris & Hepner, 2014; Testa & Livingston, 2018).

As prevention scientists work to develop integrated alcohol and sexual assault prevention approaches for both military and civilian audiences, it will also be necessary to grapple with the questions of who should be targeted with such approaches. There is also the consideration of what intervention approach is likely to be most salient. Addressing the shared association between traditional gender role

adherence, alcohol use, and sexual aggression appears to be a promising strategy for targeting the array of factors that influence proclivity to rape. Given that perceived peer norms play a significant role in both personal alcohol use and sexual aggression, the adoption of a social norms approach to target both health concerns may have a synergistic effect. Regardless of the approach taken, there is likely to little downside to developing prevention programs which have the potential for cross-cutting effects on multiple psychological and health outcomes.

References

Abbey, A. (2008). Alcohol and sexual violence perpetration. *VAWnet*. Retrieved March 29, 2021, from https://vawnet.org/sites/default/files/materials/files/2016-09/AR_AlcPerp.pdf

Abbey, A., Buck, P. O., Zawacki, T., & Saenz, C. (2003). Alcohol's effects on perceptions of a potential date rape. *Journal of Studies on Alcohol, 64*(5), 669–677. https://doi.org/10.15288/jsa.2003.64.669

Abbey, A., Zawacki, T., Buck, P. O., Clinton, A. M., & McAuslan, P. (2004). Sexual assault and alcohol consumption: What do we know about their relationship and what types of research are still needed? *Aggression and Violent Behavior, 9*(3), 271–303. https://doi.org/10.1016/S1359-1789(03)00011-9

Abbey, A., Saenz, C., & Buck, P. O. (2005). The cumulative effects of acute alcohol consumption, individual differences and situational perceptions on sexual decision making. *Journal of Studies on Alcohol, 66*(1), 82–90. https://doi.org/10.15288/jsa.2005.66.82

Abbey, A., Saenz, C., Buck, P. O., Parkhill, M. R., & Hayman, L. W., Jr. (2006). The effects of acute alcohol consumption, cognitive reserve, partner risk, and gender on sexual decision making. *Journal of Studies on Alcohol, 67*(1), 113–121. https://doi.org/10.15288/jsa.2006.67.113

Ames, G., & Cunradi, C. (2004). Alcohol use and preventing alcohol-related problems among young adults in the military. *Alcohol Research & Health, 28*, 252–257.

Andresen, F. J., Monteith, L. L., Kugler, J., Cruz, R. A., & Blais, R. K. (2019). Institutional betrayal following military sexual trauma is associated with more severe depression and specific posttraumatic stress disorder symptom clusters. *Journal of Clinical Psychology, 75*(7), 1305–1319. https://doi.org/10.1002/jclp.22773

Armstead, T. L., Rambo, K., Kearns, M., Jones, K. M., Dills, J., & Brown, P. (2017). CDC's DELTA FOCUS Program: Identifying promising primary prevention strategies for intimate partner violence. *Journal of Women's Health, 26*(1), 9–12. https://doi.org/10.1089/jwh.2016.6251

Armstead, T. L., Wilkins, N., & Doreson, A. (2018). Indicators for evaluating community- and societal-level risk and protective factors for violence prevention: Findings from a review of the literature. *Journal of Public Health Management and Practice, 24*(Suppl. 1), S42–S50. https://doi.org/10.1097/PHH.0000000000000681

Baker, T. B., Piper, M. E., McCarthy, D. E., Majeskie, M. R., & Fiore, M. C. (2004). Addiction motivation reformulated: An affective processing model of negative reinforcement. *Psychological Review, 111*(1), 33–51. https://doi.org/10.1037/0033-295X.111.1.33

Barkalow, C., & Raab, A. (1990). *In the men's house: An inside account of life in the Army by one of West Point's first female graduates*. Poseidon Press.

Basile, K. C., Smith, S. G., Breiding, M. J., Black, M. C., & Mahendra, R. (2014). *Sexual violence surveillance: Uniform definitions and recommended data elements, Version 2.0*. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/sv_surveillance_definitionsl-2009-a.pdf

Belkin, A. (2012). *Bring me men: Military masculinity and the benign façade of American empire, 1898–2001*. Columbia University Press.

Bell, M. E., Dardis, C. M., Vento, S. A., & Street, A. E. (2018). Victims of sexual harassment and sexual assault in the military: Understanding risks and promoting recovery. *Military Psychology, 30*(3), 219–228. https://doi.org/10.1037/mil0000144

Benson, B. J., Gohm, C. L., & Gross, A. M. (2007). College women and sexual assault: The role of sex-related alcohol expectancies. *Journal of Family Violence, 22*(6), 341–351. https://doi.org/10.1007/s10896-007-9085-z

Berkowitz, A. D. (1994). A model acquaintance rape prevention program for men. *New Directions for Student Services, 65*, 35–42. https://doi.org/10.1002/ss.37119946505

Berkowitz, A. (2003). Applications of social norms theory to other health and social justice issues. In W. Perkins (Ed.), *The social norms approach to preventing school and college age substance abuse: A handbook for educators, counselors, and clinicians* (pp. 259–279). Jossey-Bass.

Black, M. C., & Merrick, M. T. (2013). *Prevalence of intimate partner violence, sexual violence, and stalking among active duty women and wives of active duty men – Comparisons with women in the U.S. general population*. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://apps.dtic.mil/dtic/tr/fulltext/u2/a582205.pdf

Blais, R. K., & Monteith, L. L. (2018). Suicide ideation in female survivors of military sexual trauma: The trauma source matters. *Suicide & Life-threatening Behavior, 49*(3), 643–652. https://doi.org/10.1111/sltb.12464

Blais, R. K., Brignone, E., Fargo, J. D., Galbreath, N. W., & Gundlapalli, A. V. (2018). Assailant identity and self-reported nondisclosure of military sexual trauma in partnered women veterans. *Psychological Trauma, 10*(4), 470–474. https://doi.org/10.1037/tra0000320

Bohner, G., Siebler, F., & Schmelcher, J. (2006). Social norms and the likelihood of raping: Perceived rape myth acceptance of others affects men's rape proclivity. *Personality and Social Psychology Bulletin, 32*(3), 286–297. https://doi.org/10.1177/0146167205280912

Booth, B. M., Mengeling, M., Torner, J., & Sadler, A. (2011). Rape, sex partnership, and substance use consequences in women veterans. *Journal of Traumatic Stress, 24*(3), 287–294. https://doi.org/10.1002/jts.20643

Borowsky, I., Hogan, M., & Ireland, M. (1997). Adolescent sexual aggression: Risk and protective factors. *Pediatrics, 100*(6), 1–8. https://doi.org/10.1542/peds.100.6.e7

Bostock, D. J., & Daley, J. G. (2007). Lifetime and current sexual assault and harassment victimization rates of active-duty United States Air Force women. *Violence Against Women, 13*(9), 927–944. https://doi.org/10.1177/1077801207305232

Bouffard, L. A. (2010). Exploring the utility of entitlement in understanding sexual aggression. *Journal of Criminal Justice, 38*(5), 870–879. https://doi.org/10.1016/j.jcrimjus.2010.06.002

Brahms, E., Ahl, M., Reed, E., & Amaro, H. (2011). Effects of an alcohol intervention on drinking among female college students with and without a recent history of sexual violence. *Addictive Behaviors, 36*(12), 1325–1328. https://doi.org/10.1016/j.addbeh.2011.07.018

Bray, R. M., & Hourani, L. L. (2007). Substance use trends among active duty military personnel: Findings from the United States Department of Defense Health Related Behavior Surveys 1980–2005. *Addiction, 102*(7), 1092–1101. https://doi.org/10.1111/j.1360-0443.2007.01841.x

Breland, J. Y., Donalson, R., Li, Y., Hebenstreit, C. L., Goldstein, L. A., & Maguen, S. (2018). Military sexual trauma is associated with eating disorders, while combat exposure is not. *Psychological Trauma: Research, Practice, and Policy, 10*(3), 276–281. https://doi.org/10.1037/tra0000276

Bremner, J. D., Southwick, S. M., Darnell, A., & Charney, D. S. (1996). Chronic PTSD in Vietnam combat veterans: course of illness and substance abuse. *The American Journal of Psychiatry, 153*(3), 369–375. https://doi.org/10.1176/ajp.153.3.369

Bridges, J. S., & McGrail, C. A. (1989). Attributions of responsibility for date and stranger rape. *Sex Roles, 21*(3–4), 273–286. https://doi.org/10.1007/BF00289907

Brown, M. T. (2012). *Enlisting masculinities: The construction of gender in U.S. military recruiting advertising during the all-volunteer force*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199842827.001.0001

Brubaker, S. (2009). Sexual assault prevalence, reporting and policies: Comparing college and university campuses and military service academies. *Security Journal, 22*, 56–72. https://doi.org/10.1057/sj.2008.10

Burgess, A. W., Lee, W. J., & Carretta, C. M. (2016). Online reporting of military sexual trauma. *Military Medicine, 181*(4), 350–355.

Burns, B., Grindlay, K., Holt, K., Manski, R., & Grossman, D. (2014). Military sexual trauma among US servicewomen during deployment: A qualitative study. *American Journal of Public Health, 104*(2), 345–349. https://doi.org/10.2105/AJPH.2013.301576

Campbell, R., & Raja, S. (1999). Secondary victimization of rape victims: Insights from mental health professionals who treat survivors of violence. *Violence and Victims, 14*(3), 261–275.

Campbell, R., & Raja, S. (2005). The sexual assault and secondary victimization of female veterans: Help-seeking experiences with military and civilian social systems. *Psychology of Women Quarterly, 29*(1), 97–106. https://doi.org/10.1111/j.1471-6402.2005.00171.x

Cantor, D., Fisher, B., Chibnall, S., Harps, S., Townsend, Thomas, G., Lee, H., Kranz, V., Herbison, R., & Madden, K. (2019). *Report on the AAU Campus Climate Survey on sexual assault and sexual misconduct*. Westat. https://cpb-us-w2.wpmucdn.com/voices.uchicago.edu/dist/6/294/files/2019/10/2019-Campus-Climate-Survey-Results.pdf

Caslen, R. L., Jebb, C. R., Gade, D., & Landsem, H. C. (2015). *Getting to the left of sharp: Efforts to combat sexual harassment and assault*. United States Army War College Press. https://apps.dtic.mil/dtic/tr/fulltext/u2/a616054.pdf

Castro, C. A., Kintzle, S., Schuyler, A. C., Lucas, C. L., & Warner, C. H. (2015). Sexual assault in the military. *Current Psychiatry Reports, 17*(7), 54. https://doi.org/10.1007/s11920-015-0596-7

Chilcoat, H. D., & Breslau, N. (1998). Posttraumatic stress disorder and drug disorders: Testing causal pathways. *Archives of General Psychiatry, 55*(10), 913–917. https://doi.org/10.1001/archpsyc.55.10.913

Clinton-Sherrod, A. M., Morgan-Lopez, A. A., Brown, J. M., McMillen, B. A., & Cowell, A. (2011). Incapacitated sexual violence involving alcohol among college women: The impact of a brief drinking intervention. *Violence Against Women, 17*(1), 135–154. https://doi.org/10.1177/1077801210394272

Connell, R. W. (1985). Masculinity, violence, and war. In P. Patton & R. Poole (Eds.), *War/Masculinity* (pp. 4–10). Intervention Publications.

Connell, R. W. (2005). *Masculinities* (2nd ed.). University of California Press.

Creech, S. K., & Orchowski, L. M. (2016). Correlates of sexual revictimization among women veterans presenting to primary care. *Traumatology, 22*(3), 165–173. https://doi.org/10.1037/trm0000082

Creech, S. K., Pulverman, C. S., Shin, M. E., Roe, K. T., Tzilos Wernette, G., Orchowski, L. M., Kahler, C. W., Shea, M. T., & Zlotnick, C. (2021). An open trial to test participant satisfaction with and feasibility of a computerized intervention for women veterans with sexual trauma histories seeking primary care treatment. *Violence Against Women, 27*(3–4), 597–614. https://doi.org/10.1177/1077801219895102

Curtin, J., & Fairchild, B. (2003). Alcohol and cognitive control: Implications for regulation of behavior during response conflict. *Journal of Abnormal Psychology, 112*, 424–436. https://doi.org/10.1037/0021-843x.112.3.424

Dardis, C. M., Murphy, M. J., Bill, A. C., & Gidycz, C. A. (2016). An investigation of the tenets of social norms theory as they relate to sexually aggressive attitudes and sexual assault perpetration: A comparison of men and their friends. *Psychology of Violence, 6*(1), 163–171. https://doi.org/10.1037/a0039443

Dardis, C. M., Reinhardt, K. M., Foynes, M. M., Medoff, N. E., & Street, A. E. (2018). "Who are you going to tell? Who's going to believe you?": Women's experiences disclosing military sexual trauma. *Psychology of Women Quarterly, 42*(4), 414–429. https://doi.org/10.1177/0361684318796783

David, W. S., Simpson, T. L., & Cotton, A. J. (2006). Taking Charge: A pilot curriculum of self-defense and personal safety training for female veterans with PTSD because of

military sexual trauma. *Journal of Interpersonal Violence, 21*(4), 555–565. https://doi.org/10.1177/0886260505285723

Davis, T. M., Bush, K. R., Kivlahan, D. R., Dobie, D. J., & Bradley, K. A. (2003). Screening for substance abuse and psychiatric disorders among women patients in a VA health care system. *Psychiatric Services, 54*(2), 214–218. https://doi.org/10.1176/appi.ps.54.2.214

Davis, K. C., George, W. H., & Norris, J. (2004). Women's responses to unwanted sexual advances: The role of alcohol and inhibition conflict. *Psychology of Women Quarterly, 28*(4), 333–343. https://doi.org/10.1111/j.1471-6402.2004.00150.x

Davis, K. C., Hendershot, C. S., George, W. H., Norris, J., & Heiman, J. R. (2007). Alcohol's effects on sexual decision making: An integration of alcohol myopia and individual differences. *Journal of Studies on Alcohol and Drugs, 68*(6), 843–851. https://doi.org/10.15288/jsad.2007.68.843

Davis, K. C., Stoner, S. A., Norris, J., George, W. H., & Masters, N. T. (2009). Women's awareness of and discomfort with sexual assault cues: Effects of alcohol consumption and relationship type. *Violence Against Women, 15*(9), 1106–1125. https://doi.org/10.1177/1077801209340759

Defense Manpower Data Center. (2012). *Workplace and gender relations survey of active duty members, survey note no. 2013–007*. https://www.sapr.mil/public/docs/research/2012_Workplace_and_Gender_Relations_Survey_of_Active_Duty_Members-Survey_Note_and_Briefing.pdf

Delphi Behavioral Health Group. (2021). *Drinking habits by industry*. Retrieved April 5, 2021, from https://delphihealthgroup.com/drinking-habits-by-industry/

Department of Defense. (2008). D*epartment of defense FY08 report on sexual assault in the military.* Retrieved April 5, 2021, from https://sapr.mil/public/docs/reports/dod_fy08_annual_report_combined.pdf

Department of Defense. (2014). *Report to the President of the United States on sexual assault prevention and response. 136.* https://sapr.mil/public/docs/reports/FY14_POTUS/FY14_DoD_Report_to_POTUS_Full_Report.pdf

Department of Defense. (2019a). *Annual report on sexual assault in the military, fiscal year 2018.* Retrieved April 5, 2021, from https://www.politico.com/f/?id=0000016a-794c-d79f-adfb-fb4c003a0000

Department of Defense. (2019b*). Department of defense prevention plan of action 2019–2023*. Retrieved April 5, 2021, from: https://www.sapr.mil/sites/default/files/PPoA_Final.pdf

Department of Defense. (2020). *Department of defense annual report on sexual assault in the military: Fiscal year 2019*. Retrieved April 5, 2021, from https://media.defense.gov/2020/Apr/30/2002291660/-1/-1/1/1_DEPARTMENT_OF_DEFENSE_FISCAL_YEAR_2019_ANNUAL_REPORT_ON_SEXUAL_ASSAULT_IN_THE_MILITARY.PDF

Dworkin, E. R., Brill, C. D., & Ullman, S. E. (2019). Social reactions to disclosure of interpersonal violence and psychopathology: A systematic review and meta-analysis. *Clinical Psychology Review, 72*, 101750. https://doi.org/10.1016/j.cpr.2019.101750

Farris, C., & Hepner, K. A. (2014). *Targeting alcohol misuse: A promising strategy for reducing military sexual assaults?* Retrieved April 5, 2021, from http://www.rand.org/pubs/research_reports/RR538.html

Fillo, J., Heavey, S. C., Homish, D. L., & Homish, G. G. (2018). Deployment-related military sexual trauma predicts heavy drinking and alcohol problems among male reserve and National Guard soldiers. *Alcoholism: Clinical and Experimental Research, 42*(1), 111–119. https://doi.org/10.1111/acer.13528

Fleming, W. M., & Wiersma-Mosley, J. D. (2015). The role of alcohol consumption patterns and pro-social bystander interventions in contexts of gender violence. *Violence Against Women, 21*(10), 1259–1283. https://doi.org/10.1177/1077801215592721

Foubert, J. D., & Masin, R. C. (2012). Effects of The Men's Program on U.S. Army soldiers' intentions to commit and willingness to intervene to prevent rape: A pretest posttest study. *Violence and Victims, 27*(6), 911–921. https://doi.org/10.1891/0886-6708.27.6.911

Fromme, K., D'Amico, E. J., & Katz, E. C. (1999). Intoxicated sexual risk taking: An expectancy or cognitive impairment explanation? *Journal of Studies on Alcohol, 60*(1), 54–63. https://doi.org/10.15288/jsa.1999.60.54

Gedney, C. R., Wood, D. S., Lundahl, B., & Butters, R. P. (2018). Sexual assault prevention efforts in the US Air Force: A systematic review and content analysis. *Journal of Interpersonal Violence, 33*(3), 421–441. https://doi.org/10.1177/0886260515608801

George, W. H., & Stoner, S. A. (2000). Understanding acute alcohol effects on sexual behavior. *Annual Review of Sex Research, 11*, 92–124. https://psycnet.apa.org/record/2001-17368-003

George, W. H., Davis, K. C., Norris, J., Heiman, J. R., Stoner, S. A., Schacht, R. L., Hendershot, C. S., & Kajumulo, K. F. (2009). Indirect effects of acute alcohol intoxication on sexual risk-taking: The roles of subjective and physiological sexual arousal. *Archives of Sexual Behavior, 38*(4), 498–513. https://doi.org/10.1007/s10508-008-9346-9

Gidycz, C. A., Rich, C. L., Orchowski, L., King, C., & Miller, A. K. (2006). The evaluation of a sexual assault self-defense and risk-reduction program for college women: A prospective study. *Psychology of Women Quarterly, 30*(2), 173–186. https://doi.org/10.1111/j.1471-6402.2006.00280.x

Gidycz, C. A., Loh, C., Lobo, T., Rich, C., Lynn, S. J., & Pashdag, J. (2007). Reciprocal relationships among alcohol use, risk perception, and sexual victimization: A prospective analysis. *Journal of American College Health, 56*(1), 5–14. https://doi.org/10.3200/JACH.56.1.5-14

Gidycz, C. A., Orchowski, L. M., & Berkowitz, A. D. (2011a). Preventing sexual aggression among college men: An evaluation of a social norms and bystander intervention program. *Violence Against Women, 17*(6), 720–742. https://doi.org/10.1177/1077801211409727

Gidycz, C. A., Orchowski, L. M., & Edwards, K. (2011b). Standards of primary prevention of sexual assault. In M. Koss & J. White (Eds.), *Violence against Women and Children, Volume 2, Navigating Solutions* (pp. 159–179). American Psychological Association.

Gidycz, C. A., Orchowski, L. M., Probst, D. R., Edwards, K. M., Murphy, M., & Tansill, E. (2015). Concurrent Administration of Sexual Assault Prevention and Risk Reduction Programming: Outcomes for Women. *Violence Against Women, 21*(6), 780–800. https://doi.org/10.1177/1077801215576579

Gidycz, C. A., Wyatt, J., Galbreath, N. W., Axelrad, S. H., & McCone, D. R. (2018). Sexual assault prevention in the military: Key issues and recommendations. *Military Psychology, 30*(3), 240–251. https://doi.org/10.1080/08995605.2018.1489663

Gilmore, A. K., Lewis, M. A., & George, W. H. (2015). A randomized controlled trial targeting alcohol use and sexual assault risk among college women at high risk for victimization. *Behaviour Research & Therapy, 74*, 38–49. https://doi.org/10.1016/j.brat.2015.08.007

Gilmore, A. K., Orchowski, L. M., Davis, K. C., & Hahn, C. K. (2018a, July). *Alcohol and sexual assault prevention for college students: An mHealth solution* [Paper presentation] International Society for Research on Aggression, Paris, France.

Gilmore, A. K., Bountress, K. E., Selmanoff, M., & George, W. H. (2018b). Reducing heavy episodic drinking, incapacitation, and alcohol-induced blackouts: Secondary outcomes of a web-based combined alcohol use and sexual assault risk reduction intervention. *Violence Against Women, 24*(11), 1299–1313. https://doi.org/10.1177/1077801218787934

Gilmore, A. K., Leone, R., Oesterle, D., Orchowski, L., Davis, K. C., & Kaysen, D. (2020, November). *Reaching sexual and gender minority college students through Alcohol and Sexual Assault Prevention (ASAP): Findings from an open pilot trial* [Paper presentation] 36th annual meeting of the International Society for Traumatic Stress Studies, Virtual Conference.

Goldman, M. S., Del Boca, F. K., & Darkes, J. (1999). Alcohol expectancy theory: The application of cognitive neuroscience. In K. E. Leonard & H. T. Blane (Eds.), *The Guilford substance abuse series. Psychological theories of drinking and alcoholism* (pp. 203–246). The Guilford Press.

Government Accountability Office. (2015). *Sexual assault: Actions needed to improve DoD's prevention strategy and to help ensure it is effectively implemented, Report to congressional committees*. Retrieved April 5, 2021, from https://www.gao.gov/assets/gao-16-61.pdf

Graham, K., Bernards, S., Wayne Osgood, D., Abbey, A., Parks, M., Flynn, A., Dumas, T., & Wells, S. (2014). "Blurred lines?" Sexual aggression and barroom culture. *Alcoholism: Clinical and Experimental Research, 38*(5), 1416–1424. https://doi.org/10.1111/acer.12356

Greeley, J., & Oei, T. (1999). Alcohol and tension reduction. In K. E. Leonard & H. T. Blane (Eds.), *The Guilford substance abuse series. Psychological theories of drinking and alcoholism* (Vol. 2, pp. 14–53). The Guilford Press.

Griffin, K. W., Williams, C., Travis, W., & Tharp, A. (2021). Prevention of unwanted sexual contact among cadets at the United States Air Force Academy: A brief small-group intervention. *American Journal of Public Health, 111*(4), 672–674. https://doi.org/10.2105/AJPH.2020.306050

Groves, C. (2013). Military sexual assault: An ongoing and prevalent problem. *Journal of Human Behavior in the Social Environment, 23*(6), 747–752. https://doi.org/10.1080/10911359.2013.795064

Haikalis, M., Leone, R. M., Parrott, D. J., & DiLillo, D. (2018). Sexual assault survivor reports of missed bystander opportunities: The role of alcohol, sexual objectification, and relational factors. *Violence Against Women, 24*(10), 1232–1254. https://doi.org/10.1177/1077801218781941

Ham, L. S., Wiersma-Mosley, J. D., Wolkowicz, N. R., Jozkowski, K. N., Bridges, A. J., & Melkonian, A. J. (2019). Effect of alcohol intoxication on bystander intervention in a vignette depiction of sexual assault. *Journal of Studies on Alcohol and Drugs, 80*(2), 252–260. https://doi.org/10.15288/jsad.2019.80.252

Harrington, N. T., & Leitenberg, H. (1994). Relationship between alcohol consumption and victim behaviors immediately preceding sexual aggression by an acquaintance. *Violence and Victims, 9*(4), 315–324.

Hill, M., & Fischer, A. (2001). Does entitlement mediate the link between masculinity and rape-related variables? *Journal of Counseling Psychology, 48*(1), 39–50. https://doi.org/10.1037/0022-0167.48.1.39

Hinojosa, R. (2010). Doing hegemony: Military, men, and constructing a hegemonic masculinity. *The Journal of Men's Studies, 18*(2), 179–194. https://doi.org/10.3149/jms.1802.179

Hochstetler, A., Copes, H., & Forsyth, C. J. (2014). The fight: Symbolic expression and validation of masculinity in working class tavern culture. *American Journal of Criminal Justice, 39*, 493–510. https://doi.org/10.1007/s12103-013-9222-6

Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine, 351*(1), 13–22. https://doi.org/10.1056/NEJMoa040603

Holliday, R., & Monteith, L. L. (2019). Seeking help for the health sequelae of military sexual trauma: A theory-driven model of the role of institutional betrayal. *Journal of Trauma & Dissociation, 20*(3), 340–356. https://doi.org/10.1080/15299732.2019.1571888

Hooper, C. (1999). Masculinities, IR and the 'gender variable': A cost-benefit analysis for (sympathetic) gender sceptics. *Review of International Studies, 25*(3), 475–491. https://doi.org/10.1017/s0260210599004751

Hoyt, T., Rielage, J. K., & Williams, L. F. (2011). Military sexual trauma in men: A review of reported rates. *Journal of Trauma & Dissociation, 12*(3), 244–260. https://doi.org/10.1080/15299732.2011.542612

Hunter, M. (2007). *Honor betrayed: sexual abuse in America's military*. Barricade Books Incorporated.

Iwamoto, D. K., Cheng, A., Lee, C. S., Takamatsu, S., & Gordon, D. (2011). "Man-ing" up and getting drunk: the role of masculine norms, alcohol intoxication and alcohol-related problems among college men. *Addictive Behaviors, 36*(9), 906–911. https://doi.org/10.1016/j.addbeh.2011.04.005

Jaffe, A. E., DiLillo, D., Gratz, K. L., & Messman-Moore, T. L. (2019). Risk for revictimization following interpersonal and noninterpersonal trauma: Clarifying the role of posttraumatic stress symptoms and trauma-related cognitions. *Journal of Traumatic Stress, 32*(1), 42–55. https://doi.org/10.1002/jts.22372

Jakupcak, M., Tull, M. T., McDermott, M. J., Kaysen, D., Hunt, S., & Simpson, T. (2010). PTSD symptom clusters in relationship to alcohol misuse among Iraq and Afghanistan war veterans seeking post-deployment VA health care. *Addictive Behaviors, 35*(9), 840–843. https://doi.org/10.1016/j.addbeh.2010.03.023

Jaycox, L. H., Schell, T. L., Morral, A. R., Street, A., Farris, C., Kilpatrick, D., & Tanielian, T. (2014). Sexual assault findings: Active Component. In T. L. Schell, A. R. Morral, & K. L. Gore (Eds.), *Sexual assault and sexual harassment in the U.S. military* (Vol. 2, pp. 9–30). RAND.

Kanin, E. J. (1985). Date rapists: Differential sexual socialization and relative deprivation. *Archives of Sexual Behavior, 14*(3), 219–231. https://doi.org/10.1007/BF01542105

Katz, L. (1992). Free a man to fight: The exclusion of women from positions in the armed forces. *Minnesota Journal of Law & Inequality, 10*(1), 1–52.

Katz, L. S., Bloor, L. E., Cojucar, G., & Draper, T. (2007). Women who served in Iraq seeking mental health services: relationships between military sexual trauma, symptoms, and readjustment. *Psychological Services, 4*(4), 239–249. https://doi.org/10.1037/1541-1559.4.4.239

Kaysen, D., Neighbors, C., Martell, J., Fossos, N., & Larimer, M. E. (2006). Incapacitated rape and alcohol use: A prospective analysis. *Addictive Behaviors, 31*(10), 1820–1832. https://doi.org/10.1016/j.addbeh.2005.12.025

Kaysen, D., Atkins, D. C., Moore, S. A., Lindgren, K. P., Dillworth, T., & Simpson, T. (2011). Alcohol use, problems, and the course of Posttraumatic Stress Disorder: A prospective study of female crime victims. *Journal of Dual Diagnosis, 7*(4), 262–279. https://doi.org/10.1080/15504263.2011.620449

Kelley, M. L., Schwerin, M. L., Farrar, K. L., & Lane, M. E. (2005). An evaluation of a sexual assault prevention and advocacy program for U.S. Navy personnel. *Military Medicine, 170*(4), 320–326. https://doi.org/10.7205/MILMED.170.4.320

Kelley, M. L., Runnals, J., Pearson, M. R., Miller, M., Fairbank, J. A., Mid-Atlantic, V. A., Women Veterans Workgroup, M. I. R. E. C. C., Mid-Atlantic, V. A., Registry Workgroup, M. I. R. E. C. C., & Brancu, M. (2013). Alcohol use and trauma exposure among male and female veterans before, during, and after military service. *Drug and Alcohol Dependence, 133*(2), 615–624. https://doi.org/10.1016/j.drugalcdep.2013.08.002

Khantzian, E. J. (1997). The self-medication hypothesis of substance use disorders: A reconsideration and recent applications. *Harvard Review of Psychiatry, 4*(5), 231–244. https://doi.org/10.3109/10673229709030550

Kimerling, R., Makin-Byrd, K., Louzon, S., Ignacio, R. V., & McCarthy, J. F. (2016). Military sexual trauma and suicide mortality. *American Journal of Preventive Medicine, 50*(6), 684–691. https://doi.org/10.1016/j.amepre.2015.10.019

Kurpius, S., & Lucart, A. (2000). Military and civilian undergraduates: attitudes toward women, masculinity, and authoritarianism. *Sex Roles, 43*(3–4), 255–265. https://doi.org/10.1023/A:1007085015637

Lannutti, P. J., & Monahan, J. L. (2004). Resistance, persistence, and drinking: Examining goals of women's refusals of unwanted sexual advances. *Western Journal of Communication, 68*(2), 151–169. https://doi.org/10.1080/10570310409374794

Lansford, J. E., Rabiner, D. L., Miller-Johnson, S., Golonka, M. M., & Hendren, J. (2003). Developmental model of aggression. In E. F. Cocaro (Ed.), *Aggression: Psychiatric assessment and treatment* (pp. 41–60). CRC Press. https://doi.org/10.1201/b14206

Larimer, M. E., & Cronce, J. M. (2007). Identification, prevention, and treatment revisited: individual-focused college drinking prevention strategies 1999–2006. *Addictive Behaviors, 32*(11), 2439–2468. https://doi.org/10.1016/j.addbeh.2007.05.006

Leone, R. M., & Parrott, D. J. (2019a). Male role norms, heavy drinking, and bystander behavior for sexual aggression. *Journal of Interpersonal Violence*. Advance online publication. https://doi.org/10.1177/0886260519851222

Leone, R. M., & Parrott, D. J. (2019b). Acute alcohol intoxication inhibits bystander intervention behavior for sexual aggression among men with high intent to help. *Alcoholism: Clinical & Experimental Research, 43*, 170–179. https://doi.org/10.1111/acer.13920

Leone, R. M., Haikalis, M., Parrott, D. J., & DiLillo, D. (2018). Bystander intervention to prevent sexual violence: The overlooked role of bystander alcohol intoxication. *Psychology of Violence, 8*(5), 639–647. https://doi.org/10.1037/vio0000155

Lofgreen, A. M., Carroll, K. K., Dugan, S. A., & Karnik, N. S. (2017). An Overview of Sexual Trauma in the U.S. Military. *Focus (American Psychiatric Publishing), 15*(4), 411–419. https://doi.org/10.1176/appi.focus.20170024

Lund, E. M., & Thomas, K. B. (2015). Necessary but not sufficient: Sexual assault information on college and university websites. *Psychology of Women Quarterly, 39*(4), 530–538. https://doi.org/10.1177/0361684315598286

Lynch, J. F., Mowrey, R. J., Nesbitt, G. M., & O'Neill, D. F. (2004). Risky business: Misperceived norms of sexual behavior among college students. *Journal of Student Affairs Research and Practice, 42*(1), 21–35. https://doi.org/10.2202/1949-6605.1412

Maguen, S., Lucenko, B. A., Reger, M. A., Gahm, G. A., Litz, B. T., Seal, K. H., Knight, S. J., & Marmar, C. R. (2010). The impact of reported direct and indirect killing on mental health symptoms in Iraq war veterans. *Journal of Traumatic Stress, 23*(1), 86–90. https://doi.org/10.1002/jts.20434

Maguen, S., Cohen, B., Ren, L., Bosch, J., Kimerling, R., & Seal, K. (2012). Gender differences in military sexual trauma and mental health diagnoses among Iraq and Afghanistan veterans with posttraumatic stress disorder. *Women's Health Issues, 22*(1), e61–e66. https://doi.org/10.1016/j.whi.2011.07.010

Martin, S., Macy, R., & Young, S. (2011). Health and economic consequences of sexual violence. In J. W. White, M. P. Koss, & A. E. Kazdin (Eds.), *Violence against women and children: Vol. 1. Mapping the terrain* (pp. 173–195). American Psychological Association. https://doi.org/10.1037/12307-008

Matthews, M., Farris, C., Tankard, M., & Dunbar, M. S. (2018). Needs of male sexual assault victims in the U.S. Armed Forces. *RAND Health Quarterly, 8*(2), 7. https://www.ncbi.nlm.nih.gov/pubmed/30323990

McCauley, J. L., & Calhoun, K. S. (2008). Faulty perceptions? The impact of binge drinking history on college women's perceived rape resistance efficacy. *Addictive Behaviors, 33*(12), 1540–1545. https://doi.org/10.1016/j.addbeh.2008.07.009

Melkonian, A. J., Ham, L. S., Wiersma-Mosley, J. D., Jackson, K. K., Mobley, A. M., Jozkowski, K. N., Willis, M., & Bridges, A. J. (2020). Alcohol intoxication impairs the bystander intervention process in a hypothetical sexual assault: A field investigation. *Psychology of Violence, 10*(6), 657–666. https://doi.org/10.1037/vio0000283

Mengeling, M. A., Booth, B. M., Torner, J. C., & Sadler, A. G. (2014). Reporting sexual assault in the military: who reports and why most servicewomen don't. *American Journal of Preventive Medicine, 47*(1), 17–25. https://doi.org/10.1016/j.amepre.2014.03.001

Meredith, L. S., Sherbourne, C. D., Gaillot, S. J., Hansell, L., Ritschard, H. V., Parker, A. M., & Wrenn, G. (2011). Promoting psychological resilience in the U.S. military. *Rand Health Quarterly, 1*(2), 2.

Merrill, L., Newell, C., Thomsen, C., Gold, S., Milner, J., Koss, M., & Rosswork, S. G. (1999). Childhood abuse and sexual revictimization in a female Navy recruit sample. *Journal of Traumatic Stress, 12*(2), 211–225. https://doi.org/10.1023/A:1024789723779

Messman-Moore, T. L., Ward, R. M., & Brown, A. L. (2009). Substance use and PTSD symptoms impact the likelihood of rape and revictimization in college women. *Journal of Interpersonal Violence, 24*(3), 499–521. https://doi.org/10.1177/0886260508317199

Miranda, R., Jr., Meyerson, L. A., Long, P. J., Marx, B. P., & Simpson, S. M. (2002). Sexual assault and alcohol use: Exploring the self-medication hypothesis. *Violence and Victims, 17*(2), 205–217. https://doi.org/10.1891/vivi.17.2.205.33650

Moffitt, T., Caspi, A., Harrington, H., & Milne, B. (2002). Adolescence-limited and life-course persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100*(4), 674–701. https://doi.org/10.1037/0033-295X.100.4.674

Mondragon, S. A., Wang, D., Pritchett, L., Graham, D. P., Plasencia, M. L., & Teng, E. J. (2015). The influence of military sexual trauma on returning OEF/OIF male veterans. *Psychological services, 12*(4), 402. https://doi.org/10.1037/ser0000050

Monteith, L. L., Bahraini, N. H., Matarazzo, B. B., Soberay, K. A., & Smith, C. P. (2016). Perceptions of institutional betrayal predict suicidal self-directed violence among veterans exposed to military sexual trauma. *Journal of Clinical Psychology, 72*(7), 743–755. https://doi.org/10.1002/jclp.22292

Monteith, L. L., Gerber, H. R., Brownstone, L. M., Soberay, K. A., & Bahraini, N. H. (2019). The phenomenology of military sexual trauma among male veterans. *Psychology of Men & Masculinities, 20*(1), 115–127. https://doi.org/10.1037/men0000153

Monteith, L. L., Schneider, A. L., Holliday, R., & Bahraini, N. H. (2021). Assessing institutional betrayal among female veterans who experienced military sexual trauma: A Rasch Analysis of the Institutional Betrayal Questionnaire.2. *Journal of Interpersonal Violence.* https://doi.org/10.1177/0886260520983959

Morral, A. R., Gore, K. L., & Schell, T. L. (2014). *Sexual assault and sexual harassment in the US Military. Volume 1. Design of the 2014 RAND military workplace study*. RAND. https://www.rand.org/pubs/research_reports/RR870z1.html.

Morris, E. E., Smith, J. C., Farooqui, S. Y., & Surís, A. M. (2014). Unseen battles: The recognition, assessment, and treatment issues of men with military sexual trauma (MST). *Trauma, Violence, & Abuse, 15*(2), 94–101. https://doi.org/10.1177/1524838013511540

Muehlenhard, C. L., & Linton, M. A. (1987). Date rape and sexual aggression in dating situations: Incidence and risk factors. *Journal of Counseling Psychology, 34*(2), 186–196. https://doi.org/10.1037/0022-0167.34.2.186

Mullen, K., Watson, J., Swift, J., & Black, D. (2007). Young men, masculinity, and alcohol. *Drugs: Education, Prevention and Policy, 14*(2), 151–165. https://doi.org/10.1080/09687630600997816

Murnen, S., Wright, C., & Kaluzny, G. (2002). If "boys will be boys", then girls will be victims? A meta-analytic review of the research that relates masculine ideology to sexual aggression. *Sex Roles, 46*(11–12), 359–375. https://doi.org/10.1023/A:1020488928736

Napper, L. E., & Kenney, S. R. (2018, September 27). *An integrated approach to promoting alcohol harm reduction & sexual health among college students* [Presentation]. Recent Advances in Understanding and Preventing Alcohol-Related Sexual Assault: An NIAAA Workshop, NIH Workshop, Washington, D.C., United States.

Napper, L., Kenney, S., Orchowski, L. M., Barnett, N., & Johnson, N. (2018). *A multi-component alcohol and sex risk intervention for college students* (R34AA026032). Grant funded by the National Institute on Alcohol Abuse and Alcoholism (NIAAA; 6/15/18-5/31/21).

Nation, M., Crusto, C., Wandersman, A., Kumpfer, K. L., Seybolt, D., Morrissey-Kane, E., & Davino, K. (2003). What works in prevention: Principles of effective prevention programs. *American Psychologist, 58*(6–7), 449–456. https://doi.org/10.1037/0003-066x.58.6-7.449

Neal, D., & Fromme, K. (2007). Event-level covariation of alcohol intoxication and behavioral risks during the first year of college. *Journal of Consulting and Clinical Psychology, 75*(2), 294–306. https://doi.org/10.1037/0022-006X.75.2.294

Neill, K. (2000). Duty, honor, rape: sexual assault against women during war. *Journal of International Women's Studies, 2*(1), 43–51.

Neilson, E. C., Gilmore, A. K., Pinsky, H. T., Shepard, M. E., Lewis, M. A., & George, W. H. (2018). The use of drinking and sexual assault protective behavioral strategies: Associations with sexual victimization and revictimization among college women. *Journal of Interpersonal Violence, 33*(1), 137–158. https://doi.org/10.1177/0886260515603977

Norris, J., Nurius, P. S., & Dimeff, L. A. (1996). Through her eyes: Factors affecting women's perception of and resistance to acquaintance sexual aggression threat. *Psychology of Women Quarterly, 20*(1), 123–145. https://doi.org/10.1111/j.1471-6402.1996.tb00668.x

Norris, J., Nurius, P. S., & Graham, T. L. (1999). When a date changes from fun to dangerous: Factors affecting women's ability to distinguish. *Violence Against Women, 5*, 230–250. https://doi.org/10.1177/10778019922181202

Oesterle, D. W., Orchowski, L. M., Moreno, O., & Berkowitz, A. (2018). A qualitative analysis of bystander intervention among heavy-drinking college men. *Violence Against Women, 24*(10), 1207–1231. https://doi.org/10.1177/1077801218781931

Office of People Analytics. (2019). *2018 Workplace and gender relations survey of the active duty military*. Retrieved April 5, 2021, from https://apps.dtic.mil/dtic/tr/fulltext/u2/1072334.pdf

Orchowski, L. M., & Gidycz, C. A. (2018). *Sexual assault risk reduction: Theory, research and practice*. Elsevier.

Orchowski, L. M., Gidycz, C. A., & Raffle, H. (2008). Evaluation of a sexual assault risk reduction and self-defense program: A prospective analysis of a revised protocol. *Psychology of Women Quarterly, 32*(2), 204–218. https://doi.org/10.1111/j.1471-6402.2008.00425.x

Orchowski, L. M., Berkowitz, A., Boggis, J., & Oesterle, D. (2016). Bystander intervention among college men: The role of alcohol and correlates of sexual aggression. *Journal of Interpersonal Violence, 31*(17), 2824–2846. https://doi.org/10.1177/0886260515581904

Orchowski, L. M., Berry-Caban, C. S., Kazemi, D., Borsari, B., Kahler, C., & Prisock, K. (2017, August). *Development of a sexual assault and alcohol intervention for men in the military* [Paper presentation] 2017 American Psychological Association Annual Conference, Washington, DC, United States.

Orchowski, L. M., Berry-Cabán, C. S., Prisock, K., Borsari, B., & Kazemi, D. M. (2018a). Evaluations of sexual assault prevention programs in military settings: A synthesis of the research literature. *Military Medicine, 183*(Suppl. 1), 421–428. https://doi.org/10.1093/milmed/usx212

Orchowski, L. M., Barnett, N. P., Berkowitz, A., Borsari, B., Oesterle, D., & Zlotnick, C. (2018b). Sexual assault prevention for heavy drinking college men: Development and feasibility of an integrated approach. *Violence Against Women, 24*(11), 1369–1396. https://doi.org/10.1177/1077801218787928

Orchowski, L. M., Oesterle, D. W., Moreno, O., Yusufov, M., Berkowitz, A., Abbey, A., Barnett, N. P., & Borsari, B. (2020a). A qualitative analysis of sexual consent among heavy-drinking college men. *Journal of Interpersonal Violence*. Advanced online publication. https://doi.org/10.1177/0886260520958658

Orchowski, L. M., Gilmore, A., Walters, K., Davis, K. C., & Flanagan, J. (2020b). *Personalized web-based sexual assault prevention for service members*. Department of Defense; W81XWH-19-PHTBIRP-PSAAD-IIFRA; 10/1/20 – 9/30/23. Log Number: PT190176; Grant Award Number: W81XWH-20-2-0039

Orchowski, L. M., Gidycz, C. A., & Kraft, K. (2021). Resisting unwanted sexual and social advances: Perspectives of college women and men. *Journal of Interpersonal Violence, 36*(7–8), NP4049–NP4073. https://doi.org/10.1177/0886260518781805

Parkhill, M. R., & Abbey, A. (2008). Does alcohol contribute to the confluence model of sexual assault perpetration? *Journal of Social & Clinical Psychology, 27*(6), 529–554. https://doi.org/10.1521/jscp.2008.27.6.529

Parks, K. A., & Zetes-Zanatta, L. M. (1999). Women's bar-related victimization: Refining and testing a conceptual model. *Aggressive Behavior, 25*(5), 349–364. https://doi.org/10.1002/(SICI)1098-2337(1999)25:5<349::AID-AB3>3.0.CO;2-O

Patten, E., & Parker, K. (2011). *Women in the US military: Growing share, distinctive profile*. Pew Research Center: Social and Demographic Trends. https://www.pewresearch.org/social-trends/2011/12/22/women-in-the-u-s-military-growing-share-distinctive-profile/

Peralta, R. L., Tuttle, L. A., & Steele, J. L. (2010). At the intersection of interpersonal violence, masculinity, and alcohol use: The experiences of heterosexual male perpetrators of intimate partner violence. *Violence Against Women, 16*(4), 387–409. https://doi.org/10.1177/1077801210363539

Pershing, J. L. (2003). Why women don't report sexual harassment: A case study of an elite military institution. *Gender Issues, 21*, 3–30. https://doi.org/10.1007/s12147-003-0008-x

Peterson, C., DeGue, S., Florence, C., & Lokey, C. (2017). Lifetime economic burden of rape among U.S. adults. *American Journal of Preventative Medicine, 52*(6), 691–701. https://doi.org/10.1016/j.amepre.2016.11.014

Potter, S. J., & Moynihan, M. M. (2011). Bringing in the bystander in-person prevention program to a U.S. military installation: Results from a pilot study. *Military Medicine, 176*(8), 870–875. https://doi.org/10.7205/MILMED-D-10-00483

Potter, S. J., & Stapleton, J. G. (2012). Translating sexual assault prevention from a college campus to a United States military installation: Piloting the Know-Your-Power bystander social marketing campaign. *Journal of interpersonal violence, 27*(8), 1593–1621. https://doi.org/10.1177/0886260511425795

Pugh, B., Ningard, H., Vander Ven, T., & Butler, L. (2016). Victim ambiguity: Bystander intervention and sexual assault in the college drinking scene. *Deviant Behavior, 37*(4), 401–418. https://doi.org/10.1080/01639625.2015.1026777

Rees, S., Silove, D., Chey, T., Ivancic, L., Steel, Z., Creamer, M., Teesson, M., Bryant, R., McFarlane, A., Mills, L., Slade, T., Carragher, N., O'Donnell, M., & Forbes, D. (2011). Lifetime prevalence of gender-based violence in women and the relationship with mental disorders and psychosocial function. *The Journal of the American Medical Association, 306*(5), 513–521. https://doi.org/10.1001/jama.2011.1098

Rock, L. M., Lipari, R. N. Cook, P. J., & Hale, A. D. (2011). *2010 Workplace and gender relations survey of active duty members. Overview report on sexual harassment*. Defense Manpower Data Center. https://www.sapr.mil/public/docs/research/DMDC_2010_WGRA_Overview_Report_of_Sexual_Assault.pdf

Rosellini, A. J., Street, A. E., Ursano, R. J., Chiu, W. T., Heeringa, S. G., Monahan, J., Naifeh, J. A., Petukhova, M. V., Reis, B. Y., Sampson, N. A., Bliese, P. D., Stein, M. B., Zaslavsky, A. M., & Kessler, R. C. (2017a). Sexual assault victimization and mental health treatment, suicide attempts, and career outcomes among women in the US Army. *American Journal of Public Health, 107*(5), 732–739. https://doi.org/10.2105/AJPH.2017.303693

Rosellini, A. J., Monahan, J., Street, A. E., Petukhova, M. V., Sampson, N. A., Benedek, D. M., Bliese, P., Stein, M. B., Ursano, R. J., & Kessler, R. C. (2017b). Predicting sexual assault perpetration in the U.S. Army using administrative data. *American Journal of Preventive Medicine, 53*(5), 661–669. https://doi.org/10.1016/j.amepre.2017.06.022

Rosenstein, J. E., Angelis, K. D., McCone, D. R., & Carroll, M. H. (2018). Sexual assault and sexual harassment at the US military service academies. *Military Psychology, 30*(3), 206–218. https://doi.org/10.1080/08995605.2017.1422950

Rozee, P. D., & Koss, M. P. (2001). Rape: A century of resistance. *Psychology of Women Quarterly, 25*(4), 295–311. https://doi.org/10.1111/1471-6402.00030

Ryan, G. L., Mengeling, M. A., Summers, K. M., Booth, B. M., Torner, J. C., Syrop, C. H., & Sadler, A. G. (2016). Hysterectomy risk in premenopausal-aged military veterans: associations with sexual assault and gynecologic symptoms. *American Journal of Obstetrics & Gynecology, 214*(3), 352.e1–352.e13. https://doi.org/10.1016/j.ajog.2015.10.003

Sadler, A. G., Booth, B. M., Nielson, D., & Doebbeling, B. N. (2000). Health-related consequences of physical and sexual violence: Women in the military. *Obstetrics and Gynecology, 96*(3), 473–480. https://doi.org/10.1016/S0029-7844(00)00919-4

Sadler, A. G., Booth, B. M., Cook, B. L., Torner, J. C., & Doebbeling, B. N. (2001). The military environment: Risk factors for women's non-fatal assaults. *Journal of Occupational and Environmental Medicine, 43*(4), 325–334. https://doi.org/10.1097/00043764-200104000-00007

Sadler, A. G., Booth, B. M., Cook, B. L., & Doebbeling, B. N. (2003). Factors associated with women's risk of rape in the military environment. *American Journal of Industrial Medicine, 43*(3), 262–273. https://doi.org/10.1002/ajim.10202

Sadler, A. G., Booth, B. M., & Doebbeling, B. N. (2005). Gang and multiple rapes during military service: Health consequences and health care. *Journal of American Medical Women's Association, 60*(1), 33–41.

Sadler, A. G., Mengeling, M. A., Booth, B. M., O'Shea, A. M. J., & Torner, J. C. (2017). The relationship between US military officer leadership behaviors and risk of sexual assault of Reserve, National Guard, and active component servicewomen in nondeployed locations. *American Journal of Public Health, 107*(1), 147–155. https://doi.org/10.2105/AJPH.2016.303520

Sadler, A. G., Cheney, A. M., Mengeling, M. A., Booth, B. M., Torner, J. C., & Young, L. B. (2021). Servicemen's perceptions of male sexual assault and barriers to reporting during Active Component and Reserve/National Guard military service. *Journal of Interpersonal Violence, 36*(7-8), NP3596-NP3623. https://doi.org/10.1177/0886260518780407

Sayette, M. A. (1993). An appraisal-disruption model of alcohol's effects on stress responses in social drinkers. *Psychological Bulletin, 114*(3), 459–476. https://doi.org/10.1037/0033-2909.114.3.459

Scaglione, N. M., Hultgren, B. A., Reavy, R., Mallett, K. A., Turrisi, R., Cleveland, M. J., & Sell, N. M. (2015). Do students use contextual protective behaviors to reduce alcohol-related sexual risk? Examination of a dual-process decision-making model. *Psychology of Addictive Behaviors, 29*(3), 733–743. https://doi.org/10.1037/adb0000113

Schry, A., Hibberg, R., Wagner, H. R., Turchik, J., Kimbrel, N., Wong, M., Elbogen, E. E., Strauss, J. L., Brancu, M., & Veterans Affairs Mid-Atlantic Mental Illness Research, Education and Clinical Center Workgroup. (2015). Functional correlates of military sexual assault in male veterans. *Psychological Services, 12*(4), 384–393. https://doi.org/10.1037/ser0000053

Schultz, J. R., Kathryn, M. B., Naugle, A. E., & Polusny, M. A. (2006). Child sexual abuse and adulthood sexual assault among military veteran and civilian women. *Military Medicine, 171*(8), 723–728. https://doi.org/10.7205/milmed.171.8.723

Scott-Sheldon, L. A., Carey, K. B., Elliott, J. C., Garey, L., & Carey, M. P. (2014). Efficacy of alcohol interventions for first-year college students: A meta-analytic review of randomized controlled trials. *Journal of Consulting and Clinical Psychology, 82*(2), 177–188. https://doi.org/10.1037/a0035192

Seelig, A. D., Rivera, A. C., Powell, T. M., Williams, E. C., Peterson, A. V., Littman, A. J., Maynard, C., Street, A. E., Bricker, J. B., & Boyko, E. J. (2017). Patterns of smoking and unhealthy alcohol use following sexual trauma among U.S. service members. *Journal of Traumatic Stress, 30*(5), 502–511. https://doi.org/10.1002/jts.22214

Senn, C. Y., Eliasziw, M., Barata, P. C., Thurston, W. E., Newby-Clark, I. R., Radtke, H. L., & Hobden, K. L. (2015). Efficacy of a sexual assault resistance program for university women. *The New England Journal of Medicine, 372*(24), 2326–2335. https://doi.org/10.1056/NEJMsa1411131

Senn, C. Y., Eliasziw, M., Hobden, K. L., Newby-Clark, I. R., Barata, P. C., Radtke, H. L., & Thurston, W. E. (2017). Secondary and 2-year outcomes of a sexual assault resistance program for university women. *Psychology of Women Quarterly, 41*(2), 147–162. https://doi.org/10.1177/0361684317690119

Sexton, M. B., Raggio, G. A., McSweeney, L. B., Authier, C. C., & Rauch, S. A. M. (2017). Contrasting gender and combat versus military sexual traumas: Psychiatric symptom severity and morbidities in treatment-seeking veterans. *Journal of Women's Health, 26*(9), 933–940. https://doi.org/10.1089/jwh.2016.6080

Siebold, G. L. (2007). The essence of military group cohesion. *Armed Forces & Society, 33*(2), 286–295. https://doi.org/10.1177/0095327X06294173

Skinner, K. M., Kressin, N., Frayne, S., Tripp, T. J., Hankin, C. S., Miller, D. R., & Sullivan, L. M. (2000). The prevalence of military sexual assault among female veterans' administration outpatients. *Journal of Interpersonal Violence, 15*(3), 291–310. https://doi.org/10.1177/088626000015003005

Smith, C. P., & Freyd, J. J. (2013). Dangerous safe havens: Institutional betrayal exacerbates sexual trauma. *Journal of traumatic stress, 26*(1), 119–124. https://doi.org/10.1002/jts.21778

Smith, C. P., & Freyd, J. J. (2014). Institutional betrayal. *American Psychologist, 69*(6), 575–587. https://doi.org/10.1037/a0037564

Smith, S. G., Zhang, X., Basile, K. C., Merrick, M. T., Wang, J., Kresnow, M., & Chen, J. (2018). *National Intimate Partner and Sexual Violence Survey: 2015 Data Brief – Updated Release.* National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/2015data-brief508.pdf

Stander, V. A., & Thomsen, C. J. (2016). Sexual harassment and assault in the U.S. military: A review of policy and research trends. *Military Medicine, 181*(Supp. 1), 20–27. https://doi.org/10.7205/MILMED-D-15-00336

Steele, C. M., & Josephs, R. A. (1990). Alcohol myopia: Its prized and dangerous effects. *American Psychologist, 45*, 921–933. https://doi.org/10.1037//0003-066x.45.8.921

Stein, N., Mills, M., Arditte, K., Mendoza, C., Borah, A., Resich, P., Litz, B. T., & STRONG STAR Consortium. (2012). A scheme for categorizing traumatic military events. *Behavior Modification, 36*(6), 787–807. https://doi.org/10.1177/0145445512446945

Stoner, S. A., Norris, J., George, W. H., Davis, K. C., Masters, N. T., & Hessler, D. M. (2007). Effects of alcohol intoxication and victimization history on women's sexual assault resistance intentions: The role of secondary cognitive appraisals. *Psychology of Women Quarterly, 31*(4), 344–356. https://doi.org/10.1111/j.1471-6402.2007.00384.x

Street, A., & Stafford, J. (2002). Military sexual trauma: Issues in caring for veterans. In *Iraq War Clinician Guide* (pp. 66-69). National Center for Post-Traumatic Stress Disorder, Walter Reed Army Medical Center.

Suris, A., & Lind, L. (2008). Military sexual trauma: A review of prevalence and associated health consequences in veterans. *Trauma, Violence and Abuse, 9*(4), 250–269. https://doi.org/10.1177/1524838008324419

Suris, A., Lind, L., Kashner, M., Borman, P., & Petty, F. (2004). Sexual assault in women veterans: An examination of PTSD risk, health care utilization, and cost of care. *Psychosomatic Medicine, 66*(5), 749–756. https://doi.org/10.1097/01.psy.0000138117.58559.7b

Suris, A., Lind, L., Kashner, M., & Borman, P. (2007). Mental health, quality of life and health functioning in women veterans: Differential outcomes associated with military and civilian sexual assault. *Journal of Interpersonal Violence, 22*(2), 179–197. https://doi.org/10.1177/0886260506295347

Taylor, S. P., & Chermack, S. T. (1993). Alcohol, drugs and human physical aggression. *Journal of Studies on Alcohol, 11*, 78–88.

Tedor, M. F., Quinn, L. M., Wilsnack, S. C., Wilsnack, R. W., & Greenfield, T. K. (2018). Gender and country differences in alcohol-aggression expectancy and alcohol-related intimate partner violence. *Deviant Behavior, 39*(5), 554–575. https://doi.org/10.1080/01639625.2016.1269559

Testa, M., & Livingston, J. A. (2009). Alcohol consumption and women's vulnerability to sexual victimization: can reducing women's drinking prevent rape? *Substance Use & Misuse, 44*(9–10), 1349–1376. https://doi.org/10.1080/10826080902961468

Testa, M., & Livingston, J. A. (2018). Women's alcohol use and risk for sexual victimization: Implications for prevention. In L. M. Orchowski, C. A. Gidycz, & C.A. (Eds.), *Sexual assault risk reduction: Theory, research and practice* (pp. 135–172). Elsevier. https://doi.org/10.1016/B978-0-12-805389-8.00007-4

Testa, M., & Parks, K. A. (1996). The role of women's alcohol consumption in sexual victimization. *Aggression and Violent Behavior, 1*, 217–234.

Testa, M., Livingston, J. A., & Collins, R. L. (2000). The role of women's alcohol consumption in evaluation of vulnerability to sexual aggression. *Experimental and Clinical Psychopharmacology, 8*(2), 185–191. https://doi.org/10.1037/1064-1297.8.2.185

Testa, M., Hoffman, J. H., Livingston, J. A., & Turrisi, R. (2010). Preventing college women's sexual victimization through parent based intervention: a randomized controlled trial. *Prevention Science, 11*(3), 308–318. https://doi.org/10.1007/s11121-010-0168-3

Tharp, A. T., DeGue, S., Valle, L. A., Brookmeyer, K. A., Massetti, G. M., & Matjasko, J. L. (2013). A systematic qualitative review of risk and protective factors for sexual violence perpetration. *Trauma, Violence & Abuse, 14*(2), 133–167. https://doi.org/10.1177/1524838012470031

Turchik, J., & Wilson, S. (2010). Sexual assault in the US military: A review of the literature and recommendations for the future. *Aggression and Violence Behavior, 15*(4), 267–277. https://doi.org/10.1016/j.avb.2010.01.005

Ullman, S. E., & Najdowski, C. J. (2009). Revictimization as a moderator of psychosocial risk factors for problem drinking in female sexual assault survivors. *Journal of Studies on Alcohol and Drugs, 70*(1), 41–49. https://doi.org/10.15288/jsad.2009.70.41

Ullman, S. E., Townsend, S. M., Starzynski, L. L., & Long, L. M. (2006). Correlates of comorbid PTSD and polysubstance use in sexual assault victims. *Violence and Victims, 21*(6), 725–743. https://doi.org/10.1891/vv-v21i6a004

Vogt, D., Bruce, T. A., Street, A. E., & Stafford, J. (2007). Attitudes toward women and tolerance for sexual harassment among reservists. *Violence Against Women, 13*(9), 879–900. https://doi.org/10.1177/1077801207305217

Wilkins, N., Tsao, B., Hertz, M., Davis, R., & Klevens, J. (2014). *Connecting the dots: An overview of the links among multiple forms of violence.* National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/connecting_the_dots-a.pdf

Wilkins, N., Myers, L., Kuehl, T., Bauman, A., & Hertz, M. (2018). Connecting the dots: State health department approaches to addressing shared risk and protective factors across multiple forms of violence. *Journal of Public Health Management and Practice, 24*(Suppl. 1), S32–S41. https://doi.org/10.1097/PHH.0000000000000669

Wilkinson, S., & Wilkinson, C. (2020). Young men's alcohol consumption experiences and performances of masculinity. *International Journal of Drug Policy, 81*, 102550. https://doi.org/10.1016/j.drugpo.2019.08.007

Wilson, L. C. (2016). The prevalence of military sexual trauma: A meta-analysis. *Trauma, Violence, & Abuse, 19*(5), 584–597. https://doi.org/10.1177/1524838016683459

Windle, M. (1994). Substance use, risky behaviors, and victimization among a U.S. national adolescent sample. *Addiction, 89*, 175–182.

Wood, E. J., & Toppelberg, N. (2017). The persistence of sexual assault within the US military. *Journal of Peace Research, 54*(5), 620–633. https://doi.org/10.1177/0022343317720487

Zinzow, H., Grubaugh, A., Monnier, J., Suffoletta-Maierle, S., & Frueh, B. (2007). Trauma among female veterans: A critical review. *Trauma, Violence & Abuse, 8*(4), 384–400. http://www.jstor.org/stable/26636131

Zinzow, H., Gruabaugh, A., Frueh, B., & Magruder, K. (2008). Sexual assault, mental health, and service use among male and female veterans seen in Veterans Affairs primary care clinics: A multi-site study. *Psychiatry Research, 159*(1–2), 226–236. https://doi.org/10.1016/j.psychres.2007.04.008

Zinzow, H. M., Thompson, M. P., Goree, J., Fulmer, C. B., Greene, C., & Watts, H. (2018). Evaluation of a college sexual violence prevention program focused on education, bystander intervention, and alcohol risk reduction. *College Student Affairs Journal, 36*(2), 110–125. https://doi.org/10.1353/csj.2018.0019