

Empowerment Self-Defense Outcome Measures: A Three-Paper Dissertation Study

Dissertation

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Abstract

Research about empowerment self-defense (ESD), a resistance and risk reduction strategy for preventing sexual violence, is considered to be in its infancy, but recent evidence has shown ESD to be effective in reducing rates of sexual violence victimization. To advance ESD-related research, scholars have identified a need for an expanded and improved battery of standardized measures. This three-paper dissertation aims to enhance ESD research by advancing knowledge related to outcome measures used in ESD intervention research. Informed by feminist, empowerment, and social cognitive theories, this study had three primary objectives: (1) identifying existing measures used in prior ESD research studies and reviewing the characteristics of the measures; (2) identifying ESD students' and instructors' perspectives about the primary psychosocial and behavioral outcomes associated with ESD; and (3) exploring the utility of existing standardized measures by exploring ESD researchers' experiences with selecting and using standardized measures in their research. Data were collected using multiple methods, including a systematic review, secondary data analysis, and qualitative case study methodology. A systematic review of measures was conducted to compile and describe the characteristics of measures that have been used in ESD intervention research. Survey data from ESD participants and qualitative interviews with ESD instructors were used to explore participant and instructor perspectives about key ESD

intervention outcomes, and qualitative interviews were conducted with ESD researchers to explore their experiences selecting and using standardized measures. A total of 55 measures, grouped into nine categories, were identified across 22 ESD research studies. Sixteen ESD instructors participated in in-depth interviews, and secondary survey data included 269 ESD students. Students were from one of two ESD courses: a college course (n = 74) and a community course (n=194). Seven ESD researchers participated in individual interviews to describe their perceptions about the existing ESD measures. A convergence of results from the three studies illuminates directions for future practice and research.

Dedication

This dissertation is dedicated to all of the remarkable, inspiring, and strong women who so graciously participated in this study. I also dedicate this dissertation to all survivors of sexual violence.

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Fields of Study

Major Field: Social Work

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Chapter 1. Introduction

Global studies of violence against women continue to report high prevalence of sexual assault victimization indicating an urgent need for strategies effective in reducing these high rates of victimization (Dartnall & Jewkes, 2013; Garcia-Moreno et al., 2006; World Health Organization [WHO], 2018). Of the five sexual violence prevention strategies recommended by the Center for Disease Control and Prevention (CDC), two strategies focus on teaching skills to prevent violence and providing opportunities to empower and support women and girls (Basile et al., 2016). One approach within these strategies includes empowerment self-defense (ESD), a type of sexual assault resistance and risk reduction program (Senn et al., 2018).

Research about ESD programs has increased over the past decade but is still an emerging field of study. Recent rigorously designed studies about ESD outcomes have reported evidence of reducing sexual assault victimization by 50% for college women (Senn et al., 2015; Senn et al., 2017). Other studies have reported additional positive outcomes, such as increases in self-efficacy, assertiveness, and ability to detect risk (Hollander et al., 2018a). Given that so few prevention efforts demonstrate potential to reduce global rates of sexual assault victimization, further research on ESD is warranted. To conduct this research using rigorous design and methodology, researchers require a consistent and high-quality battery of measures to maximize the reliability and validity of

study results and to compare results across study populations and settings. Currently, measures have not been used consistently across studies and several measures are outdated, incongruent with targeted outcomes, and/or excessively lengthy (Hollander, 2014). Additionally, Hollander (2014) has noted the need for a comprehensive battery of scales that will measure the many hypothesized outcomes associated with ESD. Therefore, the overarching goal of this dissertation study was to begin addressing this need for an improved and expanded battery of measures to be used in future ESD research and evaluation.

Background

Violence against women continues to be a pervasive and severe public health and human rights issue across the world. The WHO estimates that 35% of women worldwide have endured physical or sexual assault by an intimate or non-intimate partner at least one time during their life (WHO, 2018), though some demographic groups experience heightened risk of exposure to violence (see Demographics). Sexual violence is defined by the CDC as any sexual act that occurs without the consent of the victim, including when the person is unable to provide consent. The definition of sexual violence includes a wide range of behaviors, from non-contact unwanted sexual experiences (e.g., verbal sexual harassment and unwanted exposure to sexual material or situations) to forced penetration (i.e., rape). (See Basile et al. 2014 for a more in-depth overview of sexual violence definitions). Sexual assault specifically refers to those behaviors involving unwanted sexual contact (Basile et al., 2014).

Outcomes Associated with Sexual Assault Victimization

The effects of experiencing sexual assault permeate many aspects of a survivor's life. Survivors of sexual assault often experience negative outcomes that can be acutely damaging and/or long lasting. For example, experiencing sexual assault has been linked to negative mental health and physical health outcomes, increased risk for revictimization, decline in interpersonal relationships, and disengagement from daily life (Campbell et al., 2009; Classen, et al., 2005; Murphy et al., 1988). Although the population of interest for this current study is all women, a majority of the research about ESD has been conducted with college women. Therefore, in this section, outcomes specific to college women are also reported.

Mental Health Outcomes

Survivors of sexual assault have an increased risk for experiencing negative mental health outcomes. Mental health outcomes that have been associated with sexual assault victimization include depression and loneliness, anxiety, post-traumatic stress disorder (PTSD), poor self-esteem, psychological distress, substance use, suicidal ideation, suicide attempts, and non-suicidal self-injury (Acierno et al., 1997; Campbell et al., 2009; Jordan et al., 2010; Kendall-Tackett et al., 2013; Murphy et al., 1988; Tjaden & Thoennes, 2006).

College students who experience sexual assault similarly tend to experience adverse mental health outcomes (Krahé et al., 2017). In a recent study, women assaulted during their first semester of college experienced higher rates of depression and anxiety symptoms that were clinically significant, even after controlling for previous sexual

assaults and baseline mental health status (Carey et al., 2018). Another study found that, compared to their heterosexual peers who had been sexually assaulted, sexual minority (SM) students who had experienced sexual assault while attending college had elevated levels of depression, anxiety, stress, and eating issues (Smidt et al., 2019).

Recovery from trauma symptoms is not impossible, however, as not all survivors of sexual assault will go on to experience prolonged trauma symptoms (Gavey et al., 2011; Steenkamp et al., 2012). For example, one study of sexual assault survivors found that 75% of the participants showed a gradual decline of symptoms and had significantly fewer PTSD symptoms at a four-month follow-up period compared to the initial weeks after their experience of assault (Steenkamp et al., 2012). Nevertheless, sexual assault survivors often endure adverse mental health consequences that tend to interfere with their well-being and functioning (Carey et al., 2018; Kendall-Tackett et al., 2013).

Physical Health Outcomes

Sexual assault victimization has also been associated with detrimental outcomes on survivors' physical health. In addition to injury that may have occurred during an assault (Tjaden & Thoennes, 2006), survivors of sexual assault have an increased risk of experiencing chronic and acute pain, gastrointestinal disorders, cardiovascular disease, diabetes, and metabolic syndrome (Kendall-Tackett et al., 2007, 2013). They are also more likely to struggle with sleep disturbances, which correspond with decreased health functioning (Kendall-Tackett et al., 2013). Experiencing sexual assault can result in reoccurring sexual and reproductive health problems (Basile et al., 2014), some of which include increased likelihood of: (a) engaging in risky sexual behavior (e.g., inconsistent

condom use and multiple sex partners); (b) experiencing pain during sexual intercourse; (c) experiencing decreased sexual pleasure; (d) contracting sexually transmitted infections (STIs); and (e) unintentionally becoming pregnant (Fuentes, 2008; Golding, 1996; Hequembourg et al., 2011; Noll et al., 2003; Turchik, 2012).

Revictimization

Women who have experienced prior sexual victimization, compared to women who have not, have an increased risk of future sexual victimization, referred to as revictimization (Arata, 2002; Classen et al., 2005). Between 28% to 38% of women with no experience of childhood sexual victimization go on to be assaulted in adulthood, which is significantly lower compared to the 48% to 66% of women survivors of childhood sexual assault who experience sexual revictimization as adults (Banyard et al., 2001; Maker et al., 2001). Classen and colleagues (2005) found that two out of three women who are ever sexually assaulted experience revictimization. Experiencing revictimization has been shown to be correlated with increased mental health concerns and psychological distress (Classen et al., 2005; Ullman, 2016). Women with multiple victimizations have demonstrated poorer long-term psychological and emotional outcomes (e.g., psychological distress, suicidality, alcohol use, self-harm behaviors) compared to their peers with no experience or with a single experience of sexual victimization (Arata, 1999; Balsam et al., 2011; Banyard et al., 2001; Casey & Nurius, 2005; Maker et al., 2001).

Additional Outcomes

Additional outcomes that have been associated with sexual violence victimization include disengagement from daily life (e.g., job performance, academic engagement) and interference with interpersonal relationships. Among college students specifically, studies have shown that experiencing sexual assault contributes to impaired academic performance and a decline in retention (Jordan et al., 2014; Mengo & Black, 2016; Smith et al., 2003). Grade point averages (GPAs) of college students who experience sexual assault tend to be lower compared to their classmates (Jordan et al., 2014; Mengo & Black, 2016). College women with experience of sexual assault victimization during their first semester, compared to their non-victimized peers, attained lower GPAs, and the severity of assault was shown to be positively correlated with a lower GPA (Jordan et al., 2014). An additional study found that students who experienced sexual assault—as compared to those who experience physical or verbal violence—were more likely to leave their university (Mengo & Black, 2016).

The impact of sexual assault spills into the workplace. Increased time off from work, diminished job performance, termination from job, and inability to sustain employment are all outcomes shown to be associated with sexual violence (Loya, 2014). These employment disruptions affect the earning power and economic well-being of women, which in turn affects quality of life.

Risk Factors for Sexual Assault

A multitude of risk factors for sexual assault victimization have been identified through decades of research. Although research predominantly focuses on individual-level risk factors for sexual assault victimization, risk factors exist at all social ecological

levels and have implications for prevention efforts at all levels (i.e., primary, secondary, and tertiary levels). Some of the primary risk factors are described below.

Adverse Childhood Experiences (ACEs)

Recent scholarship suggests that experiencing adversity in childhood is linked to sexual victimization in adulthood (Ports et al., 2016). Each of the ten ACE variables alone has been shown to be predictive of sexual victimization in adulthood, though childhood sexual assault (CSA) was the strongest predictor among the ten ACE variables. In addition, as the number of ACEs that a person experienced increased, the risk of sexual victimization in adulthood also increased. In particular, those with CSA had an accumulated risk of subsequent sexual victimization for each additional ACE (Ports et al., 2016).

Mental Health and Substance Use

Mental health is both a sequela and risk factor for sexual assault victimization. Scholars have reported that mental health illness increases women's risk of sexual assault compared to women with no mental health concerns (Goodman et al., 2001; Teplin et al., 2005; Wenzel et al., 2000). For example, after controlling for race/ethnicity and age and depending on the type of crime, one study reported that women with severe mental illness were 6 to 23 times more likely than women in the general population to experience a violent crime, defined as rape/sexual assault, robbery, or assault (Teplin et al., 2005). Though the precise reasoning for this is not fully understood, some researchers speculate that this increased risk is likely correlated with other factors associated with mental

health illness, such as poverty, substance abuse, homelessness, childhood abuse, and illness severity (Goodman et al., 2001).

Substance use by perpetrators and survivors also plays a significant role as a risk factor for sexual assault. Alcohol use has been shown to be associated with sexual assault victimization (Abbey et al., 2001; Dardis et al., 2021; Gidycz et al., 2007; Ullman et al., 1999; Yuan et al., 2006), particularly in assaults perpetrated by an acquaintance (Combs-Lane & Smith, 2002; Girard & Senn, 2008; Gross et al., 2001; Koss et al., 1988; Loiselle & Fuqua, 2007). There may be several reasons for this association between alcohol and sexual assault. Due to the social nature of drinking, which occurs at bars or parties, encounters between potential perpetrators and potential victims may occur more frequently or routinely than in other settings (Gilbert et al., 2018; Testa & Livingston, 2009). College men in these environments may target intoxicated women who are less likely or unable to resist or are unable to consent (Testa et al., 2003). Drinking may also increase men's aggressiveness, lower their inhibitions, and interfere with their ability to detect signals of disinterest and resistance (Steele & Josephs, 1990). Similarly, alcohol use may impede one's ability to detect risk of potential harm and may restrict one's ability to apply resistance strategies to deter or interrupt the perpetrator's behavior (Macy et al., 2007; Testa et al., 2003).

Notably, substance use is not only a risk factor but is also a consequence of sexual assault victimization (Walsh et al., 2014). Some scholars have noted this complex relationship between sexual victimization and alcohol use (Dardis et al., 2021; Gidycz et al., 2007). When examining the potential moderating role of PTSD symptom severity in

predicting the bidirectional association between alcohol use and sexual assault victimization among college women, alcohol use was shown to increase risk of sexual assault victimization for women with higher levels of PTSD symptoms (one standard deviation above the mean), but not for those with lower levels of PTSD symptoms (one standard deviation below the mean); however prior experience of sexual violence was not predictive of alcohol use, regardless of PTSD symptom severity (Dardis et al., 2021).

Low Assertiveness

Several studies have demonstrated the association between low assertiveness and sexual assault victimization. Assertiveness refers to behaviors that are reflective of an individual's best interest, such as standing up for oneself, expressing one's thoughts or feelings, or exerting one's rights without denying or infringing on the rights of others (Alberti & Emmons, 1970). For women, low assertiveness in situations with men has been shown to be predictive of future sexual assault victimization, while situation-specific assertiveness was protective of future victimization (Greene & Navarro, 1998). A more recent study found that low sexual assertiveness strongly predicted revictimization among first-year college females (Kelley et al., 2016). In situations of sexual coercion, assertiveness was shown to be protective of victimization (Testa & Dermen, 1999). Moreover, survivors of sexual assault, compared to those who have not experienced sexual assault, are less likely to use assertive resistance strategies, such as yelling or physically fighting (Atkeson et al., 1989; Gidycz et al., 2008; Vanzile-Tamsen et al., 2005), increasing their vulnerability to revictimization.

Prior Victimization

Prior sexual assault victimization is a risk factor for future victimization. Poor mental health and substance use following sexual assault victimization may increase risk of victimization. Multiple studies have reported that PTSD symptomology mediates the relationship between sexual assault in childhood and sexual assault in adulthood (Hedtke, et al., 2008; Risser et al., 2006). One proposed hypothesis for this relationship is that hyperarousal—a symptom of PTSD—may hinder the ability to distinguish between danger cues and risk contexts associated with sexual assault (Hedtke et al., 2008; Risser et al., 2006).

Demographics

Some individuals have a heightened risk of victimization based on their social identity. For example, women who are Native American or Alaskan Natives have elevated risk of sexual assault (Tjaden & Thoennes, 2000). One study reported that the strongest predictor of sexual assault among Native American women was separation or divorce (Yuan et al., 2006). Others have speculated that the historical and traumatic events that contributed to the erasure of cultural practices may help to explain the elevated rates of violence (Perry, 2002), along with the adherence to hegemonic heteronormativity (Hamby, 2000)

College students are particularly vulnerable to assault—risk factors among college students include: being a first-year college student (Cranney, 2015; Krebs et al., 2016); participating in fraternities/sororities (Franklin, 2016); substance use; and having a history of prior sexual assault (Carey, et al., 2018; Arreola et al., 2009; Classen et al.,

2005; Tyler, 2008). For first-year college women with a prior history of sexual assault, the risk of experiencing an assault during their first semester of college more than doubled compared to those with no previous victimization (Carey et al., 2018). Sexual and gender minorities are also at increased risk of experiencing sexual assault, which many researchers link to internalized homophobia and/or transphobia (Balsam & Szymanski, 2005; Frost & Meyer, 2009; McCauley et al., 2018).

Community & Societal Risk Factors

Compared to individual risk factors, community- and societal-level risk factors have been less frequently examined in research studies, even though factors at these levels have a significant and far-reaching impact on large sections of society (DeGue et al., 2012). Some examples of risk factors in this area include: the presence of an active and involved bystander (Clay-Warner, 2002) and socialization through society, media, and pornography (Hall & Barongan, 1997; Pazzani, 2007).

Strategies Used to Address Sexual Assault: Empowerment Self-Defense (ESD)

Because sexual assault has long-term, damaging outcomes for many survivors, and because risk factors for victimization are known and can be targeted, interventions are needed to prevent sexual assault and promote improved physical and mental health outcomes for survivors. A comprehensive approach to violence prevention would incorporate the social-ecological model by implementing interventions and policies geared toward the multiple spheres of influence: individuals, relationships, communities, and society (Basile et al., 2016). However, many of the approaches to sexual assault prevention education have been predominantly focused on the individual level (DeGue et

al., 2012). Some programs have focused on potential perpetrators as their target audience for prevention programming, where the aim is to reduce the likelihood of potential or actual perpetrators from committing violence in the future (DeGue et al., 2014).

One type of sexual assault risk reduction and resistance programming designed specifically for women includes self-defense. Self-defense training in general “is an educational process that [ideally] takes place *before* any future assault occurs, with the aim of teaching women practical skills to avoid, deter, interrupt, and resist assault; this educational process itself may reduce women’s risk of violence” (Hollander, 2018b, p. 3). ESD, sometimes referred to as feminist self-defense, is distinct from other self-defense training. Hollander (2018a) synthesizes the seven fundamental defining features of ESD that have been identified by scholars, ESD instructors, and the National Women’s Martial Arts Federation, the preeminent organization that certifies ESD instructors. Hollander (2018a) explains that ESD: (1) is evidence-based; (2) is comprehensive; (3) locates responsibility of violence on perpetrators; (4) transforms understandings of women’s bodies; (5) situates violence in a social context; (6) aims for social change; and (7) seeks to empower—and NOT to restrict—women.

ESD classes are informed by evidence about the nature of assaults women experience and the strategies that have been shown to maximize the likelihood of deterring or interrupting assaults (Hollander, 2018a; Thompson, 2014). Because women are assaulted most often by men they know (i.e., not strangers), ESD classes address the distinctive challenges of these situations, such as women’s reluctance to harm those they know and/or are close to (Nurius & Norris, 1996). It has been well established that

forceful verbal responses (e.g., yelling) and forceful physical responses (e.g. kicking, striking, or running away) are more likely to prevent or end an assault than passive responses (e.g., pleading, crying) (Clay-Warner, 2002; Tark & Kleck, 2004; Ullman, 1997, 2007). ESD classes incorporate this knowledge by teaching appropriate assertive responses to situations ranging from uncomfortable experiences to situations that are life-threatening (Hollander, 2018a).

ESD is comprehensive in both the range of situations that are addressed and the skills that are taught (Hollander, 2018a). ESD curricula acknowledge that violence exists on a continuum ranging from situations that are irritating to experiences that are life threatening, yet all are related to gender inequality and involve the exercise of power by the offender (Hollander, 2018a). On one end of the continuum, examples of male behaviors that could be characterized as irritating might include catcalling or making sexist comments. It might also include “elevator eyes,” or looking at someone up and down (resembling an elevator) which, depending on context, could make a woman feel objectified, uncomfortable, or harassed. On the more severe end of the continuum, an example of a life-threatening behavior might be someone beating, raping and/or killing a woman. All behaviors on this continuum of violence stem from gender inequality because these behaviors of men that are degrading and hostile to women tend to be minimized, normalized, condoned, and even supported by the larger society despite the varying degrees of harm they cause women (Johnson & Johnson, 2021; Lonsway & Fitzgerald, 1995). While problematic behaviors are placed conceptually on a continuum of severity, the threat or experience of any type of harm, regardless of location on the

continuum, will affect survivors differently based on multiple situational and personal factors (Campbell et al., 1999; Kilpatrick et al., 1989; Ullman & Filipas, 2001).

As previously mentioned, ESD classes primarily address situations of assault that are instigated by acquaintances and intimate partners, though situations of stranger assaults are also addressed (Hollander, 2018a; Senn et al., 2018). Comprehensive skills include both physical and non-physical skills. In addition to physical techniques (e.g., kicks, strikes, and releases from grabs, chokeholds, and pins), an emphasis is also placed on verbal assertiveness, boundary setting, awareness, noticing signs of aggression, and tactics that are commonly used by offenders (Hollander, 2018a; McCaughey, 1997). ESD classes focus on both preventing violence from happening and responding to violence when it occurs. Participants of ESD are empowered to choose among a range of options that work best for them in any given situation, and the comprehensive nature of ESD is intended to maximize freedom rather than restrict behavior and reinforce fear of violence (Hollander, 2018a; McCaughey, 1997).

ESD curricular content attributes responsibility of violence on perpetrators, and this messaging is consistently conveyed throughout the duration of a course; and at the same time ESD content combats the myth that the survivor is somehow responsible for an assault (Hollander, 2018a; Senn et al., 2018). Victim-blaming myths are repeatedly addressed during ESD training, and ESD instructors repeatedly and explicitly attribute the blame and responsibility of an assault to the perpetrator (Hollander, 2018a; Thompson, 2014; Senn et al., 2018).

ESD transforms understandings of women's bodies (Hollander, 2018a; McCaughey, 1997; Thompson, 2014). This transformation occurs because ESD challenges the deeply engrained assumptions that males are inherently and unstoppably stronger than females, and the false myth that men's violence cannot be stopped (Hollander, 2018a; McCaughey, 1997). The physical techniques taught in an ESD course are purposefully practical, easy-to-learn techniques that any woman, regardless of her size, strength, or ability can execute. An ESD course instructs women how to use the strong points of their bodies to strike vulnerable points on an assailant's body, with an emphasis on the fact that every assailant, regardless of their size or strength, has vulnerable areas on their body (e.g., eyeballs, knees, groin, nose, solar plexus) (McCaughey, 1997). By learning and practicing these techniques, students are able to transform their understanding about gendered bodies, in which women are socialized and assumed to be weak, passive, and submissive, and men are assumed to be dominant, strong, and aggressive (Hollander, 2001, 2018a; McCaughey, 1997; Thompson, 2014). Throughout the duration of an ESD training course, students observe their classmates they initially perceive to be weak or small perform powerful verbal and physical techniques, and they themselves experience the effect of their own powerful strikes on handheld targets, heavy bags, or padded attackers. Some ESD courses culminate with each woman breaking a wooden board with a palm-heel strike or another physical technique. With these experiences, it is difficult for the students to continue believing the false, yet deeply engrained narrative that women are inevitably weak (McCaughey,

1997). This transformation affects the way students perceive their own bodies and the bodies of women (McCaughey, 1997).

ESD situates violence in a social context by acknowledging that violence is produced in a social and political context (Hollander, 2018a). Violence is fostered by gender socialization and ideologies about what it means to be masculine and feminine (Brownmiller, 1975). These gender ideologies require men to be dominant, tough, loud, and always ready for sex and require women to be compliant, gentle, quiet, and always centered on the needs of others (Hollander, 2001, 2018AB; McCaughey, 1997).

Divergence from these gender ideologies is policed by society in such a way that encourages males to become perpetrators and females to become victims (Hollander, 2013; McCaughey, 1997). ESD courses incorporate discussions about intersecting identities and structural locations that create, sustain, or perpetuate inequalities in women's ability to resist violence—not all women have similar experiences or abilities to resist violence because of their intersecting identities (Hollander, 2018a; National Women's Martial Arts Federation, n.d.; Thompson, 2014).

ESD aspires for social change. Violence is not an individual-level issue, but rather is a product of societal and political contexts (Brownmiller, 1975), and therefore, ESD courses aim for social change. ESD classes highlight the commonalities among women's experiences of violence while pointing out that these shared experiences can be a source of social change (Hollander, 2018a). When describing ESD as a tool for social change, Hollander writes:

ESD classes also contribute to social change by transforming gendered ideologies, identities, and practices. . . Although these changes occur in individual women, they do not remain personal; they affect social interactions with others, and those others may then change their own behavior. A woman who comes to believe in her own right to self-determination, for example, may start to behave more assertively in her interactions with her friends, families, and coworkers, stating her opinions and desires more explicitly and expecting that others will respond. These new behaviors can shift the dynamics of interaction, as others attempt to meet or, in some cases, resist these new expectations. The others may then, in turn, behave differently with others. These ripple effects may spread well beyond the individual enrolled in a particular class and when accumulated, they may affect larger communities as well. (2018a, p. 228).

ESD seeks to empower rather than restrict women (Hollander, 2018a; McCaughey, 1997). This is achieved in three ways. First, many safety courses and non-ESD classes tend to confer strategies that restrict women—they tell women what they should or should not do and place the burden for safety on the woman (which also tends to reinforce victim-blame) (Hollander, 2018a). ESD does not teach or suggest restrictions on women's lives, but rather presents empirical information about risks and strategies and then empowers women to make decisions for themselves based on their own personal situations (Hollander, 2018a). Second, ESD empowers women by infusing into the curriculum the belief that students/women are both worth defending and have the right to defend themselves (Hollander, 2018a). Women have often been trained or socialized to

consider the needs and desires of others as more important than their own (Phillips, 2000), which is also true in regard to sexual desires and behaviors (Orenstein, 2016). As such, teaching women to prioritize their own safety and their own needs can seem revolutionary (Hollander, 2018a). Third, ESD instructors acknowledge that there are likely to be survivors in every class. Instructors integrate this awareness into their pedagogy by acknowledging the experiences of survivors and affirming that no matter how they responded to the assault, they did the right thing at the time because they successfully survived the assault. Affirming and honoring survivors in this way “can be a profound reframing of women’s experiences in a culture where victims are often blamed for provoking an assault and/or for the choices they make in responding to it” (Hollander, 2018a, p. 228).

ESD is, to date, the only type of women’s self-defense training that has been rigorously evaluated (Hollander, 2018b). Although research related to ESD is still in its infancy, several recent studies suggest that ESD training can significantly reduce women’s risk of sexual assault (Hollander, 2014, 2015; Senn et al., 2015). In a large experimental study conducted on three Canadian university campuses, women who completed a 12-hour course called Enhanced Assess, Acknowledge, Act (EAAA) were 50% less likely to report being raped at the one-year follow-up compared to the control group who received treatment as usual, informational pamphlets about sexual violence (Senn et al., 2015). Participants of EAAA also reported significantly lower rates of unwanted sexual contact and attempted rape. These results held true for students both who had and who had not reported experience of prior sexual victimization. Similarly, in

quasi-experimental studies conducted by Hollander (2004, 2014), participants in a 30-hour course reported significantly reduced rates of completed sexual assaults, attempted sexual assaults, and sexual assaults resulting from sexual coercion (Hollander, 2004, 2014, 2015). Hollander (2004, 2014, 2015) and Senn (2015) report similar findings, though Hollander's studies uniquely showed much less sexual coercion among the ESD participants compared to their college student peers. Notably, the results of Senn (2015) and Hollander (2004, 2014, 2015) indicate that not only were there fewer completed sexual assaults, but there were also fewer attempted sexual assaults. That is, women who had participated in ESD were not only effective in stopping sexual assaults in progress; they were also less likely to be targeted for sexual assault. Evidence also suggests that college women who were assaulted after completing an ESD course, compared to college women in a wait-list control group who were later assaulted, were less likely to blame themselves and more likely to blame the perpetrator for the assault (Gidycz et al., 2006). Taken together, these results lend empirical support for ESD as an effective strategy to reduce risk of sexual assault for female college students and to reduce self-blame for those who may later be assaulted.

There is also evidence suggesting that ESD contributes to additional positive outcomes for women. Multiple studies have shown that ESD is associated with increased self-defense self-efficacy for college women (Gidycz et al., 2015; Hollander, 2004, 2014, 2015; Senn, 2013; Senn et al., 2017) and for women who are not in college (Jordan & Mossman, 2017; Ozer & Bandura, 1990; Pinciotti & Orcutt, 2017). Self-defense self-efficacy refers to one's level of confidence in their ability to perform various self-defense

techniques in a variety of assault situations (Ozer & Bandura, 1990). Self-defense self-efficacy is important because it a predictor of actual effectiveness (Bandura, 1986, 1997).

Another positive outcome that has been demonstrated in several studies is an increase in assertiveness across various social contexts (Weitlauf et al., 2000). This includes increased assertiveness during everyday, non-threatening situations, on one end of the spectrum, and dangerous, threatening situations on the other end (Gidycz et al., 2015; Hollander 2004, 2013; Orchowski et al., 2008). The increase of assertiveness is notable given the association between low assertiveness and victimization.

Additionally, ESD has been shown to decrease symptoms of depression and anxiety in women (David et al., 2006; Ozer & Bandura, 1990; Shim, 1998). Ozer and Bandura (1990) found that participants in an ESD course demonstrated lower levels of “anxiety arousal” (measured on a 10-point scale ranging from a high level of anxiety to no anxiety at all) at post-intervention and at the 6-month follow-up. Similarly, Shim (1998) found that participants in an ESD course had significantly decreased depression and anxiety symptoms at post-intervention and 6-month follow-up. For military women with a PTSD diagnosis, ESD training resulted in decreased depression and PTSD hyperarousal (David et al., 2006).

Although study findings indicate that ESD is associated with positive outcomes—including reduced risk of experiencing an assault—it should be noted that the burden is not on women to prevent sexual assault. ESD programming makes explicit that women may have the ability to defend themselves against violence, but this does not mean that they are responsible for preventing it. Rather, the responsibility for prevention is ascribed

to the perpetrator, and women should neither be expected to prevent it nor be blamed if they experience an assault—a fundamental message that is highlighted in ESD programming (Hollander, 2018a; McCaughey, 1997; Senn et al., 2018). It is necessary both to acknowledge that women are not responsible for preventing violence, and also to continue empowering women in ways that help reduce their likelihood of experiencing violence (Hollander, 2014; 2018a).

Theoretical Frameworks

Three theoretical frameworks inform the current study: a feminist framework, empowerment theory, and social cognitive theory (SCT) (see Figure 1). ESD curriculum content is largely guided by a feminist framework, while the behavioral change components of the intervention are supported through SCT.

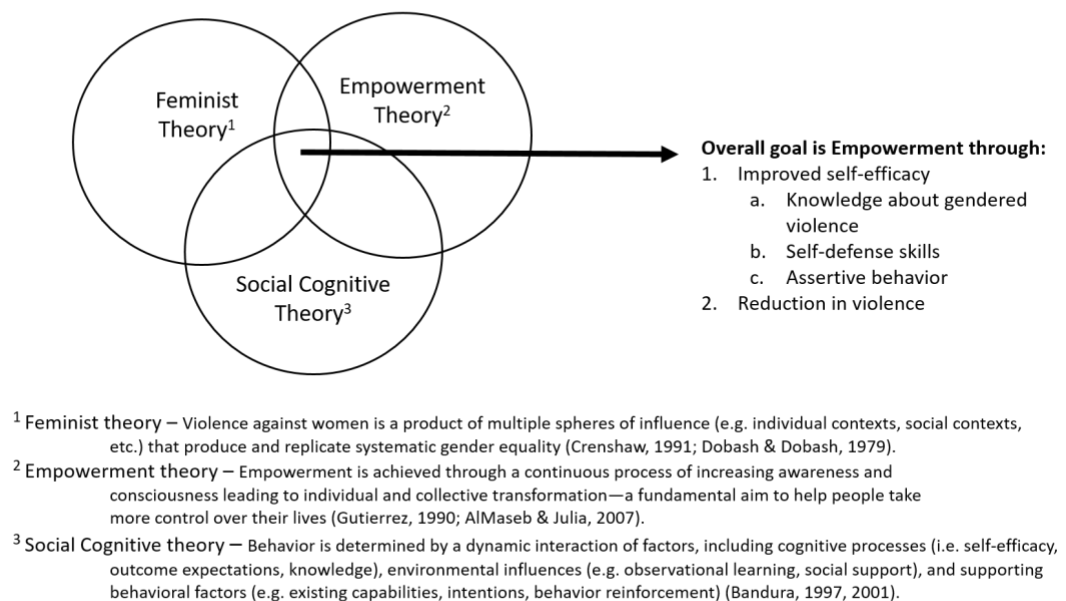


Figure 1. Theoretical Framework

Feminist Framework

ESD is guided fundamentally by feminist theory through the central topics related to gender socialization and violence. Very broadly, feminist theory centers on the fundamental belief that women have unequal access to all forms of power, and this inequality positions women as subordinate or inferior; and as such a feminist framework recognizes that individuals' experiences with social, political, and economic structures are impacted by gender, so examining the effects of oppression and discrimination must include an analysis of gender (Crenshaw, 1991).

Violence against women has consistently been recognized as a primary way in which women are oppressed—violence against women both stems from and maintains, gender inequality (Brownmiller, 1975). Actual experiences of violence and fear of violence serve to constrain women from living freely. Moreover, gender inequality and gender socialization is a physical embodiment—a physical reality (McCaughey, 1997). Gendered ideologies about what it means to be masculine or feminine become engrained unconsciously into the body. Gender-specific bodily gestures, habits, and postures are learned habits that become a part of a person's second nature (Brownmiller, 1975; McCaughey, 1997). Because the embodiment of gender is continuously rehearsed and reinforced through socialization, this embodiment is often mistaken as innate or natural. In ESD classes, this embodiment of gender ideology is interrupted. (McCaughey, 1997, p. 90).

It is critical to consider more than gender identity when examining the social constructions that contribute to sexual violence. An intersectional perspective considers

the indivisible connectedness of social identities such as race, gender, and class that cannot be viewed in isolation (Crenshaw, 1991; Yuval-Davis, 2006). Multiple marginalized social identities based on gender and race, for example, overlap to create unique experiences with and vulnerabilities to violence (Crenshaw, 1991). When feminist discourse or intervention fails to include an intersectionality perspective, it can reproduce or reinforce the subordination of women based on their multiple marginalized identities. ESD incorporates knowledge-building about and strategies for addressing multiple marginalized identities and their unique vulnerabilities to violence (Hollander, 2018a).

Empowerment Theory

A second theory informing this study is empowerment theory. Conceptualizations of “empowerment” vary among scholars (Turner & Maschi, 2015). Some define empowerment as an increase in personal, interpersonal, and political power among oppressed and marginalized populations, with the goal of achieving individual and collective transformation (Lee, 2001). Other scholars conceptualize empowerment as a process wherein a person first identifies the nature of oppression they are experiencing, with a continual increase in awareness and consciousness leading to individual and/or collective transformation (Gutierrez, 1990; Gutierrez & Lewis, 1999). Consistent across definitions is the fundamental aim to help people take more control over their lives (AlMaseb & Julia, 2007).

Empowerment theory is congruent with the tenets of feminist theory and the field of social work. Feminist social work theorists and practitioners have adopted an empowerment approach that aims to elevate individuals’ sense of worth and strength, and

to enhance their individual capacity to deal with life obstacles and problems (Handy & Kassam, 2006). Both empowerment and feminist theories emphasize the importance of increasing personal, interpersonal, and political power of marginalized populations, and in doing so, engage in collective action as a community to improve their circumstances (Freire, 1973; Gutierrez, 1990).

Aligning with empowerment theory, a fundamental aim of ESD is to increase participants' personal, interpersonal, and political power by amplifying their sense of strength, power, and worth. ESD aims to increase participants' knowledge about the nature of their individual experiences of gendered oppression and the social structures allowing inequities to persist. Concurrently, ESD aims to educate participants about a wide range of skills that can be applied in various situations to increase their sense of personal safety and power. The consciousness raising that occurs among ESD participants ideally fosters the skills and motivation needed for collective action geared toward social change.

Social Cognitive Theory

According to SCT, behavior acquisition is determined by a dynamic interaction of cognitive processes, environmental influences, and supporting behavioral factors (Bandura, 1997). ESD incorporates these SCT factors by: (a) providing a supportive, trauma-informed environment that facilitates opportunities to engage in the targeted behaviors and that challenges normative beliefs about sex and gender (*environmental influences*); (b) teaching verbal and physical skills and providing the support for participants to perform the skills (*behavioral factors*); and (c) increasing participants'

knowledge (e.g., statistics about violence against women, risk perception, the continuum of violence, etc.), and having participants rehearse the skills (e.g., body language, verbal skills, and physical skills) to build self-efficacy and reduce psychological barriers to engaging in assertive behaviors and protecting themselves (*cognitive influences*) (Bandura, 1997; Hollander, 2018a).

ESD targets multiple learning outcomes. For example, ESD aims to increase participants' knowledge about sexual assault and improve participants' ability to perceive and assess risk (Hollander, 2018a). ESD educates participants about normative beliefs surrounding gender and how these normative beliefs relate to vulnerability and oppression (Hollander, 2001; Hollander, 2018a; McCaughey, 1997; Thompson, 2014). Other ESD participant outcome goals include adjusted attitudes about sexual assault (e.g., reduced stigma of survivors), the ability to attribute blame for an assault solely on the perpetrator, and increased awareness about one's own psychological barriers to engaging in assertive and protective behaviors (Hollander, 2018a; Nurius & Norris, 1996; Thompson, 2014). Moreover, ESD programs aim for participants to have an increased awareness about body language (and a shift in one's body language), increased confidence in their ability to engage in boundary setting, decreased fear of experiencing sexual assault, and increased confidence in their ability to engage in assertive verbal skills and physical skills (Gidycz et al., 2015; Hollander, 2018a; McCaughey, 1997; Orchowski et al., 2008; Thompson, 2014; Weitlauf et al., 2000).

Research Gap/Significance

Given the persistently high rates of sexual assault around the globe and the harmful outcomes often associated with victimization, prevention programs that reduce rates of sexual assault are needed urgently. Establishing effective programs, however, has not occurred rapidly over the past several decades (DeGue et al., 2014), most likely because of conceptual and methodological challenges associated with developing and evaluating sexual assault prevention programs. The complex etiology of violence, which is extensive and multifactorial, is one conceptual challenge in developing prevention programs (Orchowski et al., 2018). The low base rates of sexual assault over short periods of time creates a challenge in being able to demonstrate intervention effectiveness through statistically significant changes in rates of victimization (see Kraemer et al., 2006). Orchowski et al. (2018) point to Tharp et al. (2011) to illustrate that, perhaps because of the urgent need to address sexual assault, some prevention interventions have been implemented before rigorous evaluation has been conducted (see Tharp et al., 2011). Tharp pointed out that research and evaluation of many sexual violence prevention programs have not increased in rigor over time when initial evaluation produces promising outcomes, but instead have replicated the same research designs (e.g., qualitative or pre-post designs with no control group). In some of these studies that report positive outcomes, the validity of outcomes should be questioned because of problematic methodologies and the corresponding findings and conclusions (e.g., a study that reported effectiveness in achieving behavior change, yet the study only included a follow-up

survey with open-ended questions with no pre-post measures and no comparison group) (Tharp et al., 2011).

To advance the field, it is critical that sexual assault prevention programs undergo rigorous evaluation (CDC, 1999). As of 2018, in the field of sexual assault risk reduction “there are no published effectiveness trials examining the application of efficacious interventions outside of a controlled research environment” (Orchowski et al., 2018, p. 417). However, to effectively implement this much-needed evaluation, it is critical that the necessary tools (i.e., standardized measures) be available.

Research on ESD is still in its infancy, with much of the research emerging within the last 15 years. The existing research indicates that ESD is currently a promising practice in sexual assault prevention, with several recent studies demonstrating a significant reduction in sexual assault victimization (e.g., Hollander, 2014; Senn, 2017). Given the conceptual and methodological challenges associated with sexual assault prevention program research and evaluation and the ability to demonstrate effectiveness in reducing rates of sexual assault victimization, these findings are profound.

However, further outcomes-based, implementation, and replication research studies are needed to determine whether ESD, as it is generally practiced, can be considered an effective practice (Flay et al., 2005). Currently, women’s self-defense is classified as a promising intervention, with more research needed to elevate it to the effective category (Kerr-Wilson, 2020). There is currently a major obstacle to engaging in high-quality research about ESD—there is a significant challenge related to the scales and instruments used to measure participant outcomes. The major gaps include (a) a lack

of consistent scales being used across studies; (b) the use of several scales that are outdated, incongruent with the targeted outcomes, and/or excessively lengthy; (c) a lack of studies reporting scale development methodology and psychometric performance; and (d) a need for comprehensive scales that will measure the many hypothesized outcomes of ESD (Hollander, 2014; Senn et al., 2018).

Currently, research studies about ESD have not used the same scales to measure outcomes, even when measuring the same construct. The lack of consistency makes it difficult to draw conclusions or make comparisons across studies. The lack of consistency is particularly problematic when it comes to implementation research. In order for programs and interventions to be declared an effective practice, multiple replication and implementation studies are needed before drawing conclusions about the external validity of intervention outcomes. However, in order to engage in replication and implementation research, a consistent, comprehensive, and theoretically-driven battery of scales with strong psychometric properties is needed.

Additionally, some of the current scales that have been used are too lengthy, incongruent with targeted outcomes, or outdated (Hollander, 2018). This is problematic because using lengthy and outdated scales poses threats to the validity of study outcomes and limits the conclusions that can be drawn from the results. For example, the Rathus Assertiveness Schedule, which has been used in ESD research (e.g., Weitlauf et al., 2000; Weitlauf et al., 2011) was developed in 1973, and many of the 30 items in the scale focus solely on situations with strangers; most items are not relevant to being assertive with acquaintances, friends, family, and other known individuals. Given that women are more

likely to be assaulted by someone they know, it is imperative that they be able to apply assertive behaviors with people who are known to them and not just strangers. The scale also does not take in to account a gendered lens although gender has an influence on one's willingness and ability to engage in assertive behavior.

There are additional positive outcomes of ESD that have not yet been measured empirically. As one example, Hollander (2018b) points out that “past studies have not systematically assessed some of the most central elements of ESD programs, such as women's use of verbal assertiveness skills, changes in body language, or boundary setting in their everyday lives following class participation” (p. 239). Scales to measure these outcomes have not yet been identified or created. Moreover, given the robust constructs included in the theories in which ESD is grounded, there may be additional behavioral and psycho-social constructs that should be measured in order to strengthen the empirical understanding of ESD outcomes.

Specific Aims

To address these obstacles to engaging in rigorous research and evaluation, this dissertation study was designed to identify the most effective existing scales and instruments for measuring ESD outcomes and to determine which additional constructs need to be assessed. To achieve a comprehensive understanding of existing research and evaluation practices from the perspective of ESD stakeholders (i.e., participants, instructors, and researchers), this dissertation included three studies, with each study addressing one of the specific aims of the project as a whole. Corresponding with the overall goal of the study, the proposed dissertation has three primary aims:

Aim 1: To synthesize and evaluate the existing scales that have been used to measure behavioral and psycho-social outcomes related to ESD.

Research Question 1: What are the existing scales that have been used to measure outcomes associated with ESD?

Research Question 2: What are the characteristics of the existing scales that have been used to measure outcomes associated with ESD?

Aim 2: To determine the perceptions of ESD students and instructors about key behavioral and psycho-social outcomes related to ESD.

Research Question 1: What are ESD participant perceptions about the primary behavioral and psycho-social outcomes associated with their participation in an ESD course?

Research Question 2: What are ESD instructors' perceptions about key behavioral and psycho-social outcomes associated with ESD?

Aim 3: To explore the perceptions of ESD researchers to (a) determine their perspectives and experiences implementing existing scales during research and evaluation efforts, and (b) determine their perspective about what assessment outcomes they perceive to be missing.

Research Question 1: What are ESD researchers' experiences with selecting and implementing scales during their research and evaluation efforts?

Research Question 2: What are ESD researchers' perspectives about what assessment outcomes they perceive to be missing?

To achieve the first aim, the first study was a systematic review and critical appraisal of the existing scales that have been used in ESD research and evaluation. It is important that scales are reliable and valid to ensure that they are effective in consistently measuring the targeted outcomes. In the systematic review study, the researcher identified the existing scales that have been used in ESD research and evaluation. Descriptive information about each scale was extracted and reported in a table.

The second study was a qualitative study of both ESD participants and ESD instructors. The goal of this study was to identify the breadth of psychosocial and behavioral outcomes that participants and instructors ascribe to ESD programming. Application of theory is beneficial in an initial determination of intervention outcome measures, however, it is important to assess whether theoretical constructs align with the “actual perception and experiences” of the targeted populations (DeVellis, 2017, p. 235). Therefore, understanding the perspectives of ESD students and instructors is necessary to inform the selection, revision, and/or development of applicable standardized measures. Examining the perspectives and experiences of students and instructors also helped with identifying potential factors influencing intervention outcomes.

The third study was a qualitative inquiry of ESD researchers to explore their experiences with selecting and using standardized measures over the course of their research. In addition to measuring the appropriate constructs, rigorous research should incorporate scales that are feasible. The experiences and perspectives of ESD researchers further elucidated the utility of existing scales and the identification of areas for improving and/or developing standardized measures.

Overall, the author hopes that results of this dissertation study can help to inform ESD researchers' future outcomes-based, implementation, and replication studies with diverse populations. The results of all three studies will hopefully support researchers' ability to select the appropriate measures for their future research. It is also the author's hope that results from this study will help to inform the future directions of measurement science and efforts to improve the battery of measures recommended for ESD research.

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Chapter 2. A Systematic Review of Empowerment Self-Defense Measures

The magnitude of violence against women, including sexual violence, persists as a major social problem worldwide (Dartnall & Jewkes, 2013; World Health Organization [WHO], 2018; Garcia-Moreno et al., 2006). The CDC defines sexual violence as any sexual act that occurs without the consent of the victim, including when the person is unable to provide consent. Sexual assault specifically refers to behaviors involving unwanted, non-consensual sexual contact (Basile et al., 2014). Research about ESD as a strategy to prevent sexual assault continues to emerge, with studies reporting positive effects, including reduced risk of sexual assault victimization (Hollander, 2014; Senn et al., 2015, 2017). To advance this field of study, researchers have identified a need for measurement development and improvement. This study aims to further elucidate the nature of ESD measurement gaps in ESD measures by identifying and reviewing the standardized measures used in previous studies. This systematic review of measures will help to identify areas for improving and/or developing strong measures for ESD research.

Background

Current estimates indicate that one out of three women worldwide have experienced some form of physical and/or sexual violence (WHO, 2018). In the United States, 19.3% (one in five) women have experienced a completed or attempted rape, but for (Black, Indigenous, and People of Color) BIPOC women, these rates are even higher (Breiding et al., 2014). For BIPOC women, rates of completed or attempted rape

estimates across the lifetime are: 32.3% among multiracial women, 27.5% among American Indian/Alaska Native women, and 21.2% among Black women (Breiding et al., 2014). Sexual minority women are also at increased risk of sexual assault; almost half of bisexual women (46.1%) have experienced a completed rape in their lifetime, and 74.9% have experienced another form of sexual violence (Walters et al., 2013). For lesbian women, the rates are 13.1% (completed rape) and 46.4% (other form of sexual violence) (Walters et al., 2013).

Exposure to sexual violence begins early in life. Among women who reported past experience of rape, 40% had experienced a sexual assault before the age of 18, and 28% were raped at an even younger age—between the ages of 11 and 17 (WHO, 2018). Over half (51%) of adolescent females in grades 7 to 12 have experienced some form of sexual victimization (Young et al., 2009). Moreover, the Association for American Universities (AAU) reported that 15-20% of college students in the U.S. experience sexual assault (Cantor et al., 2015).

Women who have survived sexual violence tend to experience negative outcomes that can be both acute and long-lasting. Some of the negative outcomes can include an increased risk for mental health problems, physical health problems, risk behaviors (e.g., substance misuse, sexual risk-taking), disruption of daily life, disengagement from work and/or school, and interruptions with personal relationships (Basile & Smith, 2011; Jordan et al., 2010; Kendall-Tackett et al., 2013; Smith & Breiding 2011; Wilsnack et al., 2004).

Sexual Violence Prevention and Research

Efforts to reduce sexual violence have been ongoing by practitioners and researchers across a variety of disciplines, such as public health, psychology, medicine, sociology, and more (Renzetti et al., 2011). It is well established in the literature that prevention approaches should be comprehensive, meaning interventions should target multiple levels of the social ecological model (i.e., individual relationship, community, and societal) in order to make a population level effect on sexual violence (Basile et al., 2016). Few prevention programs have demonstrated evidence of reducing rates of sexual violence victimization and perpetration, but while the evidence-base for effective sexual violence prevention strategies and approaches is still developing, the CDC calls for continued investment in research about promising prevention practices (Basile et al., 2016).

Sexual violence scholars have experienced an ongoing challenge with research on violence against women, particularly as it relates to measuring exact prevalence rates of various forms of victimization (Jaquier et al., 2011). These prevalence data are needed to determine whether programs are effective in reducing rates of sexual violence. Accurate estimates are also essential to understanding the correlates, consequences, and nature of violence against women (Jaquier et al., 2011) and to understanding the mechanisms or pathways that contribute to violence perpetration and victimization (Grady et al., 2017). Consequently, accurate measures of prevalence rates are critical to the development and evaluation of policy, prevention programs, and treatment options for survivors.

The development and selection of measures is guided heavily by theory. Conceptual understanding and operational definitions of theoretical constructs are required to determine appropriate strategies for measurement and to ensure that measures are appropriately representing the targeted construct (Bloom et al., 2003). Conceptual definitions are written sets of words used to describe a concept, while operational definitions refer to the specifications of how a construct can be observed or measured (Bloom et al., 2003). Although the fit between conceptual and operational definitions cannot be perfect, clear and accurate definitions of both are necessary to reduce measurement error, the difference between the observed score and the true score (DeVellis, 2017). Though some measurement error is random and affected by chance, systematic error is not random.

Using measures that are reliable and valid can help to reduce systematic measurement error. Reliability refers generally to the degree to which a measure performs consistently and predictably; that is, scale reliability is the proportion of variance that can be attributed to the true score —scores on a measure should not change unless there was an actual change in the variable being measured (DeVellis, 2017). Validity refers to the degree to which a measure accurately represents a construct that is being measured. A solid understanding of theory and theoretical constructs is necessary for assessing different forms of validity (i.e., face validity, content validity, criterion validity, and construct validity) (Bloom et al., 2003). Using measures that do not have acceptable levels of reliability and validity is problematic because it can lead to erroneous

decisions in practice, policy, and research, which can cause serious harm to clients, participants, and groups.

A major challenge in estimating sexual violence prevalence rates relates to the complicated nature of conceptualizing and defining sexual violence. The way that researchers conceptualize and operationalize the definition of violence against women can vary, particularly across differing disciplinary fields, making it difficult to compare findings across studies (Jaquier et al., 2011). Compared to broad definitions that are inclusive of a wide range of behaviors, narrow definitions of violence against women tend to produce lower estimates (DeKeseredy, 2000). When different studies use the same definition, it is still possible that they will produce differing estimates based on the operationalization of violence against women (Jaquier et al., 2011). One study, for example, might include behaviorally specific terms to identify the violent acts, while the other could use labels, such as “rape” or “sexual assault” and assume that the respondent defines these terms the same way as the researcher. Using behaviorally-specific wording that describes the exact behavior is recommended because these types of items have been shown to prompt respondents to recall past experiences (Cook et al., 2011; Fisher, 2009; Fisher & Cullen, 2000).

Although researchers have made efforts to improve sexual violence measurement tools and strategies, “an enduring difficulty stems from there being no true reference measure for outcomes in [violence against women (VAW)] research” (Jewkes et al., 2020, p.3). Jewkes et al., (2020) report that “little is known about the reliability of the most commonly used measures of VAW in different populations or for men versus for

women” (p. 3). The authors also highlight the lack of consensus around key outcome variables for prevention trials—there is still debate about whether targeted outcomes “should be total cessation of violence, lower frequency of violent acts, or non-initiation of violence, and whether all violence should be considered together or particular types of violence privileged, or independently examined (such as physical and/or IPV rather than emotional or economic IPV)” (p. 3). Using multiple measures of violence could be useful to maximize likelihood of examining “the right thing,” but conversely, it also increases risk of returning positive findings due to chance from multiple testing (Jewkes et al., 2020).

Empowerment Self-Defense

Despite these measurement challenges, sexual violence prevention strategies with strong evidence of effectiveness are continuing to emerge (Basile et al., 2016). The CDC recently included empowerment-based resistance education programs for women as a recommended approach to “complement efforts focused on the prevention of perpetration, particularly when implemented as part of a comprehensive, multifaceted prevention effort” (Basile, et al., 2016, p. 16). The CDC defines empowerment-based training for women (to reduce risk for victimization) as approaches that:

...focus on strengthening the ability of women to assess risk for violence in relationships and situations and empowering them to act. They address potential emotional and physical barriers that may inhibit actions to reduce risk for sexual victimization, such as fear, internalized sex role norms, or physical size and strength. Empowerment-based approaches that focus on increasing participants’

self-efficacy to identify and reduce exposure to risky situations and people through intensive skills training have greater research and theoretical support than approaches focused primarily on physical self-defense training. (Basile et al., 2016, p.19)

One such empowerment-based training for women is Empowerment Self-Defense (ESD). ESD programs stem from a feminist understanding of gendered violence and provide evidence-informed and theory-driven strategies to interrupt or deter unwanted sexual behaviors across a continuum of violence (Hollander, 2016). ESD program components align with feminist theory, empowerment theory, and social cognitive theory. Core elements of ESD include emotional, verbal, and physical knowledge and skills for resisting violence. ESD engages participants with topics such as gender socialization, the continuum of violence, risk factors for victimization, characteristics and behavior among perpetrators, and psychological barriers to resistance, all of which are informed by feminist theories (Hollander, 2016). As supported by the Social Cognitive Theory (Bandura, 1997), ESD provides the opportunity for participants to learn in a supportive environment that facilitates opportunities to learn and rehearse the targeted behavior. These environmental supports, behavioral practice, and cognitive influences promote self-efficacy, which is a predictor of actual behavior (Bandura, 1997).

As previously noted, evaluation of sexual assault prevention programs can be challenging, particularly when trying to measure primary program outcomes aimed at reducing actual rates of victimization or perpetration, rather than measuring secondary outcomes that are associated with reduced risk of victimization (Jacquier et al., 2011).

Consequently, few prevention programs have demonstrated evidence of reducing victimization. ESD is remarkable because rigorous studies have demonstrated a significant decrease in rates of victimization (Senn et al., 2015, 2017). For example, a multi-site randomized control trial (RCT) of a 12-hour program called Enhanced, Assess, Acknowledge, Act (EAAA) demonstrated that program participants, compared to the treatment-as-usual control group participants, were 46% less likely to have experienced an attempted rape and 63% less likely to have experienced a completed rape at a one-year follow-up period (Senn et al., 2015, 2017).

In addition to reducing victimization, participating in ESD training has been associated with a wide range of positive outcomes. For example, ESD participants have reported decreased fear, avoidance behaviors, and self-blame for previous experiences of victimization along with a host of other positive outcomes (see Hollander, 2004; Kelly & Sharp-Jeffs, 2016; Gidycz et al., 2006, 2015). Although the evidence overwhelmingly suggests that ESD is a promising intervention for sexual assault prevention, more research is needed to strengthen the evidence base supporting ESD and to promote program adoption. Unfortunately, some scholars and practitioners have expressed resistance to this type of programming despite the strong evidence supporting it (see Cahill, 2009 and Hollander, 2016 for an overview of, and response to, these critiques).

It is evident that additional research studies—such as replication studies, implementation studies, and effectiveness trials in uncontrolled research environments—are needed to bolster support for program adoption (Basile et al., 2016; Brekke et al., 2007; CDC, 1999). To advance this research, high-quality measures are needed to

evaluate the breadth of targeted outcomes. Many qualitative studies have captured the breadth of positive and sustained effects ESD has had on participants, but it is also critical to measure outcomes quantitatively (Fisher, 2009). Standardized measures are needed to compare results systematically across programs, determine program effectiveness, understand optimal intervention dosage, and identify and compare other critical intervention components (DeVellis, 2017).

Researchers investigating the impact of ESD training on participants have measured a range of attitudes, beliefs, and behaviors. Recently, however, ESD scholars have acknowledged a need for “better outcome measures” (Hollander, 2018, p. 11). Several researchers have made an appeal for improved measures for risk detection (e.g., Senn et al., 2021; Vitek et al., 2018), and for a multi-item measure for sexual assault risk perception and optimism bias (Senn et al., 2021). Although scholars pinpoint some of the concerns related to measurement, the author of the current study could not identify any research to date that has reviewed the collection of measures used in ESD intervention outcome research. Therefore, the goal of the current study is to address this gap by compiling a comprehensive and descriptive record of the standardized measures used to determine ESD program outcomes.

The specific aim of the present study is to synthesize the existing scales that have been used to measure behavioral and psycho-social outcomes related to ESD. The study aims to answer the research question: What are the characteristics of existing measures that have been used to measure outcomes associated with participation in ESD programs?

Methods

A systematic review of the literature was conducted to synthesize the existing scales that have been used in prior research studies to measure ESD participant outcomes. Reporting of this systematic review follows the preferred reporting items for systematic reviews and meta-analysis protocols (PRISMA-P) (Shamseer et al., 2015). The PRISMA-P was created to provide guidance for conducting high quality systematic review methods and reporting. The PRISMA-P checklist increases transparency of the research process and reliability of the findings (Shamseer et al., 2015).

Search Strategies

Two strategies were used to identify existing scales previously used in ESD research and published in peer-reviewed articles. The sample of measures used in the review included peer-reviewed articles that were identified using two methods: a database search and a review of reference lists from peer-reviewed articles that were identified through the database search. For the database searches, a Boolean string of keywords was entered into six databases: Scopus, EMBASE, Academic Search Complete, APA PsychInfo, Psychology and Behavioral Sciences Collection, Social Work Abstracts, and SocINDEX. The Boolean string included keywords to identify articles reporting quantitative results from ESD research studies. I consulted with key informant scholars in the field of ESD research to determine the final keyword search string: (self-defense OR self defense) AND (sex* assault OR sex* violence) AND (questionnaire OR assess* OR scale OR instrument OR measure*).

The database search results were screened systematically using inclusion and exclusion criteria to identify the articles included in the review. The screening occurred

sequentially in the following order: article titles, article abstracts, and the full article.

Articles were organized and managed during the multiple stages of review using Zotero, a citation management software.

The second method for identifying articles included reference harvesting by reviewing the reference lists in the articles that were identified using the database search. First, the titles of each reference were screened for inclusion and exclusion criteria (see *Eligibility Criteria*). The articles for any newly identified titles were retrieved online for further review. The abstract and, if relevant, full articles were screened for inclusion or exclusion criteria. Both search methods were conducted in October of 2020.

Eligibility Criteria

Articles were included in the sample for the review if they met certain criteria. Peer-reviewed journal articles were included if measurement scales associated with ESD program outcomes were used in the study. Only articles published in English were included due to feasibility, but there were no restrictions on the time period of publication. Articles were excluded if they only used qualitative methods to evaluate ESD program outcomes. Studies that were cross-sectional in nature (i.e., were not intervention studies) were excluded. Not all ESD programs are labeled as such, so programs were also screened for specific elements. To be included, programs had to address both knowledge and skills (verbal and physical) needed to identify and address unwanted sexual behaviors. Sexual violence resistance programs that did not include an element of verbal and physical skills practice were excluded.

Data Extraction

Data were extracted from the articles included in the sample. Multiple descriptive features of the measures were extracted and compiled into purposively designed data extraction tables. Characteristics that were obtained included the name of the measure, subscales (if relevant), number of items in the measure, response options, scoring, mode of completion, study population, and psychometric properties.

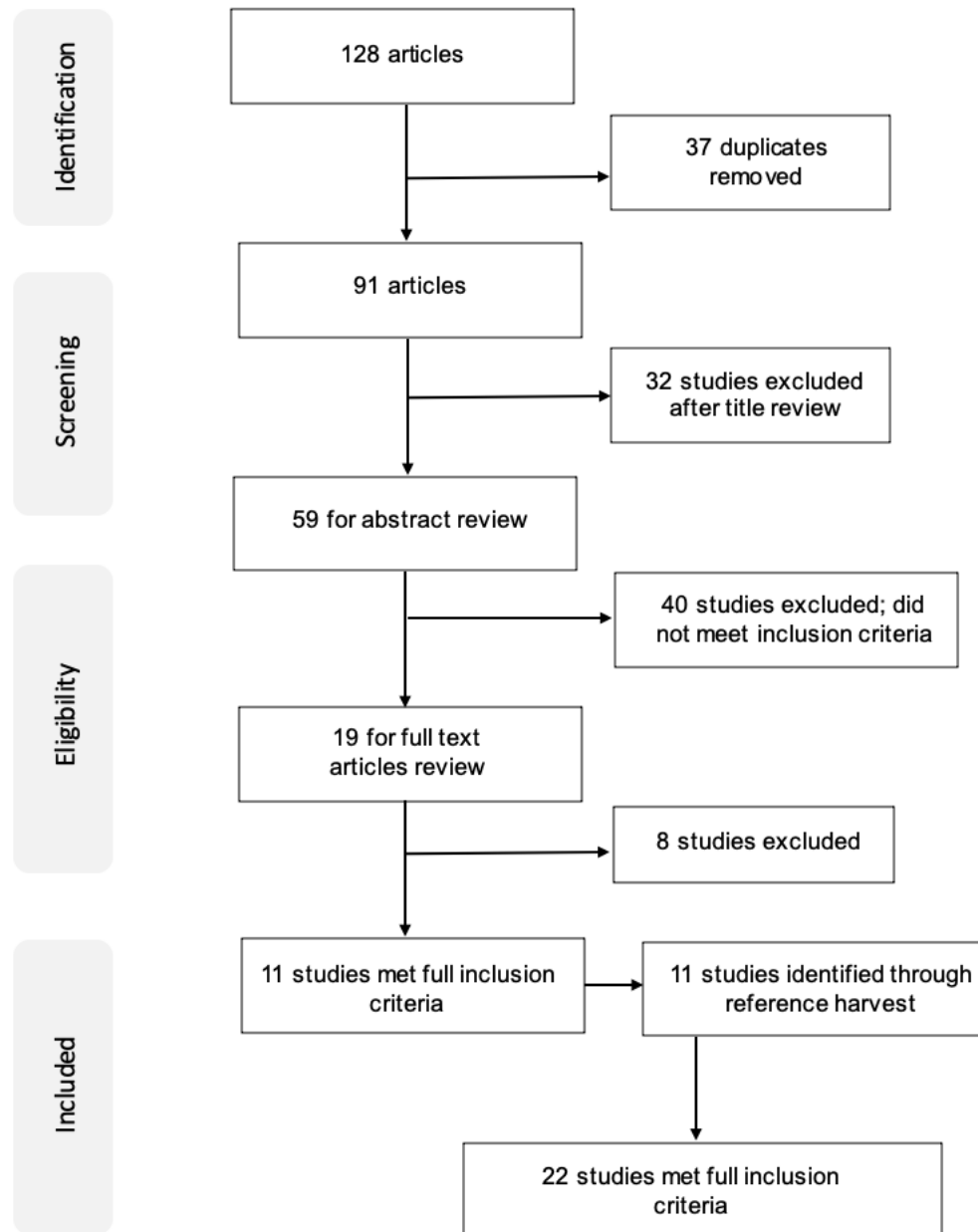


Figure 2. Flow Diagram of Search and Selection Process

Results

The database searches yielded a total of 128 papers. After removing duplicates, there were 91 papers to screen. Figure 1 summarizes the screening and review process. A total of 22 studies were included in the final sample (see Table 1). There were 55 unique measures used across these 22 ESD outcome studies. The nine concepts featured across the measures include the following: assault characteristics (n=1) (Table 2); additional attitudes & beliefs (n=6) (Table 3); behavior and behavioral intentions (n=11) (Table 4); fear (n=4) (Table 5); knowledge (n=2) (Table 6), mental health (n=8) (Table 7); any past unwanted sexual experiences (n=7) (Table 8); perception of risk and vulnerability (n=5) (Table 9); and self-efficacy (n=11) (Table 10).

Assault Characteristics

One measure was used to measure the characteristics of participants' assault experiences. The measure used multiple question types to gather details about the most severe incident of sexual assault following participation in a sexual assault prevention program (Gidycz et al., 2015). Respondents were asked to provide details about the number of times they had been assaulted, resistance tactics they used, and the degree to which they blamed themselves or the perpetrator. The measure was administered to a sample of college women. Response options varied based on the items. For example, the attribution of blame was a Likert-type scale ranging from 1 (not at all responsible) to 5 (very much responsible) (Gidycz et al., 2015).

Additional Attitudes and Beliefs

There were six tools used to measure additional attitudes and beliefs. These measures included: Perceived Causes of Rape Scale (Cowan & Campbell, 1995, 1997);

Rape Attributions Questionnaire - Causes of Rape (Frazier, 2003); Levenson's Internality, Powerful Others, and Chance Scales (Levenson, 1972); Liberal Feminism Ideology Scale-short form (Morgan, 1996); Illinois Rape Myth Acceptance Scale – Short Form (Payne et al., 1999); Marlowe Crowne Social Desirability Scale Short Form (Reynolds, 1982). Two of the measures—the Perceived Causes of Rape Scale and Rape Attributions Questionnaire—were created to determine respondents’ beliefs about the causes of rape (Cowan & Campbell, 1995, 1997; Frazier, 2003). The Illinois Rape Myth Acceptance Scale – Short Form is a 45-item measure of rape myth beliefs (Payne et al., 1999), where rape myths are defined as “attitudes and beliefs that are generally false but are widely and persistently held, and that serve to deny and justify male sexual aggression against women” (Lonsway & Fitzgerald, 1995, p. 134). The Liberal Feminism Ideology Scale short form is an 11-item measure of feminist attitudes related to goals of feminism and feminist ideology (Morgan, 1994; Woodbrown, 2015). Levenson’s Internality, Powerful Others, and Chance Scales is a measure for locus of control, defined as “expectancies for control as they relate to involvement in voluntary social action activities” (Levenson, 1972, p. 261). As the name suggests, this measure has three dimensions for internality, chance, and powerful others. The fifth scale, Marlowe Crowne Social Desirability Scale Short Form, is a measure of social desirability (Reynolds, 1982). This scale was designed to function as an adjunct measure to determine the extent to which social desirability affects participant responses on the other self-report measures related to the primary purpose of the study.

All six measures of attitudes and beliefs reported information about the psychometric evaluation of the measures. Levenson (1972) reported questionable to acceptable ranges of reliability for the three subscales, with alpha coefficients of 0.64, 0.77, and 0.78. However, when used in the ESD study, Weitlauf et al. (2000) reported unacceptable internal consistency for two of the three subscales in Levenson's Internality, Powerful Others, and Chance Scales. Coefficient alphas were 0.17, 0.40, and 0.61 respectively, so only the data from the Powerful Others subscale was retained for analysis in their study. The remaining five measures reported reliability metrics that were acceptable or good.

Sample populations were somewhat diverse among the attitudes and beliefs measures. The Liberal Feminism Ideology Scale-Short Form was used on a population of undergraduate college women, but the remaining five measures were tested on mixed-gendered populations (or unspecified gender, as in the case of the RAQ). Most of the measures were tested with adult populations, either undergraduate students or adults, but the Perceived Causes of Rape Scale (Cowan & Campbell, 1995) was unique in that a modified version with simpler language was evaluated on a small sample of high school students and found to have acceptable reliability.

Behavior and Behavioral Intentions

There were 11 scales used to measure actual behavior and behavioral intentions. These scales included: The Aggression Questionnaire (Buss & Perry, 1992); Sexual Communication Survey (Hanson & Gidycz 1993); Dating Behavior Survey (Hanson & Gidycz 1993); Sexual Assault Self-Protection Scale (Holtzman & Menning, 2015);

Dating Self-Protection Against Rape Scale (Moore & Waterman 1999); Sexual Assertiveness Scale (Morokoff et al., 1997); Resistance Tactics (Orchowski et al., 2008); Participant and Avoidant Behavior (Ozer & Bandura 1990); Behavior Test of Self-Protective Skill (Ozer & Bandura 1990); Rathus Assertiveness Schedule (Rathus, 1973); and the Sexual Assertiveness Scale for Women (Walker, 2006).

Three of the tools—the Sexual Communication Survey (SCS; Hanson & Gidycz, 1993), the Sexual Assertiveness Scale (SAS; Morokoff et al., 1997), and the Sexual Assertiveness Questionnaire for Women (SAQ-W; Walker, 2006)—measured college women’s assertive sexual communication. The SCS was designed to assess respondents’ perceptions about communication of sexual intent in dating situations (Hanson & Gidycz, 1993). The SAS measured three dimensions of assertive sexual communication, including initiation of sexual activity, refusal of sexual activity, and communication around prevention of pregnancy and sexually transmitted illness (Morokoff et al., 1997). The SAQ-W measured four dimensions of sexual assertiveness: relational sexual assertiveness, sexual confidence and communication, commitment focus, and sex-related negative affect (Walker, 2006).

All of the measures, with the exception of the behavior test of self-protective skill (Ozer & Bandura, 1990), had items that were self-reported by the respondent. The behavior test of self-protective skill was a behavioral observation of three mock assault scenarios in which participants were rated on their strike proficiency and overall effectiveness. Ozer & Bandura (1990) reported strong inter-rater reliability among the raters ($r = 0.73$ and 0.81 respectively).

Most of the measures reported information about the psychometric properties of the measure. Reliability data were not reported for the behavior test of self-protective skill (Ozer & Bandura, 1990), resistance tactics (Orchowski et al., 2008), and participant and avoidant behavior (Ozer & Bandura, 1990). Most of the measures (n=9) were used with a study population composed of women (seven with college women). The Rathus Assertiveness Scale (Rathus, 1973) was evaluated using both men and women college students between the ages of 17-27, and the Dating Self-Protection Against Rape Scale (Moore & Waterman, 1999) included both men and women college students.

Fear

There were four measures related to fear. Both measures by Ozer and Bandura (1990) were single-items (Negative Thoughts and Anxiety Arousal). For the Negative Thoughts item, participants rated on a 6-interval scale how frequently they had thoughts about sexual assault, and the Anxiety Arousal item measured on a 10-interval scale the level of anxiety about the possibility of experiencing a sexual assault (Ozer & Bandura, 1990). No further information about these items were reported.

The two additional fear scales were much lengthier in comparison. The Fear of Rape Scale (Senn & Dzinis, 1996) is a 31-item measure with Likert-type items and true/false items, and the Perceptions of Dangerous Situations Scale is a 37-item measure that is completed three times, so there are 111 responses a respondent must provide (Hughes et al., 2003). The 37 items are repeated three times to assess participants' perception of fear of rape, likelihood of victimization, and confidence in being able to

manage dangerous situations (Hughes et al., 2003). The reliability of the subscales ranged between poor, acceptable, and good (see Table 5).

Knowledge

There were two scales used to measure knowledge. The Ohio University Sexual Assault Risk Reduction (SARR) Program Knowledge Measure used 30 items to measure a variety of topics covered in the SARR program (Gidycz et al., 2006). These items were a variety of multiple-choice, true/false, and short-answer questions. The second knowledge measure was an item about self-defense tactics in which participants provided a response to an open-ended item: “If a man I knew (e.g., a date or acquaintance) tried to force me to have sex with him when I didn’t want to, I would....” (Senn et al., 2017, p. 151). Two coders scored the responses into dichotomous categories based on whether the respondent mentioned an effective resistance strategy as defined by Ullman (1997). The two coders also recorded a count of the number of forceful resistance strategies mentioned in the participant’s response (Senn et al., 2017). Interrater agreement ranged from good to excellent with Cohen’s kappa coefficients ranging from 0.82 to 0.91 (Senn et al., 2017). Both of the study populations for these two measures included college women (Gidycz et al., 2006; Senn et al., 2011, 2017).

Mental Health

There were eight tools used to measure mental health outcomes: The Beck's Depression Inventory (BDI; Beck et al., 1988); Symptom Checklist-90 - Revised (SCL-90-R; Derogatis, 1977); Posttraumatic Stress Diagnostic Scale (PDS; Foa et al., 1997); Ways of Coping (WCQ; Folkman & Lazarus, 1988); Emogram (Priesmeyer, 2006);

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965); Washington Self-Description Questionnaire (WSDQ; Smoll et al., 1993); and the Posttraumatic Stress Disorder Checklist – Civilian Version (PCL-C; Weathers et al., 1993).

Of these eight measures, two measured self-esteem: the WSDQ (Smoll et al., 1993) and the RSES (Rosenberg, 1965). Two instruments (PCL-C and PDS) were used to measure PTSD symptoms (Foa et al., 1997; Weathers et al., 1993). Psychological distress was measured with the SCL-90-R (Derogatis, 1977). The BDI (Beck et al., 1988) was used to measure depression symptoms, and the WCQ (Folkman & Lazarus, 1988) was used to measuring behavioral and cognitive coping strategies. Only the 8-item “Escape and Avoidance” subscale was used in the ESD study that examined coping as an outcome (Mouilso et al., 2011). This subscale measures avoidant and escape behaviors used to cope with distress (Folkman & Lazarus, 1988).

Most of these mental health measures are completed via self-report, with the exception of the Emogram (Priesmeyer, 2006). The Emogram is a computer-based program that analyzes participants’ emotional state and their changes in 11 emotions: anger, anxiety, contempt, disgust, distress, fear, happiness, interest, sadness, shame, and surprise (Priesmeyer, 2006).

Unwanted Sexual Experiences

All of the eight measures of unwanted sexual experiences are self-report measures. Of these eight measures, three were different version of the Sexual Experiences Survey (SES; Koss et al., 1985; Koss et al., 1987; Koss et al., 2007). Three of the tools were single-item measures to assess sexual assault victimization (Holtzman &

Menning, 2015; Baiocchi et al., 2017; Decker et al., 2018; Sarnquist et al., 2014; Sarnquist et al., 2017; Sinclair et al., 2013; Senn et al., 2011). Pinciotti and Orcutt (2018) used five items from the National Violence Against Women Survey to measure rape and attempted rape (Tjaden & Thoennes, 1998). Ozer and Bandura (1990) used a self-report measure of past experience with physical and sexual assault, but additional details about the measure were not described.

The most frequently used scale to measure unwanted sexual experiences was the Sexual Experiences Survey (SES; Koss et al., 1985; Koss et al., 1987; Koss et al., 2007). The SES was originally developed in 1982 to examine both sexual violence victimization and perpetration but has been revised and refined over the years to improve reliability and validity, and to more accurately capture legal and policy definitions of unwanted sexual experiences (Koss et al., 2007). The instrument is a self-report measure using behaviorally-specific items to identify unwanted sexual experiences. The short form has 10 questions to determine the number of times respondents experienced a particular behavior within the past year; while the long form includes an additional 11 questions and also includes a second recall time period. Respondents answer each item considering their experiences in the past 12 months and also since the age of 14; and, when used as an outcome measure, respondents consider the period of time since participating in a program or another specified timepoint (Koss et al., 2007). The SES measures six categories of unwanted experiences: rape, attempted rape, coercion, attempted coercion, sexual contact, and no unwanted sexual experiences. Responses to the SES are scored by calculating prevalence for each category or by calculating mutually exclusive categories

to determine frequency of experiences according to a respondent's most severe experience. (Koss et al., 2007).

None of the measures except for the SES indicated evidence of having undergone psychometric evaluation. Although on the lower end of acceptability, all versions of the SES have demonstrated Cronbach coefficient alphas greater than 0.70 (Koss et al., 2007). Psychometric evaluation of the SES also has demonstrated good internal consistency for diverse populations (Johnson et al., 2017). For example, among a sample of African American adolescent women, Cecil and Matson (2006) reported good internal consistency, convergent validity, and support for discriminant validity. The SES was one of two measures to be used with adolescent populations—the other being the single-item measure used in the Kenya and Malawi studies (Baiocchi et al., 2017; Decker et al., 2018; Sarnquist et al., 2014, 2017; Sinclair et al., 2013).

One of the three single-item measures was used in tandem with the SES to measure unwanted sexual experiences. When administering the SES, Senn et al., (2011) included an additional item in an effort to measure “close call” experiences, which referred to experiences when the respondent successfully applied resistance strategies (Testa et al., 2006). In this additional item, participants were asked, “Have you (since the program ended/in the last 3 months) had a dating situation where you believe you AVOIDED sexual coercion or sexual assault by your actions? (e.g., removing yourself from the situation, calling a friend, etc.);” and if participants answered “yes,” they were then asked to provide more details about that experience (i.e., “Can you tell us what happened?”) (Senn et al., 2011, p. 79).

Perception of Risk and Vulnerability

There were five measures that had been used to measure personal vulnerability and perceived risk: Perceived Risk of Acquaintance Rape (Gray et al., 1990); Risk Perception Survey (Messman-Moore & Brown, 2006); Perception of Risk--Michael scenario (Norris et al., 1999 with added items from Testa et al., 2006); Personal Vulnerability (Ozer & Bandura 1990); and Risk Assessment and Discernment (Ozer & Bandura, 1990). Two of these measures were scenario-based (Messman-Moore & Brown, 2006; Norris et al., 1999; Testa et al., 2006) and thus cannot be used at multiple phases of data collection. The hypothetical situations in the measures involve an escalation of sexually coercive behaviors by a male acquaintance or a male stranger, and because the sequence of events becomes known to the respondent after the first administration, repeated administrations would yield biased responses from the respondents (Senn et al., 2017). The Perceived Risk of Acquaintance Rape (Gray et al., 1990) and Personal Vulnerability (Ozer & Bandura, 1990) each have a single item. Ozer and Bandura (1990) also created a Risk Assessment and Discernment measure with two items. The only measure of risk perception with reported psychometric properties is the Perception of Risk – Michael scenario ($\alpha = 0.81$).

Self-Efficacy

Various types of self-efficacy were studied using 11 different measures, all of which are self-report measures. The measures included: Coppel's Self-Efficacy Scale (Coppel, 1981); self-defense self-efficacy according to assailant type (Hollander, 2014); self-efficacy ratings (Marx et al., 2001); coping self-efficacy (Ozer & Bandura, 1990);

cognitive control self-efficacy (Ozer & Bandura, 1990); the Physical Self-Efficacy Scale (Ryckman et al., 1982); General Perceived Self-Efficacy (GSE; Schwarzer & Jerusalem, 1995); Self-Efficacy Scale (Sherer et al., 1982); Domain-specific self-efficacy (Weitlauf et al., 2001); Task-specific self-efficacy (Weitlauf et al., 2000); and Self-defense self-efficacy (Weitlauf et al., 2001). The Coping Self-Efficacy Scales by Ozer and Bandura (1990) included three domains: Self-defense self-efficacy, interpersonal self-efficacy, and activities self-efficacy. Ozer and Bandura's self-defense self-efficacy subscale was used to inform the development of the two other self-defense self-efficacy scales by Marx et al., (2001) and Weitlauf et al., (2001). Self-defense self-efficacy was the most frequently measured form of self-efficacy (Ball & Martin, 2012; David et al., 2006; Gidycz et al., 2015; Gidycz et al., 2006; Hollander, 2004; Hollander, 2014; Orchowski et al., 2008; Ozer & Bandura, 1990).

Eight of the 11 self-efficacy measures reported at least some information about psychometric evaluation of the scale. The three measures that did not report this information were the self-defense self-efficacy according to assailant type (Hollander, 2014), the self-efficacy ratings (Marx et al., 2001), and cognitive control self-efficacy (Ozer & Bandura, 1990). The remaining measures were shown to have, at minimum, acceptable reliability (see Table 10).

The GSW is the only measure to have undergone psychometric evaluation with populations diverse in age, gender, race, and nationality (Schwarzer & Jerusalem, 1995). Marx et al. (2001) did not report information about the sample population information, but the remaining measures were predominantly evaluated with college women with the

exception of the two Ozer and Bandura (1990) measures, which were evaluated with women between the ages of 18 to 55 years old.

Discussion

The goal of this study was to review the measures that have been used in ESD intervention research. Across the 22 studies identified through the database search, 55 instruments had been used to measure nine categories of outcomes. There were several notable features about these instruments that have implications for future ESD research and the development of psychometrically sound measures.

The primary outcomes that ESD interventions aim to achieve are: decreased sexual violence victimization, decreased fear, decreased self/victim blame, increased healing, and societal-level shifts in around gender norms reflected through decreased population rates of sexual violence perpetration. These targeted outcomes were largely represented across the battery of measures. There were several measures for sexual violence victimization.

Measures of sexual violence experiences included both single-item and multiple-item measures. Multiple-item measures are often used to characterize various aspects of an abusive situation (Godbout et al., 2009), and single-item measures have also been endorsed as a way to balance the need to understand the nature of violence with the need to respect the privacy and well-being of respondents (Becker-Blease & Freyd, 2006). Using different measurement approaches, however, can produce inconsistent results (Godbout et al., 2009). Repeated testing has demonstrated that the SES, a commonly used multiple-indicator measure of unwanted sexual experiences, has strong psychometric properties. Less is known about the performance of single-item measures of sexual

violence experiences. These single-item measures, though, are congruent with the recommendation to use behaviorally-specific wording, rather than colloquial terms such as rape (Fisher, 2009).

The SES measures multiple forms of victimization, but it also only measures these experiences starting at the age of 14 to reflect most legal definitions of rape. Prior sexual assault victimization, including child sexual abuse, is a strong predictor of future sexual assault victimization (Briere, 1992; Messman-Moore & Long, 2000). Therefore, measuring sexual victimization prior to age 14 could be extremely beneficial to explore how ESD intervention outcomes differ between women who have prior experience of victimization and those who do not.

Measures of fear and attribution of blame were used in prior ESD intervention studies. Out of the four measures of fear, the Fear of Rape Scale was the only one to report strong psychometric properties (Senn & Dzinis, 1996). There were two measures for attribution of blame—the Perceived Causes of Rape Scale (Cowan & Campbell, 1995, 1997) and the Rape Attributions Questionnaire (RAQ; Frazier, 2003). Both are somewhat lengthy (32 items and 43 items respectively) and have reported strong psychometric properties. The RAQ is notable for having been studied with survivors of rape, whereas the PCRS was used on a general population of college men and women and a small sample (n=20) of high school students.

There was not a conceptual and operationalized measure for “healing.” Several of the mental health measures, such as the PTSD symptom scales and the depression inventory, were used to measure mental health symptomology, but healing from sexual

trauma has been identified as process of recovery that extends beyond mere mitigation of mental health symptoms (Draucker et al., 2009; Sinko et al., 2021). In a qualitative metasynthesis of studies examining the recovery process after experiencing gender-based violence, the authors reported five components of healing after sexual trauma: “(1) trauma processing and reexamination, (2) managing negative states, (3) rebuilding the self, (4) connecting with others, and (5) regaining hope and power” (Sinko et al., 2021, p. 15). Although this process of healing may have overlapping concepts with that of resilience and posttraumatic growth, the authors asserted that neither resilience nor posttraumatic growth fully captured the full domain of healing from sexual trauma (Sinko et al., 2021). The authors suggest that healing from sexual trauma may deviate from other traumatic experiences because sexual violence is an “intentional violation of bodily autonomy perpetrated by another person” (p. 15). Consequently, there is a need for additional quantitative measures capable of assessing all domains of healing from sexual trauma.

The other two primary outcomes are a societal-level shift in normative gendered behavior and a decrease in rates of perpetration. To date, no ESD study has measured the effect on cultural change and rates of perpetration. Because research in this field is still relatively young, a priority for measurement in ESD research is reduced victimization, so it is likely that the field has just not advanced to that stage yet. As research about ESD continues to expand, studies could extend to a broader sampling frame and could include individuals in a community who did not participate in the intervention in addition to the intervention groups. For example, if a manualized program like EAAA (Senn et al., 2011,

2017) were implemented on a college campus, data collection could include the broader campus community and could include measures of perpetration, such as the Sexual Experiences Survey – Short Form Perpetration [SES-SFP]) which is one of the most widely used measures of perpetration (Anderson et al., 2017; Koss et al., 2007).

Intermediate outcomes of ESD often include: shifts in beliefs about gender, increased labeling of sexual violence and risk behaviors in perpetrators, increased knowledge and use of resistance strategies, increased self-efficacy, increased assertiveness, and decreased emotional and psychological barriers to risk detection and resistance. As a targeted outcome and a primary theoretical construct of social cognitive theory (Bandura 1997, 2001), self-efficacy was among the most frequently measured outcomes. The other intermediate outcomes were also measured, though none of the assertiveness measures capture the breadth of assertive behaviors that ESD students learn and practice. Sexual assertiveness and the ability to communicate around sexual behavior, though, is of particular importance. Unwanted sexual behaviors tend to escalate, so asserting boundaries around sexual behavior is critical to interrupting uncomfortable behaviors before they escalate into more severe violations (Zinzow & Thompson, 2015).

There were fewer measures related explicitly to shifts in beliefs about gender. The Liberal Feminism Ideology Scale – Short Form relates to gender but is focused more on the goals of feminism than it is on gender beliefs. Changes in beliefs about gender, however, could be indirectly represented in measures of behavior and/or anticipated behavior. For example, sexual assertiveness was measured using the Sexual

Assertiveness Scale (Morokoff et al., 1997) and the Sexual Assertiveness Scale for Women (Walker, 2006). It could be argued that changes in sexual assertiveness could be attributed in part to shifts in beliefs about gender and what is considered normative sexual behavior for men and women.

Empowerment, which is featured in feminist and empowerment theories, was not explicitly operationalized or measured. Although empowerment is similar to self-efficacy, the construct itself was not conceptually defined nor operationally measured in any of the studies. As with other constructs, empowerment could potentially be measured through other outcome variables such as self-efficacy and assertiveness, but again, these variables fall short of the theoretical construct for empowerment as it is defined in social work and feminist literature (Miguel et al., 2015). A direction for future ESD research might consider including empowerment as a distinct construct to measure.

Psychometric properties for most measures have not been evaluated with diverse populations, and particularly with adolescents and children. The nature of sexual violence varies across populations diverse in age, race, ethnicity, ability, sexuality, and gender, so it is critical to have measures that are valid for these diverse populations. Given the prevalence of sexual violence that occurs before the age of 18, there is also an urgent need for measures that are valid and reliable for adolescents. The majority of existing measures were developed using college student and adult populations, so there is an urgent need for expanding psychometric testing of scales to examine their reliability, validity, and responsiveness with heterogeneous populations.

Most of the scales used in ESD intervention research were developed over 10 years ago. Some constructs such as fear and perception of risk may be susceptible to change over time because these variables could be impacted by social, political, and cultural contexts (Johnson & Johnson, 2021). The perception of risk and vulnerability scales, for instance, were developed in 1990 and 1999 (with additional items added in 2006), and the measures for fear were created in 1990, 1996, and 2003. All of these scales were created long before sexual violence was heavily featured in the public eye as a result of several significant events. For example, several social media hashtags drastically influenced public awareness about sexual violence. The social media hashtag, #Sayhername, became popular in 2014 in an effort to change the perception that police brutality and anti-Black violence targeted only Black men and to increase awareness about the large number of Black women who are also victims of police brutality and anti-Black violence. This hashtag drew much-needed attention to the unacceptable rate of anti-Black violence directed at women. Other hashtags such as #MeToo and #Timesup gained worldwide popularity in 2017 in response to women survivors reporting the ubiquity of sexual violence victimization. Similarly, the Women's March in 2017, a worldwide protest for women's rights, was organized in part as a response to former president Trump's degrading treatment toward women, a hallmark moment being the time he was caught on tape confessing to "grab[bing] [women] by the pussy." It may be likely that these social movements and events influenced people's awareness about sexual violence and sexual harassment. The shift in sexual violence discourse may have affected women's perceptions of risk and vulnerability along with their sense of fear of

sexual violence. These social influences are likely to have had differential effects on people according to their race and ethnicity, particularly with the explicit and violent expressions of xenophobia that increased over the past years.

Limitations

Findings should be considered in the context of the study limitations. This review only included peer-reviewed published studies, subjecting findings to a publication bias. Another limitation is that not all Empowerment Self-Defense programs are labeled as such, which creates a challenge when delineating the boundaries for inclusion and exclusion. For example, the EAAA program (Senn et al., 2011, 2015, 2017) is not described in the literature as an ESD intervention, however, the program elements are congruent with ESD program components, objectives, and format. Rape, Aggression, and Defense (RAD) programs are similarly not branded as ESD and are not known for being consistently positioned as a feminist, empowerment program. As such, this program name was not included in the keyword search. One study of a RAD program was included, however, because it was identified in the search results, and there was no indication in the study that the program elements were not congruent with ESD. It is possible that other studies of RAD programs were excluded as a result of the keyword search. Similarly, ESD courses can be considered sexual violence resistance programs, but not all sexual violence resistance programs are congruent with empowerment self-defense. It was outside of the scope of this review to include all sexual violence resistance programs.

Conclusion

As the science of sexual violence prevention continues to evolve, so too must measurement science. The importance of strong measures cannot be overstated. Results from this review can inform future directions of measurement development for ESD research. In addition to bolstering the psychometric evaluation of existing scales, research efforts are needed for the development and utilization of measures capable of assessing a broader range of outcomes for diverse populations. Until then, these study findings can help researchers and evaluators select standardized measures appropriate for their evaluation goals.

Table 1. Intervention Studies about ESD

Intervention studies (N= 22)

Citation	Measures
Baiocchi, M., Omondi, B., Langat, N., Boothroyd, D. B., Sinclair, J., Pavia, L., ... & Sarnquist, C. (2017). A behavior-based intervention that prevents sexual assault: the results of a matched-pairs, cluster-randomized study in Nairobi, Kenya. <i>Prevention science</i> , 18(7), 818-827.	Generalized Self-Efficacy Scale (GSES; Schwarzer, 2014) Reported perpetrator Disclosure of assault Relationship to person disclosed to Incidence of sexual assault ("In the last year [or since you took the Self Defense Class], has anyone forced you against your will to have sex (penetration of your vagina, anus or mouth with a penis or another object?") Question about whether the girls used the skills from the intervention to prevent a sexual assault, and if so, which skills
Ball, K., & Martin, J. (2012). Self-defense training and traditional martial arts: Influences on self-efficacy and fear related to sexual victimization. <i>Sport, Exercise, and Performance Psychology</i> , 1(2), 135.	Self-efficacy [self-defense, activities, interpersonal) by Ozer and Bandura, 1980 Perceptions of dangerous situations scale (PDSS) by Hughes et al., 2003 Sexual Experiences Survey (17-item version) (Abbey et al., 2004; Koss et al., 1987) Marlowe Crowne Social Desirability Scale by Reynolds, 1982

<p>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. <i>Journal of interpersonal violence</i>, 21(4), 555-565.</p> <p>Decker, M. R., Wood, S. N., Ndinda, E., Yenokyan, G., Sinclair, J., Maksud, N., ... & Ndirangu, M. (2018). Sexual violence among adolescent girls and young women in Malawi: a cluster-randomized controlled implementation trial of empowerment self-defense training. <i>BMC public health</i>, 18(1), 1-12.</p> <p>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. <i>Violence against women</i>, 21(6), 780-800.</p> <p>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. <i>Psychology of Women Quarterly</i>, 30(2), 173-186.</p> <p>Hollander, J. A. (2004). "I can take care of myself" the impact of self-defense training on women's lives. <i>Violence Against Women</i>, 10(3), 205-235.</p> <p>Hollander, J. A. (2014). Does self-defense training prevent sexual violence against women?. <i>Violence Against Women</i>, 20(3), 252-269.</p> <p>Holtzman, M., & Menning, C. (2015). A new model for sexual assault protection: Creation and initial testing of Elemental. <i>Journal of Applied Social Science</i>, 9(2), 139-155.</p>	<p>Self-efficacy scales (SD, interpersonal, activities) Ozer & Bandura, 1990)</p> <p>The Aggression Questionnaire (Buss & Perry, 1992)</p> <p>PCL-C (Weathers et al., 1993)</p> <p>Beck Depression Inventory (BDI; Beck et al., 1988)</p> <p>General Self-Efficacy Scale (GSES)</p> <p>Prevalence and incident rate of forced sex (single item)</p> <p>Disclosure (Did you tell anyone?)</p> <p>Perpetrator (nature of the relationship)</p> <p>Confidence (items developed specifically for the program - "if I am attacked by a bigger man I feel confident that i can defend myself"</p> <p>Knowledge (Items developed specifically for the program, if i am grabbed by an attacker what should i use to free myself?)</p> <p>SES</p> <p>Assault characteristics (Layman et al., 1996)</p> <p>Sexual Assertiveness Questionnaire for Women (SAQ-W; Walker, 2006)</p> <p>Self-Efficacy Scale (Marx et al., 2001; Ozer & Bandura, 1990)</p> <p>Dating Self-Protection Against Rape Scale (DSPARS; Moore & Waterman, 1999)</p> <p>Resistance tactics (authors)</p> <p>SES 10-item version (Koss & Oros, 1982)</p> <p>Self-efficacy (Marx et al., 2001; Ozer & Bandura, 1990)</p> <p>DSPARS (Moore & Waterman, 1999)</p> <p>Sexual communication survey (Hanson & Gidycz, 1993)</p> <p>Postassault questionnaire (Koss et al., 1987)</p> <p>Knowledge measure (Ohio University Sexual Assault Risk Reduction Program Knowledge measure)</p> <p>SES (Koss et al., 1987)Self-defense self-efficacy scale (modification; weiltauf et al., 2000)Rape Myths Acceptance Scale (Payne et al., 1999). Physical self-efficacy Scale (Ryckman et al., 1982)Liberal Feminism Ideology Scale (Morgan, 1996) (though not reported on in manuscript)</p> <p>SES (Koss et al., 1987)</p> <p>Self-defense self-efficacy scale (modified version; Weitlauf et al., 2000)</p> <p>Assailant type (self-defense self-efficacy) (Author)</p> <p>Sexual Assault Self-Protection Scale (authors - Holtzman & Menning, 2015)</p> <p>Unwanted sexual contact - All students were asked if they had experienced unwanted sexual contact or activity that was awkward, dangerous, or sexually charged (1 = yes, 0 = no) since starting college (control group) or since taking Elemental (program group at follow-up).</p>
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<p>Mouilso, E. R., Calhoun, K. S., & Gidycz, C. A. (2011). Effects of participation in a sexual assault risk reduction program on psychological distress following revictimization. <i>Journal of Interpersonal Violence</i>, 26(4), 769-788.</p>	<p>SES (Koss et al., 1987) - 10 item Symptom Checklist -90-Revised (SCL-90-R; Derogatis, 1977) Post-traumatic Stress Diagnostic Scale (PDS; Foa, 1995) Rape Attributions Questionnaire (RAQ; Frazier, 1997) Ways of Coping (WCQ; Folkman & Lazarus, 1988)</p>
<p>Munsey, B. R. A., Warren, A. S., & Wooten, H. R. (2015). Body-Centered Self Defense for Survivors of Sexual Assault. <i>Journal of Professional Counseling: Practice, Theory & Research</i>, 42(2), 17-27.</p>	<p>Emogram (Priesmeyer, 2006)</p>
<p>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. <i>Psychology of Women Quarterly</i>, 32(2), 204-218.</p>	<p>SES (Koss et al., 1987) DSPARS (Moore & Waterman, 1999) Sexual Communication Survey (Hanson & Gidycz, 1993) Self-Efficacy Scale (Marx et al., 2001; Ozer & Bandura, 1990) Rape Attribution Scale (Frazier, 2002) Knowledge measure (Ohio University Sexual Assault Risk Reduction Program Knowledge measure) Resistance tactics (authors)</p>
<p>Ozer, E. M., & Bandura, A. (1990). Mechanisms governing empowerment effects: a self-efficacy analysis. <i>Journal of personality and social psychology</i>, 58(3), 472.</p>	<p>Perceived Coping Self-Efficacy (Self-Defense, Interpersonal, and Activities) (authors) Cognitive Control Self-Efficacy (authors) Negative thoughts (authors) Personal vulnerability (authors) Risk estimate and discernment (authors) Anxiety arousal (authors) Participant and Avoidance Behavior (authors) Behavioral Test of Self-Protective Skill (authors) Past experience of physical and sexual assault (authors)</p>
<p>Pinciotti, C. M., & Orcutt, H. K. (2018). Rape aggression defense: Unique self-efficacy benefits for survivors of sexual trauma. <i>Violence against women</i>, 24(5), 528-544.</p>	<p>National Violence Against Women Survey (NVAWS; Tjaden & Thoennes, 1998) Self-Efficacy Coping Scales (Self-defense, Activities, Interpersonal self-efficacy) (Ozer & Bandura, 1990)</p>
<p>Sarnquist, C., Omondi, B., Sinclair, J., Gitau, C., Paiva, L., Mulinge, M., ... & Maldonado, Y. (2014). Rape prevention through empowerment of adolescent girls. <i>Pediatrics</i>, 133(5), e1226-e1232.</p>	<p>Incidence of sexual assault (authors)</p>
<p>Sarnquist, C., Sinclair, J., Omondi Mboya, B., Langat, N., Paiva, L., Halpern-Felsher, B., ... & Baiocchi, M. T. (2017). Evidence that classroom-based behavioral interventions reduce pregnancy-related school dropout among Nairobi adolescents. <i>Health Education & Behavior</i>, 44(2), 297-303.</p>	<p>Administrative data: Incidence of girls' school dropout due to pregnancy (School records)</p>
<p>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. <i>New England journal of medicine</i>, 372(24), 2326-2335.</p>	<p>SES-SFV (Koss et al., 2007)</p>

<p>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. <i>Psychology of women quarterly</i>, 41(2), 147-162.</p>	<p>Perceived personal risk of SA - Item adapted (Gray et al., 1990) Perception of risk (Testa et al., 2006) Risk Perception Survey (Messman-Moore & Brown, 2006) Self-defense self-efficacy (Marx et al., 2001) Knowledge of Direct Resistance (subscale in Michael scenario) (Norris et al., 1999; Testa et al., 2006) Qualitative measure for Rape Resistance Strategies (coded for forceful verbal and forceful physical resistance) (authors) Illinois Rape Myth Acceptance Scale-short form (Payne et al., 1999) Perceived Causes of Rape Scale - Female Precipitation subscale (Cowan & Campbell, 1995) SES-SFV (Koss et al., 2007)</p>
<p>Senn, C. Y., Gee, S. S., & Thake, J. (2011). Emancipatory sexuality education and sexual assault resistance: Does the former enhance the latter?. <i>Psychology of Women Quarterly</i>, 35(1), 72-91.</p>	<p>Perception of risk (Testa et al., 2006) Risk Perception Survey (Messman-Moore & Brown, 2006) Self-defense self-efficacy (Marx et al., 2001) Knowledge of Direct Resistance (subscale in Michael scenario) (Testa et al., 2006) Qualitative measure for Rape Resistance Strategies (coded for forceful verbal and forceful physical resistance) (authors) Sexual Experiences Survey (revised Abbey et al., 2005; Kosson et al., 1997) "Close call" - Avoided sexual coercion or assault question Perceived personal risk of SA - Item adapted (Gray et al., 1990) Fear of Rape Scale (Senn & Dzinis, 1996) Sexual Assertiveness Scale (SAS) for Women—Initiation and Refusal subscales (Morokoff et al., 1997)</p>
<p>Sinclair, J., Sinclair, L., Otieno, E., Mulinge, M., Kapphahn, C., & Golden, N. H. (2013). A self-defense program reduces the incidence of sexual assault in Kenyan adolescent girls. <i>Journal of Adolescent Health</i>, 53(3), 374-380.</p>	<p>Incidence of sexual assault ("In the last year [or since you took the Self Defense Class], has anyone forced you against your will to have sex (penetration of your vagina, anus or mouth with a penis or another object?)") Reported perpetrator Disclosure of assault Relationship to the person disclosed to</p>

Weitlauf, J. C., Cervone, D., Smith, R. E., & Wright, P. M. (2001). Assessing generalization in perceived self-efficacy: Multidomain and global assessments of the effects of self-defense training for women. *Personality and Social Psychology Bulletin*, 27(12), 1683-1691.

Self-defense self-efficacy (Authors)
Physical self-efficacy scale (Ryckman et al. 1982)
General self-efficacy subscale (Sherer et al., 1982)
Domain-specific self-efficacy (Authors)
Rosenberg self-esteem scale (Rosenberg, 1965)
Rathus Assertiveness Scale (Rathus, 1973)
The Aggression Questionnaire (Buss & Perry, 1992)

Weitlauf, J. C., Smith, R. E., & Cervone, D. (2000). Generalization effects of coping-skills training: Influence of self-defense training on women's efficacy beliefs, assertiveness, and aggression. *Journal of Applied Psychology*, 85(4), 625.

Task-specific self-efficacy (to deal with threat of sexual assault) (Authors)
Physical self-efficacy scale (Ryckman et al., 1982)
Coppel's self-efficacy scale (Coppel, 1980)
Washington Self-Description Questionnaire (Smoll et al., 1993)
Levenson's Internal, Chance, and Powerful Others scales (1972)
Rathus Assertiveness Scale
The Aggression Questionnaire

Table 2. Measures of Assault Characteristics

Assault characteristics (n= 1)

Measure	# items or Dimensions/Subscales (n=items)	Response options	Scoring	Mode of completion	Study Population	Reliability
Assault Characteristics (Gidycz et al., 2015, based on Layman et al., 1996)	Not reported; Assessed characteristics of an assault (referred to the most severe assault if there were multiple) including: number of times assaulted during follow-up period, resistance tactics, and attribution of blame to self or to the perpetrator.	Multiple options for different items. For attribution of blame, 5-point Likert-type scale from 1 (not at all responsible) to 5 (very much)	Not reported	Self-report	College women	Not reported

Table 3. Measures of Attitudes and Beliefs

<i>Attitudes & Beliefs (n= 6)</i>							
Measure	# items or Dimensions/Subscales (n=items)	Sample Item	Response Options	Scoring	Mode of Completion	Study Population	Reliability
Perceived Causes of Rape Scale (Cowan & Campbell, 1995, 1997) (Precipitation subscale of this scale for analysis, but full scale was administered)	Female precipitation (FP) (6); Male dominance (MD) (6); Male Sexuality (MS) (7); Society (S)(6); Male hostility (MH) (5); Rapists as mentally ill (RMI; this dimension added in 1997)(2)	Rape is caused by: (FP) women allowing the situation to get out of control; (MD) the belief that men are dominant over women; (MS) men having a stronger sex drive than women; (S) violence toward women in the movies and on television; (MH) men acting out their hostility toward women; (RMI) men who are different from the average "guy next door" (e.g., men who are weirdos")	7-point Likert-type scale strongly disagree (1) to strongly agree (7)	Higher scores indicate greater belief in power imbalance as cause of rape	self-report	238 college men and women; 20 high school students (for modified, simplified language)	FP: (0.90 in 1997) 0.89 (0.79 for high school students); MD: (0.87 in 1997) 0.92 (0.75 for high school students); MS: (0.83 in 1997) 0.87 (0.75); S: (0.85 in 1977) 0.77 (0.75); MH: (0.81 in 1977) 0.77 (0.8)

Rape Attributions Questionnaire - Causes of Rape (Frazier, 2003)	Cause of Rape: Behavioral self-blame (5); Characterological self-blame (5); Blaming chance (5); Blaming rapist (5); Blaming society (5) Aspects of Control: Present control (6); Future control (6); Likelihood of future assault (6)	(BSB) I used poor judgment; (BR) The rapist wanted to feel power over someone; (PC) I don't feel there is much I can do to help myself feel better; (FC) I have changed certain behaviors to try to avoid being assaulted again; (LFA) It is not very likely that I will be assaulted again.	5-point Likert-type scale ranging from 1 (never) to 5 (very often) 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree);	not reported	Self-report	135 non-recent rape survivors; 171 female sexual assault survivors who attended at least one counseling session post ER visit	Causes or Rape: Cronbach's α reported for behavioral self-blame (0.87) and Blaming rapist (0.87); others not reported Control: Cronbach's α for subscales: 0.81, 0.7, 0.83 respectively
Levenson's Internality, Powerful Others, and Chance Scales (Levenson, 1972)	Internal (8); Chance (8); Powerful Others (8)	(Internal) Whether or not I get to be a leader depends mostly on my ability; (Chance) When I get what I want, it's usually because I'm lucky; (Powerful Others) In order to make my plans work, I make sure they fit in with the desires of people who have power over me.	6-point Likert-type scale ranging from -3 (very uncharacteristic of me) to +3 (very characteristic of me)	Scores reported for each subscale (scored as sum of items with an added constant of 24 to eliminate negative sums); respondents receive three scores ranging from 0 to 48	self-report	Male and Female Adults	Cronbach's α = 0.64 Weitlauf: 0.17 (subscale not retained for analysis)" "Cronbach's alpha 0.77 Weitlauf: 0.40 (subscale not retained for analysis)" "Cronbach's alpha 0.78 Weitlauf: 0.61"

Liberal Feminism Ideology Scale-short form (Morgan, 1996; Woodbrown, 2015)	11 items	Women have been treated unfairly on the basis of their gender throughout most of human history.	6-point Likert- type scale ranging from 1 (strongly disagree) to 6 (strongly agree)	Sum after reverse scoring; higher scores indicate stronger feminist attitudes	Self-report	Undergraduate college women	Cronbach's α = 0.81
Illinois Rape Myth Acceptance Scale – Short Form (Payne et al., 1999)	She asked for it (8); It wasn't really rape (5); He didn't mean it (5); She wanted it (5); She lied (5); Rape is a trivial event (5); Rape is deviant event (7) Filler items (not scored) (5)	Rape happens when a man's sex drive gets out of control.	7-point Likert- type scale not at all agree (1) to very much agree (7)	Mean score of all items in subscale	self-report	University students (average age = 18.9)	Cronbach's α = 0.93 overall; subscales range of 0.74 to 0.84; average of 0.79
Marlowe Crowne Social Desirability Scale Short Form (Reynolds, 1982)	Social desirability	It is sometimes hard for me to go on with my work if I am not encouraged.	13	True (1) or False (0)	Sum of items (Range of 0 to 13)	Undergraduate students from a state university	$r = 0.76$

Table 4. Measures of Behavior and Behavioral Intentions

<i>Behavior and Behavioral Intentions (n=11)</i>						
Measure	# items or Dimensions/Subscales (n=items)	Response Options	Scoring	Mode of Completion	Study Population	Reliability
The Aggression Questionnaire (Buss & Perry, 1992).	Anger, Hostility, Physical Aggression, & Verbal Aggression (29 items in total - unsure of # for each subscale)	5-point Likert scale (1 = extremely characteristic of me, 5= extremely characteristic of me)	Sum of subscales after reverse- scoring negative items	self-report	College students in introductory psychology classes (18-20 years old)	Cronbach's α range from 0.72 to 0.85; six-week test-retest range from 0.69 to 0.83
Sexual Communication Survey (Hanson & Gidycz 1993)	21	7-point Likert scale; ranging from never (1) to always (7)	Higher scores cate perception communicating xual intentions clearly.	self-report	College women	test-retest reliability of 0.79; internal consistency coefficient 0.56 (later report 0.56 and 0.61 on page 1051)
Dating Behavior Survey (Hanson & Gidycz 1993)	15	6-point Likert scale; ranging from never (1) to always (6)	Sum of item responses; Higher scores indicate greater presence of acquaintance rape situational factors	self-report	College women	test-retest reliability of 0.77 and Cronbach's $\alpha = 0.63$
Sexual Assault Self-Protection Scale (Holtzman & Menning, 2015)	17	Likert-type scale, Level of agreement (1 = strongly disagree; 7 = strongly agree)	Mean score of all items	Self-report	College students from one of two midwestern colleges (large university and small liberal arts college)	Cronbach's $\alpha =$ 0.84

Dating Self-Protection Against Rape Scale (Moore & Waterman 1999)	15	6-point Likert-type scale; Never (1) to always (6)	Sum of item responses; Higher scores indicate greater frequency of self-protective behaviors	Self-report	152 college students (63 men, 87 women, 2 not disclosed)	Cronbach's $\alpha = 0.86$ spearman-brown split half reliability 0.81
Sexual Assertiveness Scale (Morokoff et al., 1997)	5-point scale ranging from 1 (disagree strongly) to 5 (agree strongly)	Sum of subscales; reverse code negative items		1,600 women (college women and community women)	Cronbach's $\alpha = 0.82$; Initiation: $\alpha = 0.77$ Refusal: $\alpha = 0.74$ Pregnancy/STD: $\alpha = 0.82$	
Resistance Tactics (Orchowski et al., 2008)	6	Yes or No	Not reported	Self-report	Undergraduate college women	Not reported
Participant and Avoidant Behavior (Ozer & Bandura 1990)	10	10-interval scale	Summed	Self-report	women aged 18-55 enrolled in a community SD program.	Not reported
Behavior test of Self-Protective Skill (Ozer & Bandura 1990)	SP: scale ranging from poor to excellent (intervals not reported); OE: 11-point scale (ineffective to knockout performance)	Average score for the three simulations	Behavioral observation of 3 mock assaults		women aged 18-55 enrolled in a community SD program.	$r = 0.73$ (strike proficiency); $r = 0.81$ (overall effectiveness)

Rathus Assertiveness Schedule (Rathus, 1973)	30	6-point Likert-type scale ranging from - 3 (very uncharacteristic of me) to +3 (very characteristic of me)	Sum of scores (range = -90 to +90)	Self-report	Undergraduate men and women age 17- 27	Test-retest $r=0.78$; split-half reliability $r=0.77$ $p < 0.01$
Sexual Assertiveness Scale for Women (Walker, 2006)		5-point scale from 1 (strongly disagree) to 5 (strongly agree)	Higher scores indicate increased impairment in rtiveness	Self-report	College women	Cronbach's $\alpha =$ 0.93 Cronbach's α for subscale: 0.88, 0.81, 0.74 respectively

Table 5. Measures of Fear and Vulnerability

Fear & Vulnerability Scales (n= 4)

Measure	# items or Dimensions/Subscales (n=items)	Response Options	Scoring	Mode of Completion	Study Population	Reliability
Fear of Rape Scale (Senn & Dzinas 1996)	31	5-point Likert- type scale from 0 (always) to 4 (never); 2-point scale - true or false (scored 0 to 4): 5-point Likert- type scale from 0 (very safe) to 4 (very unsafe)	Sum of item responses	Self-report	Women students enrolled at a college or university	Cronbach's α = 0.91; Spearman- Brown split-half reliability = 0.92
Negative thoughts (Ozer & Bandura 1990)	1	6-point rating scale Rarely (0) to persistently (6)	not reported	Self-report	Women aged 18-55 enrolled in a community SD program.	not reported
Anxiety Arousal (Ozer & Bandura 1990)	1 (anxiety over possibility of sexual assault)	10-interval scale (high level of anxiety to no anxiety at all)	not reported	Self-report	Women aged 18-55 enrolled in a community SD program.	not reported

Perceptions of Dangerous Situations Scale (Hughes et al., 2003)	Fear (37); Likelihood (37); Confidence (37) Participants respond to 37 items in three ways (fear, likelihood, and confidence) "Fear" had five subscales (life-threatening fear; general fear; stranger vulnerability fear; fear of theft; fear of being alone.	5-point Likert-type scale Almost none (1) to Almost complete (5)	Sum of item responses	Self-report	University women	Fear: $\alpha = 0.69$ to 0.95 Likelihood: $\alpha = 0.42$ to 0.92 Confidence: $\alpha = 0.69$ to 0.93
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Table 6. Measures of Knowledge

Knowledges (n= 2)

Measure	# items or Dimensions/Subscales (n=items)	Response Options	Scoring	Mode of Completion	Study Population	Reliability
Ohio University Sexual Assault Risk Reduction Program Knowledge Measure (Gidycz et al., 2006)	30	multiple choice, true/false, and short-answer	Scores range from 0 to 30; Higher scores indicate greater accuracy	Self- report	Undergraduate college women	not reported
Self-Defense Tactics (Senn et al., 2011, 2017)	1	Open- ended response	Two-raters coded responses; binary score for use of effective physical and verbal rape resistance strategy (1=yes; 0=no); Count of strategies identified. Coding system based on Ullman's (1997) identification of successful rape resistance strategies	Self-report	College women	Cohen's Kappas 0.92 - 0.98

Note: Senn et al., 2011, 2017 also assessed knowledge of effective rape resistance strategies using the Direct subscale from the Perception of Risk measure by Norris et al. (1999). See table (x)

Table 7. Measures of Mental Health and Self-Esteem

<i>Mental Health & Self-Esteem (n= 8)</i>						
Measure	# items or Dimensions/Subscales (n=items)	Response Options	Scoring	Mode of Completion	Study Population	Reliability
Beck's Depression Inventory (Beck et al., 1988)	21	4-point Likert-type scale ranging from 0 to 3; possible responses vary according to the item	Sum of 21 item ratings; higher scores indicate more severity	Self-report	Many sub-populations of adolescents and adults	Cronbach's α mean = 0.81 (range 0.73 to 0.92) in 15 nonpsychiatric samples
Symptom Checklist-90 - Revised (SCL-90-R; Derogatis, 1977)	90	5-point Likert scale (not at all to extremely)	GSI scoring is the average rating given to all 90 items	Self-report		Many studies indicate Cronbach's α consistently higher than 0.70
Posttraumatic Stress Diagnostic Scale (Foa et al., 1997)	49 (according to Mouilsa)		Sum	self-report		Cronbach's α = 0.92; test-retest reliability k=0.74
Ways of Coping (WCQ) (Folkman & Lazarus, 1988)	66 items; at least one: Escape & Avoidance subscale - unclear	4-point Likert-type scale ranging from not used (1) to used a great deal (4)		Self-report		Cronbach's α = 0.72
Emogram (Priesmeyer, 2006)	1 item, asked in reference to 33 items to measure change in 11 basic emotions	6-point Likert-type scale (very different, different, more different than similar, similar, and very similar)	Scaled on an index from +100 to -100	Computer-based program	Adults 19-54	Not reported

Rosenberg Self-Esteem Scale (Rosenberg, 1965)	10	4-point Likert-type scale (higher scores indicating higher level of self-esteem)	Sum score (after reverse-coding negatively worded items)	Self-report	High school students and a variety of adult groups; translated to many languages (see Schmitt et al., 2005)	Cronbach's $\alpha = 0.85$
Washington Self-Description Questionnaire (WSDQ; Smoll et al., 1993)	14	4-point Likert-type scale (1 = not like me; 4 = very much like me)	Sum of item scores	Self-report	Youth ages 9 - 11 and 12 - 14	Cronbach's $\alpha = 0.80$ (boys), 0.86 (girls)
PTSD Checklist-Civilian Version (PCL-C; Weathers et al., 1993)	17	5-point Likert-type scale (1 = not at all, 5 = extremely)	Sum of scores for all 17 items	self-report	Adults	Cronbach's $\alpha = 0.97$

Table 8. Measures of Past Unwanted Experiences of Victimization

<i>Past Unwanted Experiences of Victimization (n= 7)</i>							
Measure	# items or Dimensions/Subscales (n=items)	Sample item	Response Options	Scoring	Mode of Completion	Study Population	Reliability
Single Item for Kenya studies (Baiochi et al., 2017; Decker et al., 2018; Sarnquist et al., 2014, 2017; Sinclair et al., 2013)	1		yes or no	n/a	Self-report	Adolescent girls, young women in Kenya and Malawi	Test-retest reliability not reported for this single item
Sexual Assault Victimization (Holtzman & Menning, 2015)	1		yes (1) or no (0)	n/a	self-report	College students - predominantly first-year students; control group = students in introductory sociology class	Test-retest reliability not reported for this single item
Sexual Experiences Survey (Koss et al., 1987)	10		yes or no; indicate how many times within a specified period	Classified based on the most severe experience reported into 4 groups: sexual contact (yes to 1, 2, or 3 - not higher); sexual coercion (yes to items 6 or 7 - not higher); attempted rape (yes to items 4 or 5 - not higher); rape (yes to responses 8, 9, or 10).	self-report	College students (wording is different for males; example here is for women)	reliability = 0.74 and test-retest agreement was 93%

Revised Sexual Experiences Survey (Koss et al., 1987 original; Abbey et al., 2005)	35	0, 1, 2, 3 or more	Five categories of sexual victimization	self-report	College students from a large urban university	All versions of SES have acceptable internal consistency with alphas > 0.70
Revised SES (SES-Short Form Victimization) (Koss et al., 2007)	10	0, 1, 2, 3 or more	Five categories of sexual victimization (completed rape, attempted rape, coercion, attempted coercion, and nonconsensual sexual contact (non-penetrative)	Self-report	College students from a large urban university	All versions of SES have acceptable internal consistency with alphas > 0.70
Past Experience with Physical and Sexual Assault (Ozer & Bandura, 1990)	Not reported	Not reported	Not reported	Self-report	Not reported	Not reported
"Close calls" question (Senn et al., 2011)	1 (with 1 follow-up item if respondent answered "yes")	Yes (1) or No (0)	If respondent said "yes," follow-up item: "Can you tell us what happened?"	self-report	College student women	Test-retest reliability not reported for this single item

National Violence Against Women Survey (Tjaden & Thoennes, 1998)	5	yes (1) or no (0)	For this study, respondents were grouped into "survivors" and "nonsurvivors," where survivors were defined as "women who reported experiencing any lifetime forced or coerced vaginal, oral, or anal penetration; touching of breasts, pubic area, or perpetrator's pubic area; or any attempted sexual assault" (p. 534)	Self-report	Adults 18 or older; Nationally representative sample	Not reported
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Table 9. Measures of Perceptions of Risk and Vulnerability

<i>Perception of Risk & Vulnerability (n= 5)</i>						
Measure	# items or Dimensions/Subscales (n=items)	Response Options	Scoring	Mode of Completion	Study Population	Reliability
Perceived Risk of Acquaintance Rape (Gray et al., 1990)	1	5-point Likert-type response scale Very unlikely to very likely	Low score indicates low sense of vulnerability	Self-report	n/a	not reported
Risk Perception Survey (Messman- Moore & Brown, 2006)	25 chronological statements with risk for sexual victimization continously increasing; two items - discomfort score; leave score	Respondents select the statement number describing the point at which they would be "uncomfortable" and when they would "leave."	Higher numbers indicate greater risk for sexual victimization. Scores range between 1 to 25.	Self-report - Vignette/scenario- based measure	College women	not reported
Perception of Risk - Michael scenario (Norris et al., 1999 with added items from Testa et al., 2006)	20 (10 items for 2 separate segments)	7-point Likert-type scale not at all likely (1) to very likely (7)	Positively worded items reverse- scored; Scores range from 10 to 70; higher scores indicate higher risk of a negative outcome.	Self-report - Vignette/scenario- based measure with two coercive incidents	Women bar patrons aged 20 - 38	Cronbach's $\alpha = 0.81$

Personal Vulnerability (Ozer & Bandura 1990)	1	10-point scale (0=not at all vulnerable to 10=highly vulnerable)	not reported	Self-report	women aged 18-55 enrolled in a community SD program	not reported
Risk Assessment and Discernment (Ozer & Bandura, 1990)	2	10-interval scale (no other info)	not reported	Self-report	women aged 18-55 enrolled in a community SD program	not reported

Table 10. Measures of Self-Efficacy

Self-Efficacy Scales (n= 11)

Measure	# items or Dimensions/Subscales (n=items)	Response Options	Scoring	Mode of Completion	Study Population	Reliability
Coppel's Self-Efficacy Scale (Coppel, 1981)	Coping, pride, and learning expectations (9); Interpersonal situations (4); Control over one's life (5); Negative self-thoughts (4)	5-point Likert-type scale ranging from 1 (not at all like me) to 5 (very much like)	Not reported	Self-report	Undergraduate students	$\alpha = 0.91$; test-retest of 0.86 over two weeks
Self-Defense Self-Efficacy according to Assailant Type (Hollander, 2014)	2 Self-defense self-efficacy with a stranger (1); Self-defense self-efficacy with an acquaintance or intimate (1)	7-point scale Not effectively (1) to (very effectively (7)	Mean score	self-report	College women	Not reported
Self-Efficacy Ratings (Marx et al., 2001)	7	7-point Likert-type scale	Not reported	Self-report	Not reported	Not reported
Coping self-efficacy (Ozer & Bandura, 1990)	Self-defense self-efficacy (12); Interpersonal self-efficacy (8); Activities self-efficacy (17)	Complete uncertainty (0) to complete certitude (10)	Mean scores for each subscale	Self-report	women aged 18-55	Cronbach's $\alpha = 0.96, 0.88, 0.97$ respectively
Cognitive Control Self-Efficacy (Ozer & Bandura, 1990)	1	10-point Likert-type scale; 0 (complete inability to dismiss thoughts of assault) to 10 (ability to get rid of them easily)	Not reported	Self-report	women aged 18-55	Not reported

The Physical Self-Efficacy Scale (Ryckman et al., 1982)	Perceived Physical Ability (10); Physical Self-Presentation Confidence (12)	6-point Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree)	Sum of responses after reverse scoring items	Self-report	University students	Cronbach's α = 0.81;
General Perceived Self- Efficacy (GSE; Schwarzer & Jerusalem, 1995)	10	4-point Likert-type scale Not at all true (1) to exactly true (4)	Sum of items or mean score	Self-report	Original sample was German; T-norms for adult populations & high school students	Cronbach's α > 0.82 to 0.93
Self-Efficacy Scale (Sherer et al., 1982)	General self-efficacy (17); Social self-efficacy (6)	14-point Likert scale Strongly disagree to Strongly agree	Sum score of subscales	Self-report	College students	Cronbach's α = 0.86 and 0.71 respectively
Domain-Specific Self-Efficacy (Weitlauf et al., 2001)	Sports; Academic achievement; Conscientiousness; Assertive communication; Coping	100-point Likert- type scale 1 (<i>not at all confident</i>) to 100 (<i>very confident</i>)	Composite score of subscale sums	Self-report	Undergraduate women	Cronbach's α for composite score = 0.92 (time 1); 0.94 (time 2) Subscales range from α > 0.6 to 0.81 (time 1); α > 0.72 to 0.83 (time 2)
Task-Specific Self-Efficacy (Weitlauf et al., 2000)	6	10-point Likert- type scale ranging from 1 (not competent at all) to 10 (very competent)	Not reported	Self-report	College women	Cronbach's α = .075; Pearson's r = 0.72 (Six week test- retest)
Self-Defense Efficacy (Weitlauf et al., 2001)	16	10-point scale ranging from 1 (not competent at all) to 10 (very competent)	Mean score across items	Self-report	College women	Cronbach's α = 0.94 (time 1); 0.98 (time 2)

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Chapter 3. Empowerment Self-defense Outcomes: Perspectives from Instructors and Students

Background

The World Health Organization (WHO) continues to report the global magnitude of sexual assault victimization, a public health and human rights problem jeopardizing the health and wellbeing of survivors (World Health Organization [WHO], 2018). Sexual assault refers to any unwanted penetrative or non-penetrative sexual act by any person, regardless of their relationship to the victim, obtained through coercion, force, threat of force, or the inability to provide consent (Department of Justice, 2019). Women experience sexual assault at alarming rates; in some countries, as many as one out of three women report experience of sexual assault (WHO, 2018). This high rate of sexual assault is problematic for many reasons. Experiencing sexual assault can affect every aspect of a survivor's life, from physical and mental health problems to disruption in their daily life (e.g., a decline in job performance, earning potential, and personal relationships) (Campbell et al., 2009; Kendall-Tackett et al., 2013; WHO, 2018). Even when women have not experienced sexual assault, the fear of victimization often has a negative effect on their wellbeing, and their ability to engage with the world (Brownmiller, 1975; McCaughey, 1998).

To effectively address sexual assault prevention, strategies should be evidence-based, theory-driven, and comprehensive (Banyard, 2013; Nature et al., 2003; Orchowski

et al., 2018). Comprehensive approaches to prevention should use best practices for prevention programming and should involve multiple interventions that target the entirety of relevant stakeholders and policies within a system (Nature et al., 2003). For sexual assault prevention, these relevant stakeholders tend to be categorized as potential perpetrators, potential survivors, and potential bystanders (Basile et al., 2016).

Though few programs have shown concrete evidence of reducing rates of perpetration or victimization, a specific type of women's programming is the only programming method to date that has demonstrated success reducing sexual assault victimization (Hollander, 2004, 2014; Senn et al., 2015, 2017). Recent studies that applied rigorous research designs have shown that participation in Women's Self-Defense, also called Empowerment Self-Defense (ESD) programming was successful in reducing rates of sexual assault victimization for college women who participated in an ESD course (Hollander, 2014; Senn et al., 2015, 2017). Given that so few existing prevention efforts demonstrate potential to reduce global rates of sexual assault, further research studies about ESD are urgently needed, including outcome evaluations among diverse populations (i.e., populations other than college women in the US and Canada), replication studies, and implementation studies.

Although ESD research has increased over the past decade, it is still an emerging area of research. Efficacy trials have shown that ESD contributed to a significant decline in sexual assault victimization (Senn et al., 2015, 2017) but the literature is still sparse. For example, more research is needed to be able to compare results across programs and studies, to determine outcomes with diverse populations, and to understand how and why

the intervention is effective. Unfortunately, a challenge to conducting high quality research is the state of the measures used in the current research. Some scholars have noted that the existing measures have not been used consistently across studies, and several scales are outdated, incongruent with targeted outcomes, and/or excessively lengthy (e.g., Illinois Rape Myth Acceptance Scale) (Hollander, 2014). As an emerging area of research, there is also a need to identify what constructs are a priority for measurement. Although some outcomes have been hypothesized and measured, the mechanisms of change have not yet been isolated. As a first step to improving the battery of measures used in ESD research, it is necessary to identify the most critical outcomes to study.

The goal of this qualitative study is to contribute to the ESD literature by exploring ESD participant and ESD instructor perceptions about the most important outcomes associated with participation in ESD courses. Identifying these outcomes from student and instructor perspectives will help to inform what constructs and outcomes may be a priority for future research. At the same time, results can help to inform priority areas for measurement development or improvement, which is essential to conducting high quality research.

Empowerment Self-Defense

A comprehensive approach that targets individuals, relationships, communities, and policy is the recommended way forward to reduce sexual assault for all women (Basile et al., 2016). Although efforts to eliminate sexual assault have advanced over the past four decades, few programs and prevention strategies have shown to be effective in

reducing rates of sexual assault perpetration and sexual assault victimization (DeGue et al., 2014; Lonsway et al., 2009; Orchowski et al., 2010). One type of programming with solid evidence of producing effective outcomes, including reduced risk of sexual assault, is women's self-defense training (Hollander, 2004, 2014, 2015; Senn et al., 2015, 2017).

Self-defense training refers to the process of learning practical skills to avoid, deter, or resist assault (Hollander, 2018b). Though much variation exists among self-defense programs generally, empowerment self-defense (ESD), also called women's self-defense (WSD), is a specific type of self-defense that is evidence- and theory-informed, and that teaches a comprehensive range of knowledge and skills to prevent, resist, and interrupt harmful behaviors (Hollander et al., 2018b). ESD programs address the social context of violence against women. For instance, among college students the majority of sexual assaults are perpetrated by someone known to the victim, and women tend to experience unique barriers to addressing threats of violence when the perpetrator is an acquaintance or someone that the survivor trusts. To address this social context of violence, students predominantly learn psychological, verbal, and physical skills to address a continuum of harmful behaviors likely to occur in acquaintance scenarios, with less concentrated focus on stranger scenarios. Although ESD is geared toward women as potential victims, ESD courses avoid victim-blame and place responsibility for an assault on the perpetrator and seek to increase women's freedom rather than restrict their behavior (Hollander, 2018a).

Theoretical Frameworks

The main theories informing this study are intersectional feminism, empowerment theory, and social cognitive theory (SCT). ESD curricular content is positioned within an intersectional feminist framework, and the intervention structure focused on behavior change is aligned with social cognitive theory. ESD is also consistent with a feminist empowerment framework.

Intersectional Feminist Framework

Very broadly, feminist theory centers on the fundamental belief that access to all forms of power are contingent on social identity, including gender. Compared to masculine identities, feminine identities are viewed and treated as subordinate and inferior (Brownmiller, 1975; Johnson & Johnson, 2021; McCaughey, 1997). An intersectional feminist framework acknowledges that intersecting identities (e.g., race, gender, class) uniquely affect individuals' experiences engaging with social, political, and economic structures, and therefore, an analysis of gender must be included in any examination of the effects of oppression and discrimination (Crenshaw, 1991).

Violence against women has consistently been recognized as a primary way in which women are oppressed—violence against women both stems from and maintains gender inequality (Brownmiller, 1975). Actual experiences of violence and fear of violence serve to constrain women from living freely. Moreover, gender socialization is a physical embodiment—a physical reality (McCaughey, 1997). Gendered ideologies about what it means to be masculine or feminine become engrained unconsciously into the body. Gender-specific bodily gestures, habits, and postures are learned habits that

become a part of a person's second nature (Brownmiller, 1975; McCaughey, 1997). Because the embodiment of gender is continuously rehearsed and reinforced through socialization, this embodiment is often mistaken as innate or natural. In ESD classes, this embodiment of gender ideology is interrupted. (McCaughey, 1997, p. 90).

It is critical to consider more than gender identity when examining the social constructions that contribute to sexual violence. An intersectional perspective considers the indivisible connectedness of social identities such as race, gender, and class that cannot be viewed in isolation (Crenshaw, 1991; Yuval-Davis, 2006). Multiple marginalized social identities based on gender and race, for example, overlap to create unique experiences with and vulnerabilities to violence (Crenshaw, 1991). When feminist discourse or intervention fails to include an intersectional perspective, it can reproduce or reinforce the subordination of women based on their multiple marginalized identities. ESD incorporates knowledge-building about and strategies for addressing multiple marginalized identities and their unique vulnerabilities to violence.

Empowerment Theory

A second theory informing this study is empowerment theory. Conceptualizations of "empowerment" vary among scholars (Turner & Maschi, 2015). Some define empowerment as an increase in personal, interpersonal, and political power among oppressed and marginalized populations, with the goal of achieving individual and collective transformation (Lee, 2001). Other scholars conceptualize empowerment as a process wherein a person first identifies the nature of oppression they are experiencing, with a continual increase in awareness and consciousness leading to individual and/or

collective transformation (Gutierrez, 1990; Gutierrez & Lewis, 1999). Consistent across definitions is the fundamental aim to help people take more control over their lives (AlMaseb & Julia, 2007).

Empowerment theory is congruent with the tenets of feminist theory and the field of social work. Feminist social work theorists and practitioners have adopted an empowerment approach that aims to elevate individuals' sense of worth and strength, and to enhance their individual capacity to deal with life obstacles and problems (Handy & Kassam, 2006). Both empowerment and feminist theories emphasize the importance of increasing personal, interpersonal, and political power of marginalized populations, and in doing so, engage in collective action as a community to improve their circumstances (Freire, 1973; Gutierrez, 1990).

Aligning with empowerment theory, a fundamental aim of ESD is to increase participants' personal, interpersonal, and political power by amplifying their sense of personal strength, power, and worth. ESD aims to increase participants' understanding about the nature of their individual experiences of gendered oppression and the social structures that allow inequities to persist. Concurrently, ESD aims to educate participants about a wide range of skills that can be applied in various situations to increase their sense of personal safety and power. Building this toolbox of skills, participants are intended to feel equipped to address a continuum of unwanted behaviors and to assert their own boundaries and needs. Additionally, the consciousness raising that occurs among ESD participants ideally transforms the way women view their bodies and fosters the skills and motivation needed for collective action geared toward social change.

Social Cognitive Theory

According to SCT, behavior acquisition is determined by a dynamic interaction of cognitive processes, environmental influences, and supporting behavioral factors (Bandura, 2001). The ESD intervention is structured to incorporate these SCT factors by: (a) providing a supportive, trauma-informed environment that facilitates opportunities to engage in the targeted behaviors and that challenges normative beliefs about sex and gender (*environmental influences*); (b) teaching verbal and physical skills and providing the support for participants to perform the skills (*behavioral factors*); and (c) increasing participants' knowledge (e.g., statistics about violence against women, risk perception, the continuum of violence, etc.), and having participants rehearse the skills (e.g., body language, verbal skills, and physical skills) to build self-efficacy and reduce psychological barriers to engaging in assertive behaviors and protecting themselves (*cognitive influences*) (Bandura, 2001; Hollander, 2018a).

Course Components & Targeted Outcomes

ESD programs typically incorporate a range of knowledge and skill building strategies. Although the components may vary based on the length of the program, ESD courses tend to include educational components such as discussions of risk factors for sexual violence and detection of risky behaviors/situations from potential perpetrators, identification of psychological and emotional barriers to resistance, and information about the sexual violence continuum. Another component includes activities designed to promote awareness, boundary setting, sexual autonomy, and effective verbal and physical strategies for resistance. Many activities incorporate role-play scenarios, so students

practice applying skills in situations that are relevant to their social identity and current environment. Physical skills typically include practice striking and kicking targets (e.g., target pads, padded attackers) and practice releasing from grabs, holds, and pins (i.e., when someone is sitting or lying on top of you to pin you down) with a partner. Particularly with the college courses, instructors will assign homework activities or reflection assignments, so students continue practicing or reflecting on the course material. In some cases, the courses end with a culminating event with each student breaking a board or applying defensive skills with a padded attacker in a scenario students tailor based on their own fears or past experiences. Although padded attackers are a staple component for some programs, such as Impact International, other programs such as Wendo, do not include this element for various philosophical and/or practical reasons.

ESD targets multiple learning outcomes. For example, ESD aims to increase participants' knowledge about sexual assault and improve participants' ability to perceive and assess risk (Hollander, 2018a). ESD educates participants about normative beliefs surrounding gender and how these normative beliefs relate to vulnerability and oppression (Hollander, 2001; Hollander, 2018a; McCaughey, 1997; Thompson, 2014). Additional targeted outcomes include a reduction of negative attitudes about assault and victims (e.g., reduced stigma of survivors), the ability to attribute blame for an assault solely on the perpetrator, and increased awareness about one's own psychological barriers to engaging in assertive and protective behaviors (Hollander, 2018a; Nurius & Norris, 1996; Thompson, 2014). Moreover, ESD programs aim for participants to have an

increased awareness about body language (and a shift in one's body language), increased confidence in their ability to engage in boundary setting, decreased fear of experiencing sexual assault, and increased confidence in their ability to engage in assertive verbal and physical skills (Gidycz et al., 2015; Hollander, 2018a; McCaughey, 1997; Orchowski et al., 2008; Thompson, 2014; Weitlauf et al., 2000).

Outcomes Associated with ESD

Experimental research has only recently demonstrated evidence of definitively reducing rates of sexual assault victimization; college women who were enrolled in the Enhanced Assess, Acknowledge, Act (EAAA) sexual assault resistance education program had a 50% reduced risk of sexual assault victimization at a one-year and two-year follow-up period, compared to college women in the treatment-as-usual group who received educational brochures about sexual assault (Senn et al., 2013; Senn et al., 2015).

Other quasi-experimental studies have also indicated a reduced risk of sexual assault victimization along with other positive outcomes for students who have participated in empowerment-based self-defense program. In her 2018 review article summarizing the state of the field, Hollander (2018b) reports the many positive outcomes scholars have found to be associated with ESD. In addition to decreasing risk of sexual assault, studies suggest that participation in ESD leads to an increase in assertiveness, self-defense self-efficacy, physical self-efficacy, self-confidence, disclosure of abuse, knowledge of effective self-defense strategies, and ability to identify abusive behavior and risky situations. It also contributes to a reduction in fear of violence, avoidance

behaviors, PTSD symptoms, self-blame for past experiences of victimization, endorsement of rape myths, and self-silencing (Hollander, 2018b).

Despite these encouraging findings, additional research is needed to fully understand the effects of ESD and to understand how and why the intervention yields positive outcomes. For example, only one report to date has explored how and why ESD may be successful in producing positive post-intervention outcomes (Senn et al., 2021). Additional outcome studies about other ESD programs, outcome studies with diverse populations (i.e., beyond the college student population), and replication and implementation studies, are needed to advance the scholarship in this field, promote program adoption, and ultimately reduce rates of sexual assault victimization.

Measurement Gaps in ESD Research

Recently, scholars have drawn attention to the measures used in ESD research. Hollander (2014) identified a need for a comprehensive set of measures that could assess the many hypothesized outcomes associated with ESD, suggesting that existing measures are not yet comprehensive. Similarly, Senn et al., (2020) called for additional measures that capture the “domains key to women’s resistance to sexual violence” (Senn et al., 2021, p. 13).

Scholars have also made note of specific measures that need improvement. Senn et al. (2021) called for improvements to several specific measures that have known limitations. The perception of personal risk is an important construct to measure because it measures the respondent’s ability to detect risk. Currently, the best available option for measuring this construct is a single-item measure. Having used the single-item measure,

Senn and colleagues reported significant findings from their study, but they also pointed out that the measure is imperfect (Senn et al., 2021). Consequently, these scholars have called for a multi-item measure for perception of personal risk that has strong psychometric properties (Senn et al., 2021).

The ESD literature points to the need for new measures to capture the breadth of potential intervention outcomes and the need for improvement to some of the existing measures. ESD is a theoretically-informed intervention, and determinations about intervention outcomes to measure can be made by referencing theoretical frameworks and evidence from prior research (Norris et al., 2018). DeVellis (2017), however, asserts that understanding the perceptions and experiences of the target population is critical to ensuring that the perceptions of participants and the theoretical constructs align.

Given that scholars have not yet fully ascertained how or why ESD works to reduce risk of sexual assault, there is also a need for exploring the perspectives of students and instructors to determine what outcomes are most critical. Therefore, the goal of this current study is to identify the breadth of intervention outcomes that ESD instructors and students perceive to be most important. The study seeks to answer the research question: what do ESD instructors and students perceive to be the most important outcomes associated with participation in an ESD course? Understanding the perspectives of ESD instructors and students will allow for the exploration of the alignment of theoretical constructs and stakeholders' perspectives; and, understanding these perspectives can also help to determine which constructs should be included and measured in future ESD research.

Methods

Study Design: ESD Instructors

A qualitative case-study design was used to answer the research question in this study. Case study methodology is distinct from other qualitative approaches in that it focuses acutely on a “bounded system,” such as an individual, program, process, institution, or relationship (Jones et al., 2006, p. 53). Case study methodology was applied in this study because this qualitative approach is most appropriate when research questions aim to understand how or why a phenomenon, such as a program or process, works in a real-life context (Yin, 1994). A case study approach to qualitative research is unique in that the focus is on particular situations, events, programs, or phenomenon (Merriam, 1998). In addition to being profusely descriptive about the phenomenon of interest, results of a case study are intended to identify potential problem-solving solutions and to inform decisions about ways forward (Merriam, 1998).

Sample: ESD Instructors

The first component of this study included primary data collection using qualitative case study methodology. The goal of this portion of the study was to determine ESD instructors’ perceptions about key behavioral and psycho-social outcomes associated with ESD. To achieve this aim, individual interviews were conducted with ESD instructors.

Non-probability, purposive sampling methods—including criterion sampling and snowball sampling—were used to identify and recruit the study sample. When using criterion sampling, participants are selected based on a predetermined set of

characteristics (i.e., criteria) so individuals who are particularly knowledgeable and/or have substantial experiences with the phenomenon of interest can provide rich data and information (Creswell & Plano Clark, 2017; Patton, 2002). Criterion sampling enhances the likelihood of including participants who may be more willing to engage as a study participant and who have the knowledge and experience to articulate and reflect appropriately about the phenomenon of interest (Palinkas et al., 2015). The sample population for the current study includes ESD instructors who have been teaching for at least one full year. Any self-defense instructor who teaches a curriculum consistent with ESD, and who has taught for at least one year, was eligible to participate in the study. Snowball sampling, another purposive sampling strategy, was used to identify additional participants. Snowball sampling is a method of sampling that involves asking participants in the study to recommend participants who match the study sample criteria (Patton, 2002). Snowball sampling is particularly useful for recruiting individuals who otherwise may not be identified, or who would be less likely to participate without a referral from someone within their own network (Padgett, 2017).

Data Collection: ESD Instructors

Recruitment of study participants involved multiple methods. One prominent ESD organization, the National Women's Martial Arts Federation (NWMAF) agreed to distribute a recruitment email that described the purpose of the study and explained details about what participation in the study would entail. NWMAF implements rigorous ESD instructor trainings, certifies instructors in ESD, and maintains a listserv of active ESD instructors. The recruitment email included an invitation for recipients of the email

to share the study information with other instructors who might not have received the recruitment email through the listserv. Additionally, researchers involved in the Empowerment Self-Defense Research Consortium, many of whom have years of experience with ESD instruction, were invited to share the recruitment email with colleagues who were eligible for the study but may not have received the recruitment email via the organizations' listservs.

The researcher's contact information was included in the recruitment emails, so all interested instructors were able to contact the researcher directly. When corresponding with instructors, the researcher shared detailed information about the project, answered questions, and offered to schedule an interview that could occur over the telephone or videoconferencing depending on the participant's preference and needs. All participants opted to use videoconferencing, which was conducted using Zoom (Zoom Video Communications, Inc., 2021). Zoom is a cloud-based videoconferencing service with a feature to securely record sessions (Zoom Video Communications, Inc., 2016), and is recognized as a suitable tool for qualitative research data collection (Archibald et al., 2019). Prior to the interview, the researcher emailed the participant a form to review about informed consent to participate in this research study. At the time of the scheduled interview, the researcher reviewed the content in the informed consent form, answered any remaining questions, and obtained verbal consent from the participant.

A semi-structured interview guide with closed- and open-ended questions was used to conduct the interview (see Appendix A for interview items). Closed-ended items included demographic questions to obtain descriptive background information about the

research participants. Open-ended items were designed to elicit robust and detailed descriptions from the participants about their experiences teaching ESD and their perceptions about important outcomes associated with ESD. Sample interview questions included, “What do you think are the most important outcomes associated with participation in ESD?”, “Which components of an ESD course do you believe are most essential?”, and “What do you hope that your students will take away from their participation in your class?”

The researcher conducted 16 semi-structured interviews. The interviews lasted between 45 and 109 minutes, with an average interview length of 76 minutes. The interviews were audio recorded through Zoom. Although transcripts of each interview were generated through Zoom, the researcher listened to each recording multiple times to clean the data and to produce accurate, verbatim transcripts of the interviews. One of the interview recordings did not produce a transcript, so this recording was transcribed verbatim by a professional transcription company. When each interview had concluded, the researcher engaged in reflexive journaling (Ortlipp, 2008) to capture initial impressions and, if relevant, to record potential researcher biases. If during the interview the researcher identified any notable presentation of, or changes in, vocal intonations and body language throughout the interview, this was also recorded in the reflexive journaling. Participants did not receive an incentive for participation. Participant recruitment and interviews continued until data saturation (Fusch & Ness, 2015; Guest et al., 2006) was achieved and it was apparent that no new content was emerging from the interviews.

Study Design: Secondary Data

Secondary data were used to answer the second research aim, which was to determine the primary outcomes that ESD participants found to be most important after participation in an ESD course and at a one-year follow-up period. Recruitment and retention of study participants for intervention research can be time intensive and expensive, particularly when data are collected over a long follow-up period (Fraser et al., 2009). Few qualitative studies have examined ESD outcomes that were sustained beyond the initial post-intervention period; qualitative studies have more commonly explored participant outcomes as reported in the hours, days, or weeks after the intervention ended. A secondary data set from Dr. Jocelyn Hollander was used for this portion of the study because it allowed for comparison of results across a longer follow-up period from post-intervention to 12 months and across two study groups, college students and community participants.

The original data were collected as part of two quasi-experimental studies designed to (a) further understand the long-term outcomes associated with ESD, and (b) examine the outcomes of ESD among a college student population and an adult community population (Hollander, 2020). Both studies were approved by the University of Oregon Institutional Internal Review Board, and participants in both studies provided informed consent to participate in the research studies. The secondary data sets include responses from ESD participants who completed either a 9-hour community-based ESD course or a 30-hour, credit-bearing college-level course in the Pacific Northwest region of the United States. Participants completed surveys administered at three timepoints:

pre-intervention, post-intervention, and at the one-year follow-up. The secondary data used in the analyses of this current study came from a sub-population of participants from these two larger quasi-experimental studies; the comparison groups for those two studies were composed of participants who did not complete an ESD course, but only participants from the intervention groups were included in the current study.

Sample: ESD College and Adult Community Students

The sample population was composed of participants from two distinct ESD courses. One group was comprised of college students who completed an ESD course at a state university in the Pacific Northwest (Hollander 2004, 2014, 2015). The second group was comprised of adult community member participants who completed a community-sponsored ESD course (Hollander & Cunningham, 2020). Although the two courses varied in their length and population, both courses contained similar content—the courses were consistent with feminist, empowerment self-defense classes as described earlier (Hollander 2004, 2014, 2015; Hollander & Cunningham, 2020). The university course met for three hours per week for 10 weeks, and the course was taught by a female instructor with over 20 years of teaching experience (Hollander, 2004, 2014, 2015). Participants included students enrolled in a self-defense course offered through a Women's and Gender Studies program at a state university in the Pacific Northwest. The community course was implemented across three weeks, with each session occurring once per week for three hours. The course was taught by a team of volunteers associated with and trained by a local organization that delivered self-defense and personal safety classes for women and girls in the community.

Data Collection: ESD College and Community Students

University Course

Students enrolled in the credit-bearing university self-defense course were eligible to participate in the study, which took place in the “early 2000s” (Hollander, personal correspondence, June 26, 2020). During the recruitment stage, the PI shared with students that the goal of the study was “to understand how taking a self-defense class affects women’s lives” (Hollander, 2014, p. 256). Students who chose to participate in the study received a \$10 USD incentive after each survey that they completed. Pre- and post-test surveys were administered at the beginning and end of the term, and a follow-up survey was administered one year after the term ended. Both surveys were self-administered, and participants had the option to complete the survey using a hard copy or by completing the survey online. The data used in the current study included demographic data and the open-ended responses to a specific survey item (i.e., what was the most important thing you learned in the ESD course) from the post-test and one-year follow-up survey.

Community Course

The second group was comprised of adult women who completed an ESD course offered to members of the community. The course was free to participants and was delivered at multiple locations across a major metropolitan area in the Pacific Northwest. The courses were taught by a white cisgender woman with self-defense instructor certification from the National Women’s Martial Arts Federation. All adult women enrolled in the course were eligible to participate in the study, which was conducted in the “mid 2010s” (Hollander, personal correspondence, June 26, 2020). Similar to the

university course, the surveys were self-administered, and participants had the option to complete a hard copy of the survey or complete the survey online. Pre- and post-test surveys were administered at the beginning and end of the course, and a follow-up survey was administered one year after the course had ended. The community member participants who completed the full set of surveys received a \$25 incentive. The current study analyzed responses to survey items from the post-test and the one-year follow-up surveys were analyzed: “What is the most important thing you learned in the self-defense class?” and “It has now been a year since you completed the self-defense class. Looking back, what is the most important thing you learned in that class?” The same questions were used for both community and college students.

Data Analysis

Thematic analysis methodology and descriptive statistics were used to systematically analyze the qualitative data. Descriptive statistics using Microsoft Excel software were used to analyze the demographic information and to determine the characteristics of the study populations. The populations were described according to gender, age, race, and ethnicity, which are categories that align with the intersectionality framework guiding the study. The mean, range, and standard deviations are reported for each category.

The qualitative data were analyzed using reflexive thematic analysis, which was facilitated through the use of NVivo software (QSR International Pty Ltd, 2020). Reflexive thematic analysis is a qualitative approach that provides a rich and complex understanding of qualitative data (Braun & Clarke, 2019; Nowell et al., 2017). Nowell

and colleagues' (2017) six phase process for rigorous thematic analysis—described here linearly but applied as an iterative and reflexive process—was used to analyze the data while also maximizing trustworthiness of study results. These phases include: (1) familiarization with the data, (2) development of initial codes, (3) identification of themes, (4) review of themes, (5) defining themes, and (6) reporting the analysis and results using robust descriptions of procedures and context, with each phase containing strategies for maximizing trustworthiness of results (Nowell et al., 2017).

Although they resulted in different coding structures and codebooks, the analysis procedures for the ESD instructor and ESD student data were very similar and are therefore described in tandem. The analysis began with the researcher becoming acutely familiar with the data in multiple ways (Nowell et al., 2017). The researcher's familiarity with the ESD instructor data evolved throughout the data collection and data analyses stages of the study. Familiarity began with the facilitation of the ESD instructor interviews, which were recorded and transcribed. Next, the researcher reviewed the recordings of each interview multiple times while cleaning the transcripts generated by Zoom. The researcher wrote and reviewed all notes recorded during the data collection stage. As suggested by Nowell et al., (2017), initial ideas about potential codes and themes were noted by the researcher in a running document. This document was used to maintain an audit trail of analytic decisions and notes from peer-debriefing and researcher triangulation meetings (Creswell & Miller, 2010; Lincoln & Guba, 1986; Padgett, 2017)

For the ESD student data, the researcher gained context of each study by talking with the studies' PI and reviewing the study materials, including the IRB protocols,

surveys, and codebooks describing the survey variables. The researcher compiled into a separate document the data (i.e., open-ended response to survey item about most important outcomes) that were to be analyzed, and then twice reviewed the compilation of participants' responses before moving to the next stage.

Next, the researcher created the initial coding structures for the primary and secondary data sets by refining the preliminary list of codes from phase one. The coding structures, or provisional codebooks, were created first in excel and included: code names, code definitions, example quotes, and inclusion and exclusion criteria for the codes. The inclusion criteria and exclusion criteria were included in the codebook to ensure that each code had explicit boundaries and could be distinguished from one another (Attride-Stirling, 2001). For any code that was conceptually similar to another code, the codebook also included information about differential coding to ensure that codes were consistently applied to text and not used interchangeably (Attride-Stirling, 2001). An "other" code was available to code content that was not yet identified and included in the codebook. NVivo software (QSR International Pty Ltd, 2020) was then used to continue the coding process with the imported codebooks.

To enable researcher triangulation, which maximizes credibility of study findings and reduces researcher bias (Lincoln & Guba, 1985), a second researcher served as an additional coder during the analysis procedures. The primary researcher began the coding process by applying codes from the provisional codebooks to segments of text in both sets of data. After coding three interview transcripts and the post-test survey responses, the primary researcher shared the deidentified data and the codebooks with a second

coder who applied the codes to the same pieces of data. The two researchers clarified code names and definitions, discussed discrepancies in coding, and determined whether the codebook was exhaustive. After resolving inconsistencies and revising the codebooks as necessary (e.g., to add new codes, clarify code definitions), the researchers continued coding with the updated codebooks. The researchers repeated this process of coding portions of data and meeting to discuss the analysis until no new codes emerged. Between each meeting, the primary researcher compared coding results to ensure that both researchers were applying codes consistently. The primary researcher documented in the audit trail the analytical procedures and decisions, along with a rationale to justify analytic choices (Koch, 1994). As an example, a code name initially called “gender” was revised to “gender and intersectionality” to more accurately reflect the data, which most commonly discussed gender alongside other identities, such as race and SES.

Next, the researcher used an inductive process to review and sort codes into emergent themes. Verbatim statements were identified for each theme to ensure that the themes were well-supported by the data. This iterative process of reviewing, sorting, identifying, and organizing continued until an exhaustive list of themes were identified and defined. The researcher used peer debriefing with the second coder and with another content expert to ensure that all themes were logical and justified through the raw data.

Results

Participants: ESD Instructors

The sample for the ESD instructors (see Table 11) included 16 ESD instructors from the United States and Canada. Two participants did not disclose their age, but the

remaining 14 participants ranged in age from 32 to 74 years, with an average age of 57. Categories for gender, race, and sexuality were not predetermined, rather, the researcher asked participants how they would describe their identity in terms of race, gender identity, and sexual identity. One instructor whose teaching role was that of a “padded attacker,” identified as male, while the majority of the instructors ($n=15$) identified as female. ESD instructors identified as heterosexual or straight (38%), bisexual (19%), lesbian or gay (25%) or queer (12%), and one instructor did not disclose sexual identity. All 16 instructors had received some type of certification to teach women’s self-defense, and all instructors had at least one year of on-going or intermittent training that included an initial concentrated training period followed by an apprenticeship-like style of training and co-teaching. These instructors went on to teach, on average, for 24.5 years, and most were still teaching ESD courses at the time the interviews took place.

Table 11. Demographics of ESD Instructors

<i>Demographics of ESD Instructors (n=16)</i>		
	Mean	SD
Age (years)	57.21	12.59
Length of Interview (minutes)	76	15
Years Teaching	24.5	9.76
	Frequency	Percent
Gender		
Female	15	94%
Male	1	6%
Sexuality		
Bisexual	3	19%
Heterosexual/Straight	6	38%
Lesbian/Gay	4	25%

Queer	2	12%
Not disclosed	1	6%
Race		
Black	1	6%
White/Caucasian	15	94%
Education		
Master's Degree	7	44%
Bachelor's Degree	3	19%
Doctoral Degree	3	19%
High School/GED	2	12%

Themes: ESD Instructors

During the interviews, instructors named multiple learning outcomes they intended for their students to achieve through participation in an ESD course. Six salient themes emerged from these data and included: “Agency,” “Boundaries,” “Core Beliefs,” “Health and Healing,” “Somatic Experiences,” and “Gender and Intersectionality.” Additionally, each theme had two or more subthemes. The six themes are described here with supporting verbatim quotes from the participants. All of the instructor names are pseudonyms, and in most instances, distracting filler words (e.g., like, you know, um, etc.) and false starts have been removed from the quotes.

Theme 1: Agency

Drawing on multiple social models of agency, social work scholars conceptualize agency as the capacity of individuals to influence their life-course within a context mediated by available resources and social conditions in their environment (Parsell et al., 2017). Psychological theories similarly describe human agency “as a dynamic interplay

of a person influenced by their environment” (Parsell et al., 2017, p. 242). The theme “agency” similarly refers to students’ ability to initiate and sustain a course of action despite possible constraints caused by environmental, social, and political structures. ESD instructors aimed for their students to develop the capacity to engage in a particular course of action or inaction despite possible environmental, social, and political constraints. Instructors identified four dimensions of human agency specific to ESD, including “self-efficacy,” “enactment,” “self-determination,” and “safety vs. fear.”

Self-Efficacy. Universally, the instructors named self-efficacy as a critical outcome for ESD. Self-efficacy is defined as a person’s degree of confidence about their ability to perform a specific behavior (Bandura, 1997). Instructors described a critical goal for their students was for them to develop an increased sense of control over their own thoughts, behaviors, and choices. When asked about the most critical outcome associated with ESD, Abigail (16 years of teaching) answered, “I think overwhelmingly a sense of agency. That they get a say, both literally and figuratively, in their life and the shape of it, both in a single interaction and on a larger level.” Similarly, Emma (over 35 years of teaching) responded, “Efficacy—I can make things happen in the world. I can make somebody else move, or shut up, or change, or stop calling me ‘sweetie,’ or stop patting me on the butt or, you know, whatever it is. I can do it.” As Abigail and Emma illustrated, ESD instructors wanted their students to feel like *they* had control over the events in their lives, from the smaller scale, day-to-day interactions, to the larger scale life-events.

Enactment. Enactment refers to the extent to which an individual “implements a specific behavioral skill, cognitive strategy, or motivational state at the appropriate time and setting in his or her daily life” (Bellg et al., 2004, p. 449). Enactment extends beyond mere skill comprehension to include the capacity to put those skills into practice during daily life routines (Hankonen, 2020). The subtheme “enactment,” described the ability of students to apply in their own life the mental, verbal, and physical skills they were learning in the class. One instructor, Natalia (over 35 years of teaching) explained:

We are not teaching people, “If this happens, do this.” But it's like, here are these tools, and then creating opportunities for people to apply those tools in a whole variety of situations . . . not just learning them, but having some application . . . practicing scenarios and not just saying, “well, if this would happen, I would do something.” It's where you're in a scenario, and you have to say what you're going to say, or you have to do what you're going to do.

In this quote, Natalia describes how skills and techniques in ESD classes are not prescribed, dictated, or finite. Rather, instructors intend for their students to increase the breadth of options (mental, verbal, physical) they feel comfortable and confident applying in everyday situations that are specific to their individual set of circumstances and lived experiences.

Emma further explained the importance of having students practice the skills outside of the borders of the classroom. She stated:

In order to become empowered, that's a transformative thing to have happen. And it doesn't happen because I told you [that] you are smart or pretty. It happens with

intentionality. It happens with practice and putting into practice new behaviors...
like keeping your space on the sidewalk, your body language. It's everything.

Your awareness. Like go out in the real world and practice all of this.

As Emma had observed, a transformative experience could not occur when knowledge and skills were contained within the boundaries of the classroom. Rather, students needed to apply those skills in everyday life outside of the class, even when there were no existing threats of violence. Practical application could include being mindful and aware, using the entirety of the senses, adjusting body language to hold a stance or position on the sidewalk, rather than moving out of the way for an oncoming pedestrian/s, and other typical, day-to-day encounters or contexts.

Self-determination. In social work, self-determination refers to the right for individuals to determine their own paths (Segal et al., 2019), or the “capacity and right of individuals to affect the course of their lives” (Weick & Pope, 1988, p. 10). Self-determination theory describes the motivation behind choices people make without external influence and intervention (Ryan & Deci, 2000). According to the ESD instructors, a targeted outcome was to expand students’ repertoire of options and strategies for addressing a multitude of life situations—not only risky/life-threatening encounters, but everyday situations as well; and because of this enhanced repertoire, students could internalize the belief that they had the right to make their own decisions and pursue their own goals and desires—the right to self-determination. Svetlana, who had 35 years of teaching, stated:

What I heard from a lot of students had nothing to do with violence or self-defense. It was just, they came into their power in the world. One woman took a bike ride across the country and said I couldn't have done it without the class. I mean, she felt safer having some skills, but she also just believed in herself. Similarly, Natalia explained that one of her students “had always had this completely irrational fear of mice. And I mean really, like terrorized by mice. It was something that had made it difficult for her to even function. And after she took the [ESD] course, that was done. It was over—the terror.” Natalia illustrated an example of how ESD affected students not just in terms of responding to danger, but also in terms of feeling like, or perceiving, that they were in danger. Together, with the skills to recognize an existing threat and to respond to an existing threat, students expanded their established boundaries, both visible and invisible—geographic, psychological, behavioral. Their worlds expanded.

Safety vs. Fear. ESD instructors consistently discussed safety and fear in tandem as an integral outcome. It was their hope that after completing an ESD course, students would feel a sense of increased safety in the world while also feeling less fear. For example, Abigail intended for her students to “feel safer and more prepared for, rather than counting on—which no one does, but, rather than counting on—the world to be safe, and that is their only plan for a better future, that they have tools for what may happen rather than, again, either counting on things to go right or being completely helpless if they don't.” Abigail pointed to having the “tools” needed to feel in control of life, which she hoped would make students feel safer.

Theme 2: Boundaries

The second theme, “boundaries,” referred to the range of behaviors and outcomes associated with establishing, enforcing, and respecting personal boundaries. The behaviors and outcomes associated with boundaries included: “assertiveness,” “risk detection,” “non-verbal communication,” and “relationship quality.”

Assertiveness. Assertiveness has been defined as “the degree to which people speak out and stand up for their own interests when they are not perfectly aligned with others” (Ames et al., 2017, p. 1). Behavioral responses to conflict range across a spectrum, with avoidance or passivity on one end and aggression on the other (Ames et al., 2017). ESD instructors discussed assertiveness outcomes as consisting of a range of behaviors and beliefs associated with being able to establish and enforce boundaries. One such behavior included an increased ability and willingness to communicate verbal boundaries. Additional assertiveness behaviors included using a louder/stronger voice, speaking up, and interrupting unwanted behaviors.

I think that emphasis on verbal skills, keeping in mind that the physical self-efficacy leads to feelings of verbal self-efficacy, but that the most difficult part of self-defense. . . is just speaking up for yourself. I think women...can see themselves kicking a bad guy, more than they can see themselves saying “no” to the PTA who asked them to make cupcakes...we think saying "no" to a friend who's asking us to do something that we can't, don't have time for, we don't really want to do, that's riskier than the dark alley with the bad [guy]... So that verbal

self-defense, and the experience in the real world with verbal self-defense.

(Emma)

Another ESD instructor, Donna (35 years of teaching), stated, "We spend so much time thinking about the guy jumping out of the bushes when we really need to learn how to set boundaries at those lower levels. . . with more irritating people, and irritating behaviors." Donna's statement describes the need for learning to be assertive in everyday situations and not just in circumstantial moments that may feel more threatening but also occur less frequently.

Risk Detection. Risk detection, or the ability to recognize cues indicating threat of violence, is a critical antecedent to resisting sexual violence (Norris et al., 1999). This "risk detection" subtheme describes the ability to identify signs of risk across the continuum of violence and/or to know when boundaries are being crossed, especially when the boundary breach is subtle. Svetlana (35 years of teaching) emphasized that, "there's not enough of understanding how assailants work. There's not enough about if an assailant is not a stranger or is not an obvious assailant. Because that's the point. It's often subtle. The time when we have the best chance of ending something is when it's subtle." Svetlana highlights the nature of assailant behavior and emphasizes the need for risk detection as a necessary step in being able to respond with appropriate resistance strategies.

Nonverbal communication. Nonverbal communication refers to the multitude of ways that messages are conveyed to others through nonverbal means and can include myriad channels/platforms, such as eye contact, posture, facial expressions, gestures,

and the combination of these bodily signals in time and space (e.g., frequency of eye movements) (Giri, 2009). ESD instructors discussed nonverbal communication as one of the primary goals, and specifically assertive body language. Emma described an example about developing and projecting nonverbal communication:

And so we can change how a potential attacker sees us. . . Your head is up and the thought that's going through your head is, "if you f*ck with me, you're going to get hurt." You know, and it just comes like a bubble over your head, "you f*ck with me, you're gonna get hurt." And the guy sees us [and thinks], "Whoa. She looks like an old lady. But for some reason, I think if I f*ck with her, I'm going to get hurt". (Emma)

Sandy (24 years of teaching) similarly described the shift she notices in her students throughout a 10-week course after students have had a chance to learn and practice skills:

Halfway through, I start to see this transformative thing happening. . . like all of a sudden. . . they start standing up a little taller . . . there's just something that begins to happen. It's like they've stepped into themselves in a way. And I joke that I start to feel a little bit afraid of that.

Both Emma and Sandy described nonverbal communication and body language as a powerful tool for setting and projecting boundaries.

Relationship Quality. Quality of relationships exists on a continuum of unhealthy to healthy relationships, where healthy relationships are those with mutual respect, care, and nonviolence (Basile et al., 2016). Many instructors also aimed for their students to cultivate healthy relationships and improve the quality of existing

relationships as a result of the ESD course. Abigail wanted her students “to have healthier relationships, both intimate partner relationships and overall workplace family, friends” as a result of the ESD course. Mabel (33 years teaching) explained, “all the other secondary or more subtle aspects of the program have been woven in—it’s changed their relationships, sometimes, with their birth families. It’s changed their relationships with boyfriends or girlfriends or husbands.” These instructors indicate how practicing the repertoire of skills in an ESD course effects students’ ability to apply those skills in their relationships and, consequently, shift the relationship quality.

Theme 3: Core Beliefs

The third theme referred to outcomes related to core beliefs, which are one of three levels of cognition and refer to the foundational level of beliefs that we hold about ourselves, others, and the world—core beliefs tend to be absolute (Clark et al., 2000). Instructors explained a desire for their students to adopt or strengthen the core belief of self-worth.

Self-Worth. Crocker and Wolfe (2001) explain that “contingency of self-worth is a domain or category of outcomes on which a person has staked his or her self-esteem, so that person’s view of his or her value or worth depends on perceived successes or failures or adherence to self-standards in that domain” (p. 594). People create provisions for themselves that they must satisfy to believe they are a person of worth (2001). ESD instructors described an intended outcome of self-worth in which students could realize and internalize a sense of worthiness; they hoped that students would complete an ESD course knowing that they deserve, and have the right, to be treated with respect. Audra

(four years of teaching) explained, “self-worthiness is like, do I have even a right to be here? Do I have a right to be alive? And I think we assume all of us operate at a level where we believe that, but I find in my teaching, not everyone comes in with that belief.” Sophia (31 years of teaching) explained how the courses she taught intended to promote students’ sense of self-worth, “The underlying message that we work from is, ‘you and I are worth being treated with respect and dignity.’ ‘You and I are worth fighting for’ . . . what we are so intentionally cultivating and nurturing in women is that self-worth.” As Audra and Sophia point out, many women began ESD courses without a strong belief (or any belief) that they are worthy of being treated with respect or that they are worth fighting for, and their hope was that students would complete a course with the unwavering sense of self-worth.

Internalizing Values. Some instructors explained that acceptance and adoption of feminist values was necessary in order for students to be successful enacting the skills in their everyday life. In other words, the students needed to accept the core values conveyed through ESD (e.g., the right to be safe, to be free from violence, to own your power) before they could be successful enacting the skills in their everyday life. Mabel described the importance of internalizing particular values and beliefs before the practical skills learned in ESD could be useful: “I can show you how to break a nose in less than 10 seconds, but if you don’t believe in your capacity and its effectiveness, largely because . . . you’ve been taught not to see your own power, then it’s just a technique. [Our course is] so much more than that.” Alex provides additional context by stating, “I think that it depends very much on the degree to which people are ready to hear things. . .

so, one of the more challenging classes to teach or sort of category of classes to teach is a category of classes where people are not there on their own volition.” If students are not developmentally ready or willing to digest the material, it is unlikely they will achieve the desired outcomes of an ESD course.

Theme 4: Health and Healing

The fourth theme “health and healing” described the two primary outcomes associated with improved mental health and healing from previous harm, trauma, and/or victimization.

Mental Health. As described by WHO (2021), mental health is “a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community. Mental health is fundamental to our collective and individual ability as humans to think, emote, interact with each other, earn a living and enjoy life” (para. 2-3). Instructors indicated that an intended outcome of ESD was improved mental health and/or decreased symptoms of traumatic stress. This outcome was especially relevant to students who were also survivors of sexual violence. Describing the most important outcomes for her students, Claudia (26 years of teaching) stated, "Feeling safer in their bodies, feeling more powerful in their bodies, feeling like they could count on... their bodies, which is a big thing with people with PTSD is like, you just don't feel safe in your body. Specifically, if you've obviously experienced sexual trauma."

While most instructors discussed mental health in the context of students who were survivors, Abigail described an effort from her organization to offer ESD to direct service providers who support and provide care to survivors of GBV:

You know, there's so many things that affect people's longevity in this field [of victim services and violence prevention] . . . being under-resourced, underpaid, all those things. And we can't affect that, but the reality is, is that people who work at those centers take risks for the community, and it's the community's job to take care of them in that process and having that trauma response and not having hope for the future for themselves—all the things that we know trauma does—increases that burnout. We got grants to do self-defense work with providers for that reason, addressing both their trauma and vicarious trauma.

As Abigail explained, delivering courses to service providers was an effort to support their wellness and mental health in a field with high rates of secondary trauma and burnout, with the ultimate goal of minimizing burnout and maximizing workforce longevity.

Release of Shame and Victim Blame. Trauma-related shame is defined as “a negative evaluation of the self in the context of trauma with a painful affective experience, and a behavioral tendency to hide and withdraw from others to conceal one’s own perceived deficiencies” (Øktedalen et al., 2014, p. 604) and has been strongly associated with worsened mental health outcomes for survivors (DeCou et al., 2017). Victim blame describes the tendency to shift blame for an assault to the survivor and exonerating the perpetrator (Bieneck & Krahé, 2011; Stewart et al., 1996). Negative

reactions following a disclosure can contribute to exacerbated trauma symptoms (Ullman, 1996); and blaming the victim has been described as a negative reaction causing the most harm (Gravelin et al., 2019). For those students who are not survivors, victim blame is still problematic because it perpetuates harmful stereotypes about gender and sexual assault (Stewart et al., 1996).

Almost all of the instructors mentioned an outcome related to diminishing shame and victim-blame associated with sexual assault. Instructors indicated it was their hope, especially for students who are survivors, that ESD courses would alleviate shame associated with self-blame for past instances of sexual violence experiences. Svetlana explained, "another outcome is if students could walk out and release themselves from shame and blame." Sophia similarly said that she hoped her students would internalize and embrace the knowledge that "it is never our fault. No matter who it is, no matter who we are. It's never our fault if someone tries to hurt us." Recognizing that many of their students were likely to be survivors of sexual violence, instructors intended for their students to complete the course with a concrete understanding that perpetrators are solely responsible for committing acts of violence; the cause of violence was not something the survivor did or did not do.

Theme 5: Somatic Experiences

The fifth theme was "somatic experiences," which described physical, embodied experiences that transformed survivors' understanding of their bodies, and, in turn, affected how they moved through the world. Two somatic-related outcomes included "physical strength and power" and "downregulation."

Physical Strength and Power. A critical outcome that ESD instructors described was the opportunity for women to experience and realize their own physical strength and power. Emma explained, “It feels powerful to hit a bag. It feels powerful to break a board. Women have not experienced power,” meaning most women have not had the opportunity to experience the feeling of their own strength. Sophia, who stated, “we are stronger than the world wants us to believe,” points to gender socialization of women who tend to be positioned as weak. A consequence of this socialization is that women tend to underestimate or doubt their own strength, which Valerie (14 years of teaching) illustrated in the following quote:

Many women coming to class absolutely believe that there's no way in the world they could possibly win in a fight, that they don't have that in their body, that it's not there. [They think] they're too small, they're too weak. So actually, making contact with pads, seeing it, they see it with each other. When someone kicks a pad, it moves. That's them doing that. . . that's how they recognize and believe in their own physical power.

Emma explained how this realization of physical strength that develops in an ESD course can serve as a mechanism to empower women.

Actual women's self-defense should be like 80% verbal. It's just because verbal is the hardest to attain. But there's this relationship between physical and verbal—women are so much more willing to speak up after they've punched something, like, “Oh, I punched that board and it broke. Now I'm going to go home and tell

my husband to do the dishes.” There's a direct causal effect in my mind between those two things.

ESD courses enabled women to realize their physical strength and to believe that they had more physical power than they may have initially believed. Although most physical techniques in an ESD course relate to resisting an attack and disabling an attacker, ESD instructors overwhelmingly described their objectives around physical outcomes in the context of everyday behaviors, and not in the context of being able to physically defend themselves during an attack. That is, ESD facilitated women's understanding of their own physical strength, which translated into exerting power in their everyday life.

Downregulation. The second somatic-related outcome ESD instructors discussed was “downregulation,” the process of reducing or suppressing a response to stimuli (Eippert et al., 2007). Instructors aimed for their students to strengthen their ability to regulate and manage adrenaline and arousal responses. For example, Claudia identified one critical ESD outcome as developing “confidence that you can manage your own adrenaline.” She goes on to explain:

That's huge for people because that has a lot of parts. One, it is recognizing when you are getting activated, and then being able to use tools to manage that activation so you can stay present in situations and not become so overwhelmed that you go into a full trigger or, you know, can't manage the flood, basically. That's important with or without trauma. We all get activated. We all get flooded, especially now. So, you know, that's important to be able to monitor that. So, I think ESD does that very, very well.

Claudia explained how downregulation was an important outcome for everyone, both those with and without previous traumatic experiences. Natalia gave an example of the utility of downregulation and how it could present (appear) outside of the classroom:

I do think that's a very important outcome that people feel like they're better able to manage their adrenaline after an ESD class. And again, I've had reports like I can think of several different ones, but one was a student who was at a swimming pool and a child started to drown. And everyone, including the lifeguard, froze, and she just, she got everybody, using her voice, she broke everybody out of that freeze, and she, I think she jumped in and saved the child, but and . . . I heard of a nurse in an emergency room who said that her ability to handle emergencies was so much improved after taking an [ESD] class because she knew what to do with her adrenaline.

Learning to manage adrenaline and arousal was a central outcome that could be used in everyday life, and particularly for those with previous histories of trauma.

Theme 6: Gender and Intersectionality

The sixth theme was “gender and intersectionality” and encompassed subthemes about rethinking gender, undoing harmful gender stereotypes and behavior, reshaping gendered experiences, and engaging collectivity for social change around gender. These four subthemes were labeled as, “socialization,” “experiential connection,” “solidarity,” and “collective action.”

Socialization. Socialization is a cyclical process by which we learn “how to be” (Harro, 2000, p. 46), or in other words, learning to inhabit culturally determined norms

that corresponds with certain social identities. Gender, “the knowledge that establishes meaning for bodily difference” (Scott, 1988, p. 2) is manifested through the process of socialization. McCaughey (1997) illustrates the harms of traditional, binary gender socialization:

The reification of gender as natural, particularly men’s invulnerability and women’s helplessness—in popular media, in traditional rape and self-defense laws, and even in crime prevention advice for women and college rape prevention programs—is a central tenet of rape culture. Our society is a rape culture because sexual violence (including all gender-motivated assaults such as incest, rape, battery and murder) and the fear of violence are subtly accepted as the norm. . . what is usually taken for granted as a fact of nature—that a woman simply cannot physically challenge a man—is revealed as a social script which privileges men at the expense of women. (p. 7)

ESD instructors identified that a primary goal was to challenge and reshape the way students think about gender in the context of overlapping social identities. For example, Natalia wanted her students to “leave an [ESD] class really thinking about gender in a whole different way. Just really challenging the idea of certainly dichotomy and binary. The binary is—it’s socially constructed. We can create a new understanding of gender.” Madeleine (33 years of teaching) explained that she hoped her students would also realize how gender socialization affects women and how students interact with others in their daily life:

The belief that it's okay to be rude, and you don't have to be nice, all the time. I think that is so central. First of all, that saying “no,” is not necessarily rude, and that even if it was, it's okay to be rude. You don't have to be a “nice girl.” And that's just basically undoing gender socialization, which I think is really, really what it's about. It's undoing a lot of gender socialization or expectations that not everybody has, but mainstream culture certainly has those things.

Similarly, Mabel explained how gender socialization affects women's choices around personal safety and threat of harm:

I say to women, “So, we've been told that if we fight back, what bad things will happen?” Women from around the world—sexism is sexism anywhere in the world. Women will say, “We've been taught that if we fight back, we'll get hurt worse,” and I'd say, “Yes, and if that's not bad enough, what else have we been told about fighting back that we might end up—” and women will say, “dead.” We talk about the fact that society basically gives us three options. You can be assaulted, you can be beaten, or you can be killed. Those are incredibly powerful deterrents to fighting back.

As Mabel illustrated, almost universally women are socialized to believe that fighting back during an attack is not a safe option, and in fact, could exacerbate harm. Sasha (32 years of teaching) further explained this critical outcome of understanding gender socialization in the context of multiple-marginalized identities and responding to violence, “We also talk about . . . intersectionality of violence and identity and gender

and race and class, and how what might be safe for one person to do, may not be safe for another person to do. You always have a choice, and it's your choice."

Mabel shared how board breaking, a specific activity commonly used in ESD classes, facilitated this critical shift in conceptualizing gender:

It's not only how the world sees us. That's part of it, but it's how the world teaches us to see ourselves—that is the other half of it. . . I think that's where the strategy of breaking boards is brilliant because it gives women the opportunity to literally break through those stereotypes and all our experiences that hold us back, that keep us small, that stop us from believing in our own capacity. . . that sense of literally breaking through all the stereotypes that try to keep us in our place was very powerful—it was then, and it still is 30 years later.

The physical act of breaking a board at the end of an ESD course, as Mabel described, not only challenged stereotypes about women's physical power, but also served as a metaphor for challenging harmful, oppressive stereotypes that function to suppress women's personal, mental, and political power as well. Claudia described the utility of ESD courses for women who may not have difficulty being assertive or making bold choices in certain contexts, but may struggle in other environments to combat gender stereotypes and exert power:

I have been doing a lot of training for women in political circles . . . they're political candidates or officeholders, and yet, when you start talking about things like the ways we diminish our messages through all these fillers, like, "Can I ask a question?" Or, "This might sound silly, but . . ." All these light bulbs go off, and

[they're] saying, "Oh, right. So, dealing with the chair of my committee who is male, I do that. . . I do these accommodating things, and I take up way less space." So, particularly for people who are socialized female, there's a lot you can take from this stuff [ESD].

Claudia explained that even when women comfortably defy certain gender norms and expectations, the ability to exert personal power is not necessarily universally sustained across environmental and social spheres. Rather, women may encounter more or less challenges breaking gender expectations depending on the context or environment.

Synergistic Experiential Connection. A second aspect of gender and intersectionality included "synergistic experiential connection," which described the sense of shared community, connection, and synergy that fueled empowerment.

Madeleine explained, "I think there's something there—of like being together in the same room and having that collective energy. . . and the sound of all the women yelling together. There's something so powerful about that." Emma further elaborated:

There's more freedom and an honesty and a lack of inhibition that happens in a women-only space. And then there's that synergistic energy that makes the sum greater than the parts. You come out of a self-defense class and you're just like, f*ck! What just happened?! You know, it was huge, because you might have had 20 women, but we were just 50.

Madeleine and Emma illustrate how experiencing the collective energy of other women—sharing a physical space and engaging in synchronous activities like yelling—had a transformative and empowering effect on ESD students.

Solidarity. The third element of the gender and intersectionality theme referred to solidarity with other women—both classmates and women collectively. Hogan (2020) explains that solidarity is the mutual empathy among group members that emerges from recognizing a shared problem, and it can also refer to the collaborative efforts intended to reduce suffering and facilitate problem-solving. Whereas “experiential connection” referred to the synergy women experienced with their classmates during the ESD course, “solidarity” referred to a universal sense of unity and support for *all* women. Solidarity was a salient topic among the ESD instructors who hoped that ESD courses would provide students with shared experiences and mutual support for other women and would facilitate students’ development of compassion for other women and other marginalized populations.

Svetlana described an activity designed to facilitate students’ ability to internalize the belief that they, as individuals and collectively as women, have strength and power:

We did some pretty wild drills and one of them was about really getting to a place where you wanted to give up. It was just about being pulled across the floor, but it was about getting to a place where you wanted to give up. And then other people in the class would come and surround you and be cheering you on, so that you could internalize that voice. I feel teary about it. It was a very significant exercise.

Natalia further described the generation of mutual support for women as a critical ESD outcome. She explained, “It’s the collective voice, the cheering each other on, that many, many participants talk about—the power of being cheered, the power of applause.” While a first step was to experience this support in the classroom, Sophia described her

objective in having the solidarity—or as she put it, “profound compassion for other girls and women”—extend into everyday life:

One of the more inspiring pieces for me, and certainly a vision I have, is that we actually develop that sense of looking out for each other, having each other's backs, that when we're at a bar and we see a woman who clearly is intoxicated, maybe we'll be her new best friend. Maybe we'll chat her up in the washroom. Maybe we'll make sure she gets home safe.

These instructors emphasize the importance of reconceptualizing gender as it relates to interpersonal relationships and with women as a collective whole. They envision women as allies to each other demonstrating support and solidarity in the fight against oppression.

Collective Action. The final element of this theme was “collective action,” which refers to “any action that promotes the interests of one’s ingroup or is conducted in political solidarity” (Becker, 2012, p.19). ESD instructors discussed social change and engaging collectively with other women to shift the culture of sexism and misogyny, as a critical goal of their ESD courses. For example, Natalia stated that she aims for her students to “leave [the course] really with challenge to individualism. . . that they really understand that it's a collective voice that is going to contribute to change.” Mabel similarly explained, “we are living the revolution. We are living the transformation. We are living the paradigm that we are working to create, to change. We’re in it.” Both Natalia and Mabel illustrate the dual outcome of achieving change for the students individually, and also for women collectively.

Table 12. Demographics of ESD Students

<i>Demographic Table for ESD Students</i>				
	Community Sample (<i>n</i> =194)		College Sample (<i>n</i> =74)	
	Range	Mean (SD)	Range	Mean (SD)
Age (years)	18 - 77	36 (12)	18-37	22 (3)
	Frequency (%)		Frequency (%)	
Sexuality				
Bisexual	16 (8.2)		14 (18.9)	
Heterosexual/Straight	152 (78.4)		54 (73.0)	
Lesbian	9 (4.6)		6 (8.1)	
Other	17 (8.8)		0 (0.0)	
Race				
Biracial	6 (3.1)		3 (4.1)	
Black	6 (3.1)		0 (0.0)	
Native American	3 (1.5)		1 (1.4)	
Hispanic	7 (3.6)		2 (2.7)	
White, Hispanic	4 (2.1)		2 (2.7)	
Asian/Pacific Islander	10 (5.2)		5 (6.8))	
White Non-Hispanic	153 (78.9)		61 (82.4)	
Other	5 (2.6)		0 (0.0)	

Participants: ESD Students from the College & Community Courses

The total sample of ESD students included 268 participants, and sample demographics are reported in Table 2. The community class participants (*n* =194) ranged in age from 18 to 77 years, with an average age of 36 (SD=12). The college class participants (*n* = 74) ranged in age from 18-37 years, and the average age was 22 (SD=3). Both the community participants (78.4%) and college participants (73%) were

predominantly white. A majority of participants from both groups identified as heterosexual/straight, though 8.2% of the community participants and 18.9% of the college participants identified as bisexual.

Themes: ESD Students from the College & Community Courses

Although the ESD student data were analyzed separately from the ESD instructor data, it was apparent when comparing results that similar themes emerged from the ESD student data. There were six themes that emerged from the student data: Agency, Healing, Knowledge, Self-Efficacy, Self-Worth, and Solidarity. Because all six of these themes overlapped with a theme or subtheme from the ESD instructor data, the following report of ESD student results (i.e., themes) is considerably more concise. The definitions and descriptions are elaborated and can be reviewed in the previous section where ESD instructor themes are reported.

Theme 1: Agency

The first theme, “agency,” described participants’ overall sense of increased independence and freedom to move about the world. The theme also included a subtheme, “safety vs. fear.” The increased sense of being in control of their circumstances was a common response among ESD students. Many participants described this outcome in the context of being able to trust themselves and feeling that they could follow their instincts. For example, several students from the college course wrote at the one-year follow-up survey that the most important thing they learned was “to trust my intuition and to be alert,” and “to recognize and act on my

intuition/feelings/needs, not those of someone else,” and “knowing that I’m the only person in control of myself.”

Students from the community course responded with similar statements. For example, at the post-test, when describing the most important outcome from the course, some students wrote, “how powerful I can be, and what strikes/moves/techniques would be most powerful for me to use if I was in a dangerous situation,” “situations that I thought were hopeless are not,” and “realizing that I possess all the strength within me! I also was reminded to really trust my natural intuition.” These community students had similar responses at the one-year follow-up: “the feeling that I can now protect myself,” “I can be fierce, and it would be difficult to victimize me,” “I can handle situations,” and “I left every session feeling positive and strong, and even a year later I still feel the same way.” In sum, for many students, developing a sense of power and control over their life course was the most important outcome, and this outcome was sustained after one year from the date of course completion.

Safety vs. Fear. Students also reported a sense of feeling safer in the world while simultaneously feeling less fear, which had previously served to limit their behaviors. Several students described that for them, the most important outcome was a new belief that “we don’t need to be afraid” (community course, post-test), and knowledge about “how to make my life safe and find the balance of awareness of others without constantly being afraid of being attacked” (college course, one-year follow-up). Additional statements from the community course participants at the one-year follow up included: “having less fear about leaving the house,” “the peace of mind/security that I would know

what to do in a precarious situation (mostly yelling and eye gouging!),” “I feel less scared in general,” and “that my safety—or feeling of safety—is more important than a random (or not random) man's feelings.” These statements show how students felt generally less fearful and felt more in control of their safety.

Theme 2: Healing

The second theme was “healing,” and referred to outcomes associated with the healing process (from prior victimization) and with shifting attribution of blame to the perpetrator (not themselves).

Healing Process. Students found the ESD course to contribute to their healing from past experiences. For example, a college student at the one-year follow-up survey wrote that the most important lesson from the course was learning, “that when you have been a victim of violence it can take a long time to heal and there is nothing wrong with this.” A community student similarly wrote in the post-test, “Having an affirmation that will consistently challenge me to love on myself rather than putting myself down is going to be pretty essential in my healing process moving forward.” Additional responses included, “I learned how to take care of myself, both emotionally and physically,” “self-defense is about making choices and any survivor of sexual abuse/assault did the best she could at the time given our choices, including me,” and “hope.” These statements, and even the single word “hope” vividly illustrate the effect the course had on students’ ability to heal from past trauma.

Shift in Attribution of Blame. As part of their healing, many students indicated that ability to diminish their sense of self-blame and to shift the responsibility of an

assault to the perpetrator. In the post-test, college students felt the most important take-away from the course was “that the attacker is ALWAYS to blame, there is nothing more important than that,” “that it is not my responsibility if someone tries to hurt me,” and “it no longer has to do with the guilt I feel if I don't please everyone around me. That it is never my fault.” These outcomes were sustained over one year, with one college student responding, “the most important thing I learned is that an attack is not my fault and that I am worth protecting.” The community students also identified this outcome in their responses—at the one-year follow-up, one student responded: “the most important thing I learned is that abusers, or whoever is acting in an abusive manner, **CHOSE** to behave that way—nobody **MADE** them abuse someone, they chose to abuse. Victims are used to being made to feel that they cause someone to act a certain way. It's nice to know that people are responsible for their actions—especially when it comes to crimes against women.” Another student stated, “[the most important thing I learned is] to forgive myself for choosing to ‘do nothing’ instead of ‘fight back’. I never considered that not fighting back could be my survival mechanism. It eased a huge load to consider that I did what I felt I had to do in order to protect myself.” These responses illustrate the profound effect the course had on students who were able to shift the blame away from themselves and attribute responsibility to the perpetrator/s.

Theme 3: Knowledge

The third theme was “knowledge,” and referred to the acquisition of knowledge (e.g., prevalence statistics, gender socialization, risk detection) about sexual violence. A student from the community course shared at the one-year follow-up:

Taking on both the role of aggressor and victim in those exercises made it very clear to me just how much someone has to ignore and want to hurt another person in order to actually go through with an attack; that it can't really be an accident.

This realization has meant the world to me.

In their one-year follow-up survey, a college student stated, “I remember all of the strategies that men do to take advantage of you which helps me point out red flags.”

Theme 4: Self-Efficacy

The fourth theme, “self-efficacy,” includes six domains of self-efficacy that students perceived to increase or improve as a result of the ESD course and was the most important outcome from the course.

Assertiveness. Assertiveness referred to participants’ perception about their ability to assert themselves and included an understanding that it's "OKAY" to not be "nice" all of the time. A college student wrote, “The most important thing I have learned is that I can stand up for myself, and not be afraid to express my ideas and my feelings” (post-test), while a community student recognized “I have the right to remove niceties from my speech when my inner alarm starts to go off. I don't have to be so polite and phrase things as requests when I am uncomfortable” (post-test).

Body language. Another aspect of assertiveness was body language and learning to project confidence by using their body. At the one-year follow-up, a community student found it most important to have learned “how to exude confidence and assertion,” while a college student wrote, “the idea of your physical presentation (take up space).”

Student responses indicated that learning to have an assertive physical presence and project energy with their body was the most important lesson from their course.

Awareness. Self-efficacy also included awareness and the ability to be alert. At the one-year follow-up survey, for example, a community student found it most important to have learned “how to be always aware of my surroundings and to not make assumptions about my safety.”

Self-confidence. This code refers to self-efficacy more broadly. Many students indicated that they felt more confident in their abilities overall. For example, a college student revealed, “confidence that I can do things I was afraid to do before because I better know how to weigh my risks and am more prepared to handle an emergency should it happen” (one-year follow-up).

Self-Defense. Self-defense self-efficacy described students’ confidence in their ability to perform techniques or skills to defend themselves. One college student explained, “learning that I CAN fight off an attacker has been incredibly important for me” (post-test), and a community student found most important, “the self-defense moves—it gives me confidence that I can defend myself successfully” (one -ear follow-up)

Verbal Skills. The final domain of self-efficacy was feeling confident in the ability to use verbal techniques and skills. Common statements were similar to what these students wrote, “that my voice is my most powerful weapon” (college student, post-test) and “that it's ok to be loud, it's ok to tell someone to leave you alone” (community student, one-year follow-up).

Theme 5: Self-Worth

The fifth theme was “self-worth,” and referred to statements focused on developing or strengthening a sense of value or worth in themselves. Some college students wrote statements like, “that self-defense has to do with self-love and that I believe I am worth fighting for” (post-test) and “The most important thing I learned was that I am a very important and worthwhile person” (one-year follow-up). A community student similarly responded, “I AM strong, I AM worth it, I DO have a right to fight for my life” (post-test). Additional comments from college students included: “I am worth protecting,” “that I am important and that I deserve to take care of myself no matter what,” “the idea that I am worth protecting and that my opinions of others are much more important than their opinions of me,” and “my mantra is ‘I am worth defending’. By keeping this at the forefront of my mind I am more able to be assertive.” Similarly, the community students wrote statements such as, “I learned (that isn't exactly the right term - it's more like started to believe) that I have the right to remove niceties from my speech when my inner alarm starts to go off. I don't have to be so polite and phrase things as requests when I am uncomfortable,” “women’s strength is not just physical, but comes from our self-worth and confidence in ourselves,” and “to not feel bad as a woman being aggressive when it comes to boundaries and safety.”

Theme 6: Solidarity

The sixth theme was “solidarity,” and described students’ increased sense of support from their peers, and a paralleled diminished sense of being alone in their experiences of sexism, misogyny, and other forms of oppression. At the one-year follow-

up survey, students from the college course responded with statements such as, “The most important thing I learned was that all women have something in common. That women do not have to compete or be afraid of each other,” “the most important thing I learned was that other women experienced the same kind of frustration I experience regarding unsafe situations with men, being spoken to in subtle ways that are discomfoting and alienation towards other women,” and “I learned to appreciate all types of women and understand the different experiences that women face.” Students from the community course similarly wrote statements such as, “That we are dependent on each other to create a safe environment for all of us,” “I felt for each woman that was there. We all had our reasons for coming and it made me angry that we had to go to these lengths to protect ourselves where we should be able to run our lives in peace and not fear from strangers and the very ones we have loved,” and “the fact that everyone wanted to help. The group was all very supportive and lovely.” It was evident from these student responses that realizing the strength and power of other women, along with their own, helped to build a culture of support for women that extended outside of the classroom.

Discussion

The aim of this study was to identify the behavioral and psycho-social outcomes that ESD students and instructors perceive to be most essential as a result of participating in an ESD program. Results indicated that ESD instructors and students had congruent perceptions about the most important outcomes associated with ESD. Six themes emerged from the ESD instructor data: “Agency,” “Boundaries,” “Core Beliefs,” “Health and Healing,” “Somatic Experiences,” and “Gender and Intersectionality” with each

theme having at least two subthemes. ESD students reported fewer outcomes, but each of the eight themes that emerged from their data were also outcomes that had been named by ESD instructors. Results align with theoretical constructs and findings from prior studies illustrating the profound effects of ESD on women.

It is notable that there was consistency and congruency of findings over multiple time periods and across study groups. Findings from the ESD instructors and ESD students converged, as did the findings from the two distinct ESD student populations. All of the themes that emerged among the student data were present in the instructor data as well, suggesting that student outcomes are reflective of the important outcomes that instructors hope for their students to achieve.

Participants from the community and college courses, despite being demographically distinct and receiving different intervention doses, reported similar results; the six themes were salient for both groups. The results for both student groups remained constant from the post-test to the one-year follow-up survey, meaning the student responses at the one-year follow-up survey were consistent with the responses given immediately after the intervention concluded. This finding very likely indicates the degree of salience the intervention had for participants—the effect of the intervention was sustained over a one-year period for both intervention groups. One obstacle to repeated surveys is the potential for response bias (Solomon et al., 2009). Although the potential for social desirability bias cannot be entirely eliminated, administering the follow-up survey 12 months after the completion of the intervention minimized the likelihood that

students remembered how they had previously responded and reported the same response on account of social desirability (King & Bruner, 2000).

Although the salience of themes varied across the two samples of students, it is significant that both groups identified the same top six intervention outcomes that they perceived to be most important, and as previously noted, these outcomes aligned with the ESD instructor results. Students from the community course more frequently mentioned self-efficacy (verbal, assertiveness, and general) compared to the students in the college course. Self-efficacy was also extremely salient for college students; however, self-worth was most frequently reported at both time periods, with self-efficacy categories following closely behind. The reason for this discrepancy between college and community classes could be explained by several factors. A meta-analysis of longitudinal data examining self-esteem development across the life span (ages 4 to 94) found that self-esteem increases in early and middle childhood, remains constant during adolescence, and strongly increases in young adulthood with a continual increase throughout middle adulthood before declining in old age (Orth et al., 2018). This curvilinear pattern was held true when accounting for potential moderators of birth cohort, country, gender, and ethnicity (Orth et al., 2018). It is possible that the effect on self-esteem for younger adults and college students was in alignment with the developmental trajectory of self-esteem for young adults (Orth et al., 2018). Another reason for this discrepancy could be the variation in dosage (i.e., timing, frequency, and amount of time exposed to an intervention) (Voils et al., 2014). It is possible that the college students' longer exposure to the ESD material generated a greater shift in participants' self-worth. Additional

research is needed to determine the significance (if any) of these differences in self-esteem. As previously mentioned, very little is known about the optimal dosage of ESD and the differential outcomes associated with age, race, sexuality, and other potential moderating factors. As research in this area continues to expand, studies should consider exploring the role of self-esteem in achieving key intervention outcomes.

As a group, ESD instructors universally agreed on the most essential ESD outcomes—there were no negative cases, or instances when a participant’s perspectives deviated from the point of view of the other participants (Creswell & Miller, 2000). Perhaps surprisingly, no instructors indicated violence prevention as being one of the *most* important outcomes they hoped their students would take away from the course. It is likely, though, that these other outcomes ESD instructors identified are the pathways to prevention. For example, low assertiveness is a risk factor for victimization, so targeting increased assertiveness, which ESD instructors mentioned, is a logical strategy for preventing victimization.

Many of the outcomes ESD instructors identified are also supported by theory and evidence about ESD. Instructors identified as a primary goal “collective action” which aligns with defining characteristics of ESD (i.e., aspiring for social change), that distinguish it from other forms of self-defense (Hollander, 2018a). Scholars have suggested that the behavioral changes in ESD students may influence the behavior of others with whom they interact (Cahill, 2009; Gidycz & Dardis, 2014; Hollander 2103, 2016). Hollander posits, “when self-defense students set and enforce clearer interactional boundaries, for example, the men with whom they interact may behave differently, both

in the interaction in question and in subsequent interactions with other women” (2018, p. 7-8). ESD challenges existing paradigms about gender, violence, and power, and these shifting narratives may serve as a critical contribution to social change.

It is also notable that there was only one negative case among the student groups. Of the 273 respondents across the two groups, only one participant reported that she found the course to be unhelpful and that the perspectives on gender-based violence were “one-sided.” Participation in any and all of the surveys was optional, so it is possible that other students did find the intervention unhelpful and chose not to participate in the studies. However, the large number of respondents indicates that most students were positively impacted by the class. The students in the credit-bearing university course received a grade in the course. The informed consent to participate in research form explicitly stated that students’ participation in the study was optional and had no bearing on their grade, however, there is a slight possibility that some students felt compelled to participate in the study and/or to provide socially desirable responses to survey items.

As expected, the data from the ESD instructors were more robust compared to the student data because ESD instructors could respond to follow-up questions designed to elicit more detail. Similarly, the instructors were responding verbally, and questions were concentrated around one research question, whereas students were responding to open-ended items in a lengthy survey administered electronically, with items relating to a multitude of research questions. As is typical with open-ended survey items, the responses were brief and devoid of detailed and thorough description. Consequently, the instructors reported much more specificity during the interviews, so the resulting themes

were similarly more detailed and specific compared to the student data. Aside from the specificity and depth of the themes, students and instructors identified aligned outcomes.

Implications for Research

To date, very little research has examined the causal mechanisms that contribute to ESD intervention outcomes. A recent study was the first to report the relationship between primary and secondary mediators on ESD intervention effects (Senn et al., 2020). Using chained multiple mediator modeling, the authors established that three primary mediators—risk detection, self-defense self-efficacy, and willingness to use direct and forceful verbal and physical resistance strategies—worked together to fully mediate intervention effects of reduced sexual assault victimization (Senn et al., 2020). Their theoretical model explained 95% of the reduced rate of completed rape and 76% of the reduced rate of attempted rape. Three secondary mediators—perception of personal risk for sexual assault victimization, rape myth beliefs, and female precipitation (endorsement of victim-blaming myths placing blame for an assault on the survivor)—were also included in the theoretical model (Senn et al., 2020). These three secondary mediators “related to each other as predicted, rape myth acceptance and belief in female precipitation partially mediated the intervention’s effect on the perceptions of one’s own general risk, and perception of personal risk and rape myth acceptance mediated the intervention effect on risk detection” (p. 9). The authors explained, “the analysis strongly supported the indirect role of all three in achieving program improvements in sexual victimization through enhancing women’s ability to detect risk, one of the primary mediators” (p. 11).

Findings from this study have important implications for research, practice, theory, and policy. A current gap in the literature relates to intervention dosage. In the current study, the intervention doses were vastly different, yet the community course, with a 9-hour dose, had a lasting effect on participants, just as the college course, with a 30-hour dose, did for the college students. Next steps for future research should quantitatively examine and compare outcomes of smaller doses (e.g., 9 hours) and larger doses (30 hours).

Future research should also expand on the theme “somatic experiences.” Instructors described how physical skills and physical practice shifted the way that students experienced and managed their bodies, and these shifts in turn affected other domains of the students’ lives, like their ability to assert verbal boundaries. This finding aligns with what other scholars have noted about ESD in regard to shifting students’ perceptions about their body. As McCaughey (1995) stated, “self-defense enables us both to question the ways that we are defined, categorized, and embodied, and to define ourselves anew” (p. 8). Several researchers have suggested that the ability to set and maintain personal boundaries, and to use resistance strategies when boundaries are crossed, may be related at least in part to the changes in how women experience their bodies as a result of ESD (Hollander, 2004, 2014; Senn et al., 2021). This transformation in how women inhabit their physical bodies and feel in control of their physical selves warrants further research.

The racial diversity of the ESD students, both from the university and the community courses, and the instructor was extremely limited. The instructor and a

majority of participants were white, with very few racially diverse participants, so the voices of Black, indigenous, and people of color (BIPOC) were largely missing.

Hollander (2004) noted that the demographics of those who participated in the university course were consistent with the demographics of the university. ESD curricular content addresses intersectionality and presents the varied ways that racially diverse women experience violence (Crenshaw, 1991; Hollander, 2018), but to what extent is this information reaching BIPOC students? Further research should explore whether or not BIPOC college women are choosing to enroll or stay enrolled in ESD courses and what drives these decisions. Unique factors that either facilitate or prevent BIPOC women in the community from participating in ESD courses should also be explored.

ESD by definition strives for social change to promote gender equality and reduce sexual violence on a systemic level. Empowerment theory similarly aims for environmental change. Zimmerman (1995, 2000) situates empowerment within intrapersonal, interactional, and behavioral viewpoints. As Joseph (2019) explains, “the intrapersonal aspect of empowerment involves an individual’s self-awareness of his/her ability to be influential in sociopolitical contexts. The interactional component of empowerment allows an individual to interact with the external world by acquiring the necessary skills to become active in social and political activities. Finally, the behavioral sector of empowerment is the situation whereby an individual actually takes action to change social, economic, and political conditions in his/her environment by implementing the skills learned during the interactional process” (p. 146 - 147). To the best of my knowledge, no studies have evaluated whether ESD contributes to social

change outcomes. In addition to this strong theoretical support for social change, results from this current study indicate the salience of social change as a targeted outcome for ESD. Future research should advance understanding in this area.

Rapid adoption of effective sexual assault prevention programming is urgently needed worldwide, but research explaining ESD outcomes and its mechanisms that produce change is still emerging. To conduct the research that is needed to increase intervention implementation, scholars have called for improved measures for ESD research (e.g., Senn et al., 2021). Results from this study highlight the most critical outcomes that students and instructors associate with ESD. These outcomes are all supported by theories supporting ESD, including intersectional feminism, social cognitive theory, and empowerment theory. Therefore, results from this study indicate possible priority areas for measurement development or improvement.

Implications for Practice

Many scholars and practitioners have advocated for ESD to be adopted on college campuses to aid in sexual assault prevention efforts (e.g., McCaughey & Cermele, 2015). However, results from this study also suggest that ESD could be adopted on college campuses not just as a violence prevention strategy but also as a strategy to support student health and wellbeing. Findings from this study reinforce previous study findings suggesting that participation in ESD contributes to improved mental health and wellbeing outcomes for women survivors (CITE). As such, ESD may also be well-suited for adoption as an intervention for college student survivors. College students who experience sexual assault have an increased risk of experiencing negative health

outcomes and disengaging from academic life, which contributes to a decline in academic performance (Jordan et al., 2015). Social worker and college student affairs personnel might consider the adoption and intervention of ESD as an intervention to promote healing and improved wellbeing for survivors, and in doing so, could potentially help students improve academic engagement and achievement.

Most of the ESD research to date has focused on college students, and very little is known about how ESD affects other populations. The results from this study, and specifically the outcomes reported by the community ESD participants, suggest that ESD may be beneficial for additional populations beyond college-student women. With an emphasis on empowerment and intersectionality, ESD may be particularly useful to those women who are multiply marginalized.

The CDC calls for a comprehensive approach to sexual violence prevention (Basile et al., 2016), and results from this study indicate that comprehensive prevention strategies may greatly benefit from adopting ESD as part of this approach. Research continues to show the positive effects ESD has on college women. Given these promising outcomes, institutions of higher education may benefit from implementing ESD courses on their campuses as part of a comprehensive approach to sexual assault prevention.

Implications for Policy

Currently, federal legislation (e.g., Title IX, Campus SaVE Act) mandates that institutions of higher education implement sexual violence prevention education. The Campus Sexual Violence Elimination Act (SaVE), which is Section 304 of the Violence Against Women (VAWA) Reauthorization Act of 2013 (Pub. L. 113-4, 127 Stat. 54),

stipulates minimum standards about responding to and preventing sexual violence on college campuses receiving Title IX funding. Institutions are required to provide educational programming related to gender-based violence and positive bystander intervention. Results from this current study align with prior studies that have reported the positive effects of ESD. Findings from the college student participants, who reported favorable outcomes that were sustained over a one-year follow-up period, support the utility of ESD as a sexual violence prevention program that fulfils federal mandates. As institutions strive for compliance with these mandates, they may consider adopting educational policy that promotes adoption of ESD.

Limitations

There were limitations to this study that should be considered in the interpretation of the results and should inform future research. First, a majority of the instructor recruitment efforts occurred through the National Women's Martial Arts Federation, which has an established network of certified ESD instructors. It is likely that other women's self-defense programs do not brand themselves as ESD, yet they operate from the same theoretical framework and include the same content consistent with ESD. Recruitment of instructors whose programs are not labeled as ESD was extremely limited, and therefore, only three of the instructors who participated in the current study fit into this category. Therefore, the voices of these other instructors are largely absent from this current study. The interviews were conducted nine months into the Covid-19 pandemic, which also affected recruitment. Many instructors reported an interest in participating in the study but simply did not have the time.

The ESD courses for both student groups (community and college), although differing in dose and demographics, were delivered in the same region of the U.S., so a more diverse geographic region is needed for future research. The lack of substantial racial diversity across the samples limited the conclusions that could be drawn from the study results. It should also be noted that the data were collected in the early 2000s.

Despite these limitations, the findings from this study are significant for sexual violence prevention research. Few ESD studies have examined populations other than college students. The current study included a sample of community members who reported similar responses as the college students, suggesting that ESD may be well-suited for non-college populations (Hollander & Cunningham, 2020). This finding warrants additional research to determine quantitatively the outcomes associated with community samples.

Conclusion

Strategies that are effective in preventing sexual assault should be comprehensive in nature and accessible to all individuals. A comprehensive approach should not exclude programming for women given the prevalence of sexual assault victimization and severity of corresponding outcomes. Results from this study extend social work and sexual violence literature by further illuminating the transformative and salubrious effects of ESD. As research continues to support the positive outcomes associated with ESD, prevention scientists, practitioners, and policy makers can continue striving for significant gains in reducing sexual assault while promoting improved health and well-being for women worldwide.

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Chapter 4: Measures for Empowerment Self-Defense: Researcher Perspectives

Background

The sexual violence prevention field continues to search for comprehensive and effective strategies for reducing sexual assault. Comprehensive, theory-driven, and evidence-based approaches to sexual violence prevention are needed to reduce sexual violence in communities (Basile et al., 2016). Some recommended approaches include bystander-based intervention for all genders, empowerment-based resistance education for women, and social-norms and bystander education for males (Basile et al., 2016). One example of empowerment-based resistance education for women is Empowerment Self-Defense (ESD). ESD is informed by “feminist understandings of violence against women, with its analysis that violence both stems from and maintains gender inequality and the oppression of women” (Hollander, 2018, p. 3). ESD aims to provide an evidence-based, comprehensive set of strategies—designed to empower rather than restrict women—to address unwanted sexual behaviors across a continuum of violence (Hollander, 2016).

Unlike many prevention programs, ESD has been shown to significantly reduce risk of sexual assault victimization. A recent randomized-control trial (RCT) found that risk of sexual assault victimization was reduced by 50% for participants in an ESD intervention group, compared to participants receiving treatment as usual (i.e., brochures containing information about sexual assault risk reduction), (Senn et al., 2015, 2017). The ESD literature also suggests that ESD training may contribute to additional positive outcomes, some of which include a decrease in fear, avoidance

behaviors, and self-blame for past assaults (e.g., Hollander, 2004, 2015; Kelly & Sharp-Jeffs, 2016; Gidycz et al., 2006, 2015). Although the field is considered to be in its infancy, evidence points to ESD as a viable sexual violence prevention program.

Sexual violence prevention researchers recommend that after establishing intervention effectiveness, an important next step is to test the theory-based mechanisms that could explain the process of change (e.g., Hollander, 2018; Norris et al., 2018). To date, a majority of the ESD research has focused on determining whether ESD training is effective in reducing rates of completed and attempted sexual assault victimization. Studies typically have measured outcome indicators that are associated with behaviors or characteristics known to minimize risk of assault (e.g., self-efficacy). Studies have also measured actual rates of victimization to determine whether or not the intervention is effective. Little is known empirically about the process of change that occurs as a result of ESD. At the time of this writing, the author could find only one study that began to explore theoretically-supported mechanisms that influence intervention outcomes (see Senn et al., 2021). ESD research must continue to explore ESD program outcomes while also advancing the research about ESD must also seek to better understand the pathways to change.

Measurement in ESD

Measurement is a vital component of research. Accurate measures are a necessity for conducting valid and ethical research. Using measures that do not produce reliable or valid information is problematic in research because it jeopardizes the validity of conclusions that can be drawn from study outcomes and it poses ethical concerns (DeVellis, 2017). Gathering data using questionable measures may be exploitive of respondents' time and could lead to false study conclusions. Making policy, practice, and research decisions based on inaccurate conclusions can be

detrimental to individuals, communities, and the advancement of science (DeVellis, 2017).

ESD scholars have drawn attention to the limitations of measures used in the field, which create a major barrier to understanding ESD program effects and how those effects occur. Discussing limitations to existing research, Hollander (2018) suggested “there is a great need for...better outcome measures” (p. 11). Senn and colleagues (2020) similarly discussed the need for improved measures in the field, and specifically, a multi-item measure for sexual assault risk perception and optimism bias. “We join other researchers (e.g., Vitek et al, 2018) in also calling for improved measurement of risk detection” (Senn et al., 2021, p. 13).

Although some scholars have started to describe limitations to existing measures, the full scope of measurement issues and concerns have not yet been explored systematically. A comprehensive investigation of the quality of existing measures may be best achieved through a multi-faceted approach. In addition to evaluating the psychometric performance and characteristics of scales (see chapter 2 for a summary of measures), understanding perspectives from ESD researchers is also critical to understanding the quality, utility, strengths, and limitations of existing measures. ESD researchers should have a strong theoretical understanding of the intervention, and therefore, they are positioned to provide an informed perspective about the nature of measures that are available and that have been used in ESD research. A strong theoretical foundation is important because understanding the theoretical underpinnings of an intervention informs the selection of variables included in a study protocol.

In this current study, the theories guiding ESD include feminist theories, empowerment theory, and social cognitive theory (Figure 1 presents an overview of

key ESD intervention components and targeted outcomes). An intersectional feminist framework informs our understanding of intersecting identities (gender, race, and class) in the construction of people's unique vulnerabilities to and experiences with violence across social, political, and economic structures (Brownmiller, 1975; Crenshaw, 1991). ESD aims to increase women's awareness about the nature of gender-based violence, to increase their awareness about gendered norms and behaviors, and to contextualize the mental, verbal, and physical skills needed to interrupt violence effectively. Empowerment theory focuses on increasing multiple forms of power among marginalized populations with a goal of helping them apply their personal, interpersonal, and political power to engage in collective action (Freire, 1973; Gutierrez, 1990). Aligning with empowerment theory, a fundamental aim of ESD is to increase participants' personal, interpersonal, and political power by amplifying their sense of strength, power, and worth. Social cognitive theory (SCT) is the behavior change theory that supports the intervention strategies used in an ESD course. According to SCT, behavior acquisition is determined through a reciprocal interaction between cognitive processes, environmental influences, and supporting behavioral factors (Bandura, 2001). In an ESD course, participants learn in a supportive environment where targeted skills are modeled (*environmental influences*); they learn to perform and practice the mental, verbal, and physical skills (*behavioral factors*); and they learn relevant knowledge needed to promote self-efficacy and reduce psychological barriers to engaging in assertive behaviors (*cognitive influences*) (Bandura, 2001; Hollander, 2018a).

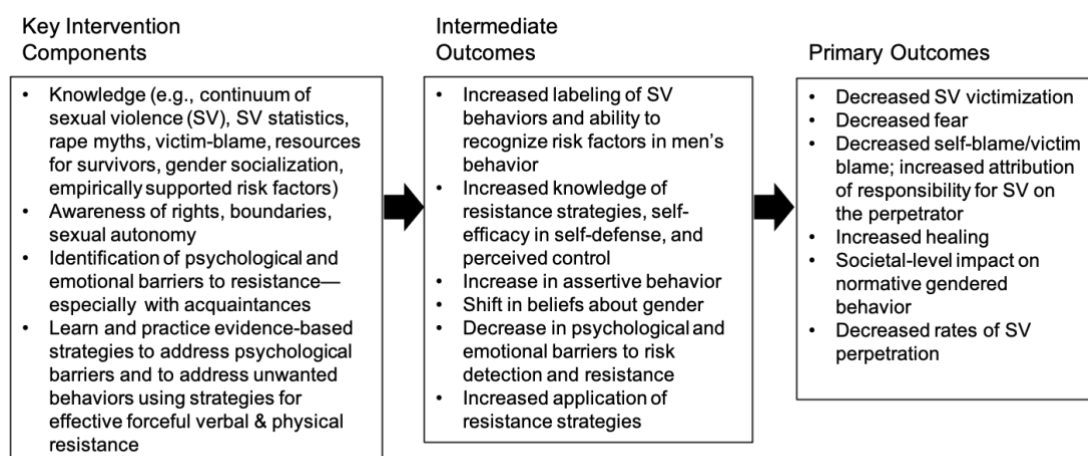


Figure informed by Hollander, 2018a; Gidycz et al., 2015; Rozee & Koss, 2001; Senn et al., 2018

Figure 3. ESD Intervention Components and Key Outcomes

This study intended to explore ESD researcher perspectives about and experiences with existing measures used in ESD research. This study aimed to answer the question: What are ESD researchers' experiences with and perspectives about measures used in ESD research?

Methods

Design

This study applied a qualitative case-study design, a methodology conducive to research studies seeking to optimize understanding of a specific unit of study, or case (Jones et al., 2006; Stake, 2008). A case study design was appropriate for this study because the focus was to gain experiential knowledge to cultivate an instructive understanding about a specific process (i.e., the process of using measurement scales in ESD intervention outcomes research) influenced by real-life social and political contexts (Stake, 2008; Yin, 1994).

Sample

The sample population included ESD researchers who had conducted intervention outcome research related to ESD. Eligibility criteria included prior

engagement with ESD intervention research. Purposive sampling methods were used to recruit the study sample. Criterion sampling, a method used to identify study participants based on a predetermined set of characteristics (Creswell & Plano Clark, 2017), maximized the likelihood of enrolling study participants with substantial knowledge about ESD research, thereby providing rich data (Creswell & Plano Clark, 2017; Patton, 2002). The second method of sampling was snowball sampling, which is another purposive sampling strategy that involved asking study participants to recommend for inclusion in the study individuals matching the study sample criteria (Patton, 2002).

Researchers who had published ESD outcome studies in peer-reviewed journals were included in the sampling frame and invited to participate in the study. Recruitment emails that described the purpose of the study and provided details about participation were sent to ten researchers. Because many of these known researchers were prominent scholars, they were invited to share information about the study with emerging scholars who might not have published in this area but had engaged in ESD outcome research.

The recruitment email included the researcher's contact information, and all individuals who were interested in participation were encouraged to contact the researcher. In a follow-up email, these interested participants received detailed information about the study and were invited to schedule an interview via telephone or videoconferencing depending on the participant's preference. Any individual who agreed to participate received a document with information about the study so they could provide verbal informed consent. At the time of the interview, the researcher again reviewed the information about the study and obtained verbal consent from the participant to engage in the study.

Data Collection

Participants were given the option to participate in the interview using the telephone or video-conferencing technology. All of the participants opted for the latter, so the interviews were conducted using Zoom (2021). The seven interviews lasted on average 67 minutes and were audio-recorded using the recording function on zoom. A semi-structured interview guide was used to ask both closed- and open-ended questions (see Appendix B). When developing the interview guide, items were reviewed by five sexual violence prevention scholars who provided feedback to refine interview questions and prompts. The first part of the interview focused on eliciting participants' perspectives and experiences with choosing and implementing the existing scales in their prior research studies. The interviews also aimed to gather perspectives about the outcome measures researchers perceived to be absent in the literature. Example interview questions included, "When conducting your research studies about ESD, how did you determine which measures to use in your research?", and "What was your experience like implementing the scales?" The interviews ended with closed-ended demographic questions. The audio-recorded interviews were then transcribed verbatim.

Data Analysis

The raw data were analyzed using reflexive thematic analysis methodology (Braun & Clarke, 2019). Thematic analysis methodology was appropriate for this study because it offered a systematic, rigorous strategy for qualitative case study analysis (Stake, 2008). The process outlined by Nowell and colleagues (2017) included an iterative six-phase process of data familiarization, code development and application, thematic development, theme review and triangulation, theme definitions,

and report preparation and production (Nowell et al., 2017). NVivo software (QSR International Pty Ltd, 2020) was used throughout the analysis process.

During the first phase, the researcher became acutely familiar with the raw data reading each transcript and reviewing notes written during and after the interviews (Nowell et al., 2017). Second, descriptive codes were applied to significant words, phrases, and statements in a first transcript. The initial codebook was generated from these first-round codes and contained the code names, definitions, exemplar quotes, and additional notes (MacQueen et al., 2018; Nowell et al., 2017). Next, the codebook was applied to a second transcript to ensure that codes were well-defined and new codes were captured. After multiple rounds of refining, the final codebook was applied to each transcript.

In phases three, four, and five, the researcher used an inductive process to sort codes into emergent themes, name the themes, and create definitions for each theme (Nowell et al., 2017). Verbatim statements from the transcripts were extracted and organized with each theme to ensure that the themes were well-supported by the raw data (MacQueen et al., 2018). This iterative process of theme creation continued until an exhaustive list of themes was identified and defined (Braun & Clarke, 2019).

Strategies to Address Rigor

To enhance the rigor of this qualitative research study, strategies recommended by qualitative methodologists were applied. These strategies include triangulation, reflexive memo writing, audit trail, and thick description (Creswell & Miller, 2010; Lincoln & Guba, 1986; Nowell et al., 2017). These activities occurred throughout the data collection and analyses phases to establish credibility and trustworthiness of the results (Creswell & Miller, 2010; Lincoln & Guba, 1986; Padgett, 2017). These methods were critical in order to maximize validity of

findings—the extent to which results accurately reflect the phenomenon or realities of the participants (Creswell & Miller, 2010).

Results

Participants

The sample included 7 researchers. All participants identified as white, cisgender females. Participants ranged in age from 37 to 74, and no participants identified as having a disability. Participants were affiliated with institutions of higher education and were from a variety of academic disciplines including Criminal Justice, Public Health, Psychology, Sociology, and spanned multiple disciplines. Interviews lasted on average 67 minutes (SD = 24 minutes).

Themes

Researchers shared a breadth of experiences and perspectives related to ESD measures. Three themes emerged from the data, and, consistent with case study methodologies (Merriam, 1998), the themes aligned very closely to the interview items presented to the participants during the interviews. The themes included: 1) Challenges with existing measures, 2) considerations for measurement utilization, and 3) Strengths. Direct quotes from participants are included when explaining themes. In most cases, fillers (e.g., like, um, you know) and false starts have been removed from quotes. Participant names were replaced with pseudonyms.

Challenges with Existing Measures

A majority of the interviews centered on challenges that researchers experienced with the existing measures. The major challenges related to measures for their target population, lack of comprehensiveness of scales, and scale characteristics.

Measures for Target Population. One of the primary concerns that researchers discussed was the absence of validated measures for specific age-groups

and populations. For adolescents, researchers additionally noted that frequently used measures of victimization may not be appropriate for younger people. Jade explained,

There's actually not a lot of standardized scales that have been tested and verified in that adolescent population, particularly that junior-high age population. . . anything related to sexual assault violence, there just isn't [anything], particularly when you get into the sexual assault piece . . . there's nothing, and there needs to be something. I do think it's really important to include people of that age in sexual assault programming because that is before most of them have experienced assault, and by the time people get to high school, a lot of people are starting to experience [it]. So, I think it's essential to have prevention on that level, which does require some measurement tools. So yeah, it's just so glaring.

Multiple researchers pointed out the sensitive nature of sexual assault measures for younger populations. Megan described her experience with young kids on a Native American reservation:

I think for some of them, they were really uncomfortable with just the nature of the questions, being in a group setting, knowing there are such high rates of child sexual abuse among Native kiddos, so some kids were like, “this is really weird.”

Describing the discomfort of the youth, Megan further elaborated “it wasn't until piloting [the survey] that we were like, oh, there's so much more giggling and wiggling.” This “giggle-fest problem,” as another researcher, Jade, called it, further emphasized that “they [survey items about sexual assault] are difficult questions for young people. . . how do you talk to eleven-, twelve-, thirteen-, fourteen-year-olds about these very sensitive topics in a thoughtful way?”

Another challenge with the younger age groups was concern about the relevance and conceptual understanding of terminology in survey items:

Just making sure conceptually that they really understand what you say. One of the things we learned in the piloting process was that for eleven- and twelve-year-olds, “boyfriend” meant like a boy you liked and not necessarily a boy you had a relationship with, which is very different than how we conceptualize it so, lots of concerns about how things are being conceptualized and what that means.

Another researcher expressed the unique challenge of working with a younger, Native population:

There's always concerns around validity, reliability, and cultural relevance. I think the one thing that was—there's one subscale around strangers, and I think we ran into some issues because I just don't know how relevant some of those questions were, like, I wish that we had done some work to really better understand how Native youth who live in highly rural, remote areas like that even conceptualize “strangers?” Like, what does that even mean? And so, you know, I just, I don't know how well that scale worked, and we didn't really see any movement on that either—on that subscale.

This researcher explained how younger populations, and especially those who are culturally diverse, may not conceptualize terminology in a survey the same way the scale developers intended, which could affect study results.

Researchers also expressed concern about the need for valid and reliable measurement tools for high-risk groups. Megan drew attention to this gap by presenting the question, “How can this work [ESD] potentially be used with other populations that we know are especially at high-risk in terms of trans men and men

who have sex with men, and then what kind of evaluation tools would be appropriate for that population?” Similarly, Laura explained, “we recognize we don't have a lot of good measures to use with youth with intellectual and developmental disabilities who may not understand some of the contexts, for example, on the Sexual Experiences Survey that we would usually use to evaluate incidents of sexual victimization.”

Lack of Comprehensiveness. Many researchers noted the complete absence of measures for certain outcome variables. For example, Madeleine explained a need to capture the sense of empowerment and transformation ESD participants experience:

I think [we need] something about the general sense of empowerment. Self-efficacy doesn't really capture all of it. I mean it's good, but it's so specific to concrete situations. But the sense of, like, feeling overall in your life more powerful, we need to capture that because that is huge...that sense of, “my life is completely different because I had this experience and I had this training” is something that I don't think is captured by the data, by the quantitative data at all, but it is such a theme in the interviews I've done, like, this is the most important class I ever took in my entire life. It changed my entire life...It's endless the things that people tell me, and they're so not related to issues of danger and safety and physical violence, so we desperately need something that will capture that in a way that people will believe even if they don't read all the qualitative data.

Madeleine discussed a need to quantitatively measure ESD outcomes related to a sense of empowerment, which is captured robustly in the qualitative research but is missing in the quantitative research.

Another need that researchers identified was a measure capable of assessing the progression of events related to an assault or an attempted assault:

Then when—if we're looking at assaults after taking a class, it would be really good to assess, not just what happened, but also the process or the progression of events. Because maybe somebody was assaulted but feels like they defended themselves really well and was able to reduce the severity of the assault. For example, I heard that a lot in my qualitative interviews. If somebody reported they had been assaulted after taking a class, that looks like a failure of the class. But actually, when speaking to people, that's not what I heard. It gets registered as a failure because it's an assault. It counts as an assault on the SES. (Madeleine)

This quote underscores the nuance related to measuring assaults and victimization. Some experiences that would currently be classified with existing measures as a failure, are in actuality experiences of success because the individual applied resistance strategies or responded in some way that reduced the severity of an attempted or completed assault or changed the outcome of their experience.

In a similar vein, a need was expressed for an instrument that could measure events that do not happen, or “near misses,” as some researchers called it:

We need to think about how to measure things that didn't happen like, I was in a situation, it was super uncomfortable, I set this boundary and what I feared was going to happen did not happen. That is really hard to figure out how to measure—the stuff that doesn't happen, but that's what we're changing here, you know, which makes it difficult to demonstrate the effects. Yeah, I didn't get assaulted, I didn't get harassed by my boss. I didn't have a really difficult relationship with my roommate or my friend or whatever. Those things are

hard to measure . . . but we need to have something. We need to have more awareness that these are important effects. Self-defense training isn't just about fighting off bad guys in bad situations. (Madeleine)

According to many researchers, measures do exist for some of the targeted outcomes, but the measures do not capture the complete scope of the construct/variable. For example, Madeleine pointed out that the commonly used self-defense self-efficacy scale is “completely about physical self-defense and not about verbal self-defense or anything else.” Because self-defense entails much more than physical skills, the scale does not fully measure the scope of self-defense self-efficacy. Another scale perceived to be incomplete in context was the silencing of the self scale (Jack & Dill, 1992):

The silencing of the self scale is only focused on people that you're in an intimate relationship with, and I think that definitely needs to be expanded to non-intimate relationships because if people are not in an intimate relationship or have never been, which is the case for a good number of college students, they don't answer the questions at all. And of course, intimate relationships may be the most difficult ones in which to put this stuff into play, and so what about all the other relationships in people's lives? So that's, that's another big gap I see.

Another scale identified as needing a broader context was the CADRI, the conflict in adolescent dating relationship inventory (Wolfe et al., 2001). One researcher explained, “I know the CADRI is kind of like the gold standard, but the problem with that is it only looks at sexual assault in the context of a dating relationship. And so, that doesn't make as much sense for [our population]. That really limits our ability to look more at sexual assault.”

Madeleine expressed a need for measures that assess a broader range of experiences on the continuum of sexual violence beyond the legal definition of sexual assault:

The sexual experiences survey focuses on sexual assault, mostly as it would be legally defined. What I think is really interesting is how empowerment self-defense training not only prevents rape and attempted rape, but also changes people's responses to incursions that are more in kind of the gray area, the gray zone where it's not really rape, but it doesn't feel good.

In addition to measuring experiences across the spectrum of sexual violence, Madeleine identified a need to measure intrusions that are not sexual in nature but may occur regularly in everyday situations:

So, both assault outcomes—different kinds of assaults like sexual harassment and things that aren't quite assault but aren't good—but also just the kind of boundary setting one does in everyday life, not in a dangerous situation, not in a sexual situation. Like, your boss asks you to do something . . . that doesn't feel right. Then you say something to your roommate who doesn't wash their dishes, or you have to be assertive with your family member who doesn't want to wear a mask. All of those things. We don't have any measures of those things, and I think that's one of the biggest effects of learning this kind of material is those everyday outcomes.

Another concern was the absence of measuring assault histories from childhood. One researcher explained:

When we're looking at people's past assault history, [we] have only looked at assaults as adults, not assaults as children. That is an issue, too, that not everyone has looked at childhood sexual victimization, or any other kind of

victimization. . . We [need] to think about how to add that because they are obviously related, and people are generally revictimized, but we may be missing a whole bunch of assaults, previous assaults.

Researchers were also dissatisfied with the available measures for fear and safety, which were perceived to be too general and lacking in context and specificity. For example, one researcher shared, “I wish there had been a different measure for fear. Measures of fear and safety that I’ve used, I really don’t like at all. I couldn’t find anything that was better. I still don’t know if there was anything better.” This researcher went on to further explain her dissatisfaction with the measure:

There’s a global measure like it is fear for your own safety. Is it something you think about never, seldom, fairly often, or all of, or most of the time? It’s too general, like I don’t know how to answer that myself right now. And then there’s a bunch of questions about how safe do you feel when you’re out in your neighborhood during the day? . . . How safe do you feel when you’re at home alone during the day. Well, it depends on who else is in my neighborhood and what’s going on in the world and it depends on a whole bunch of stuff. And those details aren’t in the measures.

This researcher explained the difficulty in completing the fear measures because context was such a factor in determining fear levels, but this context was missing from the scale.

Scale Characteristics. Another limitation related to the characteristics of certain scales, which researchers described as being too lengthy, outdated, or problematic in its format. One researcher identified the challenge with the length of the measure commonly used to assess sexual victimization:

Even for adults it seems like that set of questions, like in the past 12 months, in the past year, ever, have you been—I mean, that is a long, painful set of questions. Then you have to ask it for like intimate partners versus anybody else. And you just end up with this twenty-page survey before you even started, you know, so if there's a more succinct way to do that, I think that's a real need because it's hard to get anyone to do a good job on a long survey.

Another researcher described the additional challenge of using this measure with a younger population, “[The Sexual Experiences Survey] is so long. And there's no way like a fourteen-year-old—it just wouldn't be appropriate, and especially with literacy issues and just how detailed it can be and long and like the use of “penis,” “vagina,” like there's just no way.”

Some of the existing measures were perceived as being outdated. For example, Laura explained, “we might have like the dating self-protective measure, but my sense is that measure is really dated. Those aren't things that I would recommend to people within the context of a prevention program and some of the items are unclear.” This researcher identified the need to evaluate scales that may be outdated and “take a look at how they're mapping on to the constructs.”

Single-item measures were described as being problematic and as potentially skewing study findings:

We didn't find an impact on physical dating violence . . . I mean, it could be that the program doesn't work for that. It also is problematic because we only use a single item indicator, “has a partner pushed, slapped, shoved you in the past year or past six months?” We used that from the YRBS [Youth Risk Behavior Survey], and I think again, it could be that the program doesn't work for that, but I also think like a partner could slap you, and then you could run

away, so I think there's a challenge with the way we measure that and that could be why we didn't find an impact.

This researcher points out the limitation of using a single-item measure and the scope of violence that does not get measured when using a single item.

Considerations for Measurement Utilization

Researchers frequently discussed other challenges related to measuring ESD outcomes in their studies. Factors that influenced their selection of measures included the needs to comply with stakeholders and gatekeepers, to be perceived as credible, and to adapt to specific research settings.

Satisfying Stakeholders/Gatekeepers. A majority of the researchers mentioned the challenge of satisfying stakeholders and gatekeepers, such as community partners, tribal councils, school boards, and institutional review boards. Researchers sometimes experienced challenges with obtaining permission to conduct research (i.e., implement and evaluate an ESD program) in certain settings. One researcher stated:

Our campus is just like incredibly polarized on this issue. . . it took years . . . and like dozens of [one] hour, two-hour conversations on my part with different students and faculty and staff about how this was not a victim-blaming program, and how even though, yes, we should have something for men as well, like what we really have that's evidence-based right now is for women. And we really shouldn't deny women the opportunity to take this program just because we don't have something for men, and No, that really isn't victim blaming. It's, it's really about what we have evidence for.

Being able to conduct the research in the first place was a major obstacle for some researchers and required concerted effort and time to obtain community buy-in and permission.

Even when researchers were successful gaining stakeholder approval, they were not always able to include the measures they had intended to use in the study. For example, one researcher explained that she was restricted by course instructors in what she was permitted to measure in her study: “I was not allowed to ask about previous victimization, as [the instructors of the course] did not want me to ask that, which I was a little disappointed about, but I understood.” The reason for prohibiting those items was not explained. Another researcher discussed the need to obtain study approval from multiple stakeholders, which affected the measures she could use. For example, she was not able to include items about prior experiences of victimization: “We have faced major issues like trying to give that [Sexual Experiences Survey] to like a middle schooler, and getting that through tribal council or school boards, like good luck, it's not happening.” Laura experienced similar challenges:

We had to have our questionnaire battery approved by the school, the superintendent, and the Department of Education, and the Department of Education was very resistant to asking about any experiences that were sexual in nature, and these were anonymous questionnaires that wouldn't invoke any DCYF [Department of Children, Youth, and Families] reporting, but there was a lot of resistance to whether or not middle school students could answer those questions. . . We wanted to ask many more questions than we were approved to ask, but ultimately, we were able to ask three different questions about sexual victimization.

Similar challenges were experienced in college settings as well. For example, any measures that included items about alcohol were forbidden on one researcher's campus:

Oh god, alcohol questions on our campus are like ridiculously sensitive. . . we are basically not allowed to ask about alcohol use because the sentiment is that just because someone has been drinking doesn't mean they "got what was coming to them in the assault," which obviously we're not trying to say. But as soon as you start asking alcohol questions, people jump to that conclusion that you're going to say, "well, it's your fault because of that."

In sum, these researchers illustrate the substantial power and influence of stakeholders who had authority to determine whether studies could occur in the first place; and, after securing buy-in, stakeholders had a powerful influence over the measures researchers were permitted to use.

Buy-in for participation/Research setting. Researchers needed to account for environmental factors in the research setting that could affect the quality of data they could gather. In some instances, researchers recruited schoolteachers, ESD instructors, or community members who were representative of the sample population or who could speak the first language of the sample population. These conditions sometimes affected the researchers' choice of measures to include in their study. For example, one researcher mentioned she "didn't want to have a really long survey. . . because I was worried that it would not get completed. I was doing it in the class time, and they [instructors] were giving me ten minutes of class time to have them fill out a survey. So, I really couldn't do anything lengthy." Ultimately, this researcher was not able to include the mental health measures she had hoped to use because of the brief amount of time allotted to her for data collection.

Another researcher explained that stakeholders' presence during data collection could, at times, affect the data collection:

I think certainly in future studies, we might do it differently. We didn't have any kids reporting distress or crying or anything like that, it was just—I think it was more just like for some of them, they were just uncomfortable. And I think it didn't help either that some of the teachers in the room were like making faces about the questions [about sexual abuse].

There was also the challenge of getting ESD instructors onboard with collecting data because of the time involvement and the possibility of interfering with the end-of-class experiences. One researcher stated, “you know, at the end of a twenty-two-hour course over three days, that twenty minutes feels really long. Time is precious when you have limited time with people.” What may seem like a short amount of time to complete a survey could actually be perceived by instructors as intrusive and disrupting.

Requesting students to complete surveys could also affect the culminating experience of the final class. One researcher noted the potential for an undesirable shift in energy at the end of a class when students are asked to complete a survey:

You can tell it's like, ‘is that really how you want to end the class’ type of thing. So, I do think it's a challenge. . . How can we connect as researchers with the emotional content, with how people's brains changed. That is something like a standardized questionnaire just feels removed from their experience.

Comparison. Many researchers emphasized the need to compare evidence of intervention outcomes across different studies. As a result, researchers made an effort to select measures that had been used in previous studies. Megan explained:

I mean I think as much as possible, consistency across studies is important, you know, to really try to do some more comparative analyses. That's again hard when you're working, you know, with different populations and some communities may allow certain measures and not others.

Another researcher explained, “I chose for example the sexual experiences survey to measure rates of sexual assault because other people use it and it seemed like it was important to use the same ones that everyone else had used, and ditto for some of the other measures.” This same researcher later elaborated, “you want your later studies to be comparable to your earlier ones, and so it's hard to make those switches even if you're not totally happy with the measures. So that was a big influence on some of the measures I've chosen to use.”

Cross-Disciplinary. An additional factor informing the selection of measures had to do with maximizing the credibility of results. As one researcher stated, “I'm a sociologist, but most of the work on this topic is done in psychology. To be able to converse across those disciplinary boundaries, I used measures that would be familiar to psychologists as well.” This researcher was influenced by the need to converse and collaborate with transdisciplinary scholars.

Credible and Convincing. Lastly, researchers noted the unfortunate need to convince prevention scholars and funders that ESD is a viable primary prevention strategy to include with comprehensive prevention programming. One researcher pointed to the need for designing studies and selecting measures that could support efforts to promote ESD:

We have so much trouble being taken seriously as a prevention strategy. Like what are the markers that would convince people that self-defense training in

this way is actually preventing violence. Can we speak to those? Can we add something to our studies that would really be convincing to those folks?

This researcher explained how stakeholder perceptions about the nature of ESD created resistance to program adoption. She also pointed out that it remains unclear as to why stakeholders dismiss ESD as a credible and worthwhile prevention program.

Strengths

Researchers also recognized the strengths of certain measures and measurement strategies. Mental health measures were identified as being strong measures, and mixed-methods research including a qualitative component were seen as particularly helpful.

Some researchers pointed out the strength of existing mental health measures. One scholar explained: “We did use other validated scales, like we asked some mental health measures, and we used the Beck depression index and the Beck anxiety index. . . There were a lot more [measures] validated in that age group [adolescents] compared to the kind of sexual assault space.”

Lastly, many researchers discussed the utility of qualitative research in ESD studies. One researcher expressed her use of multiple methods, “I’m so glad that I included the qualitative element because I really think that’s where the richness comes and you learn all sorts of things you would not learn if you just ask people closed-ended surveys, you know, paper and pencil kinds of measures.” Another researcher similarly stated, “many of us researchers, we see the value in it [qualitative methods] just because we see the transformation happen within the program and the struggle really is to be able to document it with numbers.” A third researcher provided additional context explaining,

I think it's so hard to imagine the kinds of things that people will say that I'm thinking, for instance, one person saying that she had always had this completely irrational fear of mice. And I mean really like terrorized by mice, and after she took the course, that was done. It was over-- the terror, and it was like something that had made it difficult for her to even function. Now, I would not have thought of that. I mean, maybe you think of it generally like has there been anything that you've been terrified of that you are now not terrified of, but I feel like there's some, some of the specificity that comes out of open-ended questions that you would never imagine yourself and that as much as you try to put yourself in someone else's shoes, like this person, I would look at her and would never have thought that seeing a mouse could like ruin her entire day, so I think that open-ended or interviews-- there's a richness there that no survey, no matter how great it is can possibly capture.

All of these researchers illustrated the added benefit of including qualitative components in their research design because they felt the qualitative items could more fully capture ESD program effects and contextualize the quantitative results.

Discussion

The aim of this study was to gain a deeper understanding of researchers' perspectives about the existing measures used in ESD research. Researchers presented their perceptions about strengths and limitations of measures used in the field. Researchers also identified obstacles preventing them from using their preferred measures in their studies. According to the researchers, stakeholder perspectives about the intervention and about specific measures (especially those measuring past experiences of victimization) had an effect on researchers' options and choice of measures. In addition to improving and expanding the battery of measures for ESD

research, results indicate an urgent need to address stakeholder misperceptions about sexual violence, ESD, and victim-blame.

Results from this study indicate a need for scale development in several areas. There was a glaring absence of measures for adolescents which is concerning because children and youth have a heightened risk for victimization. Results from the National Intimate Partner and Sexual Violence Survey (NISVS) in the U.S. suggest that 81.3% of female survivors experienced their first completed or attempted rape *before* the age of 25, and 30.5% indicated that their first experience of victimization occurred between the ages of 11-17 (Smith et al., 2018). Given this high risk of sexual violence among adolescents, implementation of and research about ESD programs has expanded to younger populations (e.g., Edwards et al., 2020). ESD is a viable prevention program for this population, but strong measures are needed to understand the intervention effects and to inform continuous program improvement for this population.

There is also a need to capture experiences of childhood sexual abuse (CSA). Again, the evidence suggests that children and youth have heightened risk of CSA, which in turn increases their risk of revictimization—approximately half of CSA survivors experience revictimization later in their life (see Walker et al., 2019). Currently, studies have tended to measure victimization starting at the age of 14, which excludes any experiences occurring during childhood when children are at heightened risk of CSA. Researchers indicated a need to include measures of CSA to investigate whether ESD has differential effects based on past experiences of victimization. These measures are also needed to examine the possible therapeutic effect of ESD, or the effect on mental health outcomes.

Results of this study indicate a need for measuring a broader range of sexual violence experiences. ESD teaches students strategies to address a wide range of behaviors with the goal of interrupting unwanted behavior early on in the continuum. Further research is needed to understand the mechanisms of change, and to understand how ESD is effective in reducing risk of sexual assault. Does ESD work because participants are interrupting unwanted behaviors before those behaviors escalate? Or, does something change such that these women are no longer targets for perpetrators, and if so, why? Measuring a broader range of unwanted sexual experiences could help to answer these questions.

Results also suggest that the field may benefit from new or revised measures relating to specific outcomes. Researchers identified specific scales or constructs including fear, self-silencing, empowerment, self-defense self-efficacy, feminist identity development, rape myth acceptance, dating self-protection, and the spread or diffusion of ESD outcomes.

Additional Challenges

Aside from the gaps in measurement instruments, results also revealed a need to continue challenging false beliefs about ESD and victim-blame. Conducting ESD research requires partnerships and collaborations, but if stakeholders are unwilling to shift their beliefs about ESD as being victim-blaming, researchers are not able to conduct this research in the first place. Several researchers encountered severe pushback from potential partners who were unwilling to collaborate because of their perception that ESD is victim-blaming or is not an appropriate approach to prevention. After considerable effort building relationships and sharing accurate information, one researcher was successful persuading some study settings, but others were unwavering in their false belief.

The researchers described heavy pushback from stakeholders about survey items relating to experiences of violence. One of the criteria ethical review boards examine is the safety of study participants; they consider the researchers' beliefs about the potential risk of harm to the participants in balance with the potential benefit of participating in research and the strategies researchers will apply to minimize risk of harm (Byrd & Winkelstein, 2014). For many years scholars have been debating whether responding to abuse-related questions is iatrogenic, innocuous, or beneficial for the participants (e.g., McClinton Appollis et al., 2015; Becker-Blease & Freyd, 2006; Ullman, 2007), but recent evidence has bolstered the argument that, when done properly, abuse-related questions are not iatrogenic. A very recent study of 3,264 adolescent students ages 12 – 14 in South Africa involving survey items about abuse concluded that research participation “was more likely to have a positive rather than a negative emotional impact on young adolescents” (McClinton Appollis et al., 2020, p. 944). Victims of abuse “were more likely to report benefits than harms, supporting the ethical appropriateness of ongoing research on abuse and violence” (McClinton Appollis et al., 2020, p. 944). Substantial evidence also suggests that engaging with social science research can be therapeutic for participants (Lakeman et al., 2012). Participation in research, and especially qualitative research, can have positive effects on participants. These positive effects may include: giving a voice to those who are commonly perceived as powerless, helping participants to make sense of and meaning from their past experiences (Lakeman et al., 2012). When done properly and ethically, it is possible that research participants may find the experience to be empowering, enriching, and educational, even when having to describe unpleasant experiences (Dyregrov et al., 2011; Holloway & Freshwater, 2007). Although the evidence

suggests the potential benefits outweigh the potential for harm, additional considerations such as enduring cultural beliefs may influence stakeholder buy-in.

Implications for Practice & Research

Findings from this study have implications for both practice and research. Results from this study highlighted multiple areas in need of scale development or improvement. Focusing on measures for adolescents may be an important first step in addressing the many measurement gaps researchers discussed. Other priority areas include developing measures to capture a broader range of sexual victimization experiences, revising single-item measures to be more robust, and expanding the domains of self-defense self-efficacy.

The pervasive misperceptions about ESD as being victim-blaming and/or insufficient for sexual violence prevention impede researchers' and practitioners' ability to implement programs and evaluation studies. Although scholars and advocates have disseminated refutations to dispel the notion that ESD is victim-blaming and inadequate as a prevention strategy (see Hollander, 2016), results from this study indicate that there is still much work to be done to shift the culture around sexual violence prevention and to correct the falsehoods that not only contribute to rape culture, but also serve as a barrier to conducting intervention research. Because of the significant role stakeholders have in providing access to study populations and permitting the use of certain measures, future research could benefit from an in-depth understanding of stakeholder perceptions. Focus group studies exploring stakeholder perceptions about ESD and sexual violence prevention more broadly could provide insight about why these misperceptions persist. With a better grasp of stakeholder perspectives, researchers can develop strategic methods to communicate with stakeholders and maximize partnerships.

Stakeholders have a strong influence on the ability to conduct quality research and evaluation, as previously discussed. Given the challenges ESD researchers have encountered, a community engaged approach to research could be a useful strategy for advancing ESD research. Collaboration with community partners would enable stakeholders to contribute their practical knowledge from the field. Engaging community partners as collaborators could be beneficial to establish buy-in, determine priority areas for evaluation and measurement, and enhance intervention fidelity and sustainability.

Additionally, the field may benefit by continuing to use mixed-methods and qualitative research in their study designs. Many researchers pointed to the qualitative components of their studies as strengthening their study results and providing nuance that is not captured in quantitative measures. As one researcher explained, some events that were classified quantitatively as failures of a program (e.g., experience of victimization) were in actuality presented as successes in the qualitative literature. Although quantitative research is of course essential in the hierarchy of science, the continued use of qualitative research could be beneficial for contextualizing and explaining study results, particularly while the field awaits the development of stronger measures.

This discrepancy between qualitative and quantitative findings (i.e., incidents classified quantitatively as a “failure” but described as a “success” qualitatively) also points to a possible gap in how existing measurement tools are measuring “successful” outcomes related to resistance and unwanted sexual experiences. The field may benefit from scholarship that explores and delineates specific definitions of “success.” With precise boundaries that distinguish “successes” from “failures” (i.e.,

near misses), researchers can then determine if existing measurement tools are sufficiently measuring these outcomes or whether new measures are needed.

Participants from this study noted that empowerment, one of the desired outcomes from ESD, has not yet been operationalized or measured in the ESD research. Although some constructs are similar, such as self-efficacy, there is a need to capture through quantitative measures the changes in participants' sense of empowerment. Although empowerment is central to ESD and to the field of social work, the epistemological soundness of empowerment theory was only recently explored through a critical analysis using the Theory Evaluation Scale (TES; Joseph, 2020). The TES is a reliable instrument ($\alpha = 0.88$) that uses nine criteria to assess merits and limitations of social work theories (Joseph & MacGowen, 2018). Joseph (2020) found that empowerment theory scored in the "excellent" range of the TES, indicating that empowerment theory is an empirically valid framework to guide practice and research. A next step for ESD research is to explore existing measures of empowerment. After determining whether existing measures are sufficient or whether new measures of empowerment specific to ESD need to be developed, researchers can begin quantitatively measuring impact of ESD on participants' empowerment.

Conclusion

Results of in-depth interviews with ESD scholars point to priority needs and future directions for measurement development and enhancement. Researchers pointed to vast opportunities for improving measures, but they also highlighted the role of stakeholders, who were influential in giving researchers access to study environments and in deciding what measures were permissible for specific populations. Efforts to shift perceptions about ESD must continue in order to advance

this important research and implement any future developments in ESD measurement science.

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Chapter 5: Discussion

In a recent global study of interventions to prevent violence against women, self-defense programs for women were identified as a promising intervention for preventing sexual violence among college women in North America (Kerr-Wilson, 2020). To date, ESD as a prevention strategy has been evaluated rigorously only with college women, though research about ESD is still in its infancy. Other studies suggest that ESD may be an emerging promising practice for other populations as well, such as primary and secondary school girls, and diverse community populations (Baiocchi et al., 2017; Decker et al., 2018; Hollander, 2020; Sarnquist et al., 2014; Sarnquist et al., 2017; Sinclair et al., 2013). As with all sexual violence prevention programs, continuous research and program evaluation of ESD programs is needed to ensure that programs are ethical, effective, and feasible (Patton, 2008).

Scholars have reported a need for high quality measures to use in ESD outcome research (Hollander, 2018b; Senn et al., 2021). Standardized measures that are reliable and valid are needed to ensure validity of study findings, compare findings across different study settings, and evaluate the full range of hypothesized outcomes. With a recent call for improved measures for ESD, it is first necessary to understand the scope and characteristics of measures that have been used in ESD research, determine the alignment of measures with the targeted ESD outcomes, and explore the strengths and

limitations of existing scales used in ESD research. This dissertation study attempted to address this gap and to contribute to ESD scholarship by (1) reviewing the existing measures used in ESD intervention research, (2) identifying the most critical intervention outcomes as perceived by instructors and students, and (3) determining researcher perspectives about the utility of existing measures.

Although ESD intervention components can vary based on different programs, these programs aim to achieve similar outcomes. The primary outcomes include a decrease in fear, self-blame, and sexual violence victimization; and an increase in healing among students who have already experienced sexual violence (Hollander, 2018a; Gidycz et al., 2015; Rozee & Koss, 2001; Senn et al., 2018). Some ESD programs mention goals related to decreasing rates of sexual violence perpetration and shifting norms around gender and heteronormative sexual conventions (Senn et al., 2018). The intermediate outcomes tend to include: Increased labeling of SV behaviors and ability to recognize risk factors in men's behavior; increased knowledge about effective resistance strategies; increased assertive behaviors; shifts in beliefs about gender; decreased psychological and emotional barriers to engaging in resistance strategies, and an increase in use of verbal and physical resistance strategies (Senn et al., 2018). A battery of high-quality measures is needed to reliably evaluate the full range of outcomes targeted through ESD programming.

Discussion of Study Findings

Standardized Measures Used in ESD Research

The first aim of the study was to review and characterize the features of existing standardized measures used in prior ESD research studies. A systematic review was conducted to identify measures previously used and to describe the characteristics of these existing scales. Only ESD intervention outcome studies were included in the review—sexual violence resistance programs that did not incorporate a physical self-defense component in the program were not included. Among the 22 peer-reviewed studies, there were 55 unique measures that researchers used to evaluate outcomes associated with ESD. These measures were grouped into nine thematic categories, including assault characteristics, attitudes and beliefs, behavior and behavioral intentions, knowledge, mental health, past unwanted sexual experiences, perceptions of risk and vulnerability, and self-efficacy.

When comparing the 55 measures to the intermediate and primary outcomes of ESD, it was apparent that many, but not all, of the targeted outcomes were represented within the battery of measures and the constructs they were designed to measure. In other words, many of the primary and intermediate outcomes have been measured previously in at least one study. The outcomes that were not explicitly measured included healing, prevalence rates for perpetration, and societal-level changes related to gender norms and heteronormative sexuality.

ESD Instructors & Students

The second aim of this study was to determine ESD instructor and student perceptions about the most important outcomes associated with ESD training. In-depth interviews were conducted with 16 instructors of women's self-defense to explore the

first part of this aim, and open-ended survey questions from ESD students were used to explore the second part of the aim. ESD students had participated in one of two ESD courses. One was a college class, and the other was a course offered to women in a large metropolitan area in the Pacific Northwest. ESD students responded to a survey item asking them to report what they found to be the most important outcome from their experience in an ESD course. Responses from the post-intervention survey and from the one-year follow-up survey were analyzed in this current study.

Analysis of the ESD instructor interviews and ESD students' survey responses revealed similar results. As would be expected, the data from instructor interviews were more robust and detailed, while ESD student responses were extremely brief. For this reason, ESD instructors had reported a wider range of outcomes. Nevertheless, the results from both populations were quite similar. All of the themes from the student data were reflected in the instructor data. The major themes across the two groups included: Agency, Boundaries, Core Beliefs, Health and Healing, Somatic Experiences, and Gender and Intersectionality. First, the theme "agency" encompassed subthemes of self-efficacy, enactment, self-determination, and reduced fear). Second, "boundaries" described behaviors and outcomes associated with assertiveness, risk detection, non-verbal communication, and relationship quality. Third, "core values" referred to two ESD outcomes: self-worth and internalizing values. Fourth, "health and healing" described the desired outcomes of improved mental health, reduced sense of self-blame, and healing from previous harm, trauma, and/or victimization. Fifth, "somatic experiences" referred to the physical, embodied experiences involved with participation in ESD. Specifically,

this theme related to experiencing one's own and other women's physical strength and power and regulating responses to adrenalizing stimuli. Sixth, "gender and intersectionality" described the outcomes associated with rethinking gender, challenging harmful gender stereotypes and behavior, and engaging collectivity to advocated for women's rights. The four subthemes in this last theme were labeled, "socialization," "experiential connection," "solidarity," and "collective action."

Results from this study aim revealed several notable findings. It is worth noting that the themes that emerged from both of these populations were aligned with theory informing ESD and previous outcomes reported in qualitative and quantitative studies about ESD. Any significant deviations would have been concerning because it might have suggested that instructor perspectives about important outcomes were mismatched with the theoretical underpinnings of ESD. What students perceived to be most important also corresponded with the goals of ESD. Both community and college student participants reported similar responses immediately after completing the intervention and one-year later. Few studies have reported outcomes at a one-year follow-up period, and similarly, few studies have included populations other than college student women. These findings contribute to the ESD literature by reporting long-term positive effects reported by ESD participants and by including a diverse sample population from the broader community.

Like the ESD instructors, the results among all of the ESD students were consistent. Of the 273 respondents, there was only one negative case in which a participant found the course to be unhelpful. Although there were likely additional

students who did not find the intervention to be as transformative as those who participated in the survey, the large percentage of students who opted to participate in the study might suggest that the majority of students found the course to be useful. It is also notable that the dosage of the interventions among the two ESD student groups were vastly different. Students in the college course completed a 30-hour version of ESD, and students in the community course completed a 9-hour dose. In addition to the varying dosages, the two student groups were diverse in age. Despite these differences, both student groups reported similar outcomes. There was less racial diversity among the two groups. Because voices of racially diverse women are less represented in the empirical literature about ESD, this is an important area for future inquiry.

ESD Researchers

The third aim of the study was to explore ESD researcher perspectives about existing measures—both their experiences with choosing and utilizing them and their perceptions about their strengths and limitations. Individual interviews were conducted with seven researchers who have conducted ESD intervention research. Themes that emerged from the qualitative interviews including “challenges with existing measures,” “considerations for measurement utilization,” and “strengths.”

The major challenges identified by researchers included a lack of measures developed and validated for their target population (e.g., adolescents, Native American girls), a lack of comprehensiveness (e.g., absence of scales for certain constructs), and undesirable scale characteristics (e.g., too lengthy, outdated).

Researchers also discussed considerations for measurement utilization and identifying factors that informed their selection of specific used in their studies. The need for permission from stakeholders and gatekeepers to conduct research in certain settings sometimes limited the choices researchers could make about using their preferred measure/s. Environmental factors in the research setting also affected the selection of measures for some researchers. Their first choice of measurement tools was not always feasible in the limited amount of time that the stakeholder allotted for researchers to collect data. The ability to compare evidence across studies was also an influential factor affecting researchers' selection of measures.

Study Limitations and Contributions

Findings from this dissertation study should be considered in light of the study limitations. One major limitation in the study design is that the studies were conducted concurrently instead of consecutively. Consequently, the interviews were conducted before analysis of the systematic review was complete. The interview guides for ESD researchers may have been more robust if the systematic review had been completed. An in-depth understanding about the details of each scale and the specific scales that each researcher had used in their studies, would have informed more specific interview items to include in the interview guide. This familiarity would have facilitated better follow-up questions to elicit more thorough perspectives from researchers. Additionally, the researcher could have primed the participants before the interviews so they would be better able to recall their past experiences.

Another limitation is that the database search was conducted in the fall of 2020. Because of feasibility, an additional search was not conducted in spring 2021 to identify any new studies that may have been published in that time. Similarly, dissertation studies and gray literature were not included in the sample. This presents a significant publication bias, and it limited the scope of studies that were included in the study. Therefore, conclusions that can be drawn from the study results are limited.

Despite these limitations, this dissertation study has several strengths. The study is innovative in its study design. To date, the author was not able to find any research that has triangulated multiple data sources to examine the degree of congruence between (a) standardized measures that have been used in ESD research, (b) theoretically derived ESD outcomes, and (c) the primary ESD outcomes from the perspectives of various stakeholders—ESD students, instructors, and researchers. Considered in the context of relevant social work, feminist, and behavior change theories, the convergence of the three study results illuminates important considerations for future research, practice, and policy related to ESD, sexual violence prevention, and the social work profession.

The convergence of results (see Table 13) from these four data sources (i.e., systematic review, ESD instructors, ESD students, and ESD researchers) points to several important considerations for future ESD practice and research.

Table 13. Comparison of Study Aim Findings

Comparison of Study Results

Targeted Outcomes	Measured in Previous Studies	ESD Instructors	ESD Students
Sexual assault victimization	x	Implied through social change goal	No
Fear	x	x	x
Self-blame/victim-blame	x	x	x
Healing	No	x	x
Societal-level change (social justice, gendered norms)	No	x	No
Sexual violence perpetration	No	Implied through social change goal	No
Use of resistance strategies	x	x	x
Psychological and emotional barriers to resistance	x	x	No
Beliefs about gender (internalizing/acceptance)	x	x	x
Assertive behavior	x	x	x
Communication/Verbal skills	x	x	x
Knowledge of resistance strategies	x	x	x
Self-defense self-efficacy	x	x	x
Identifying behaviors on the continuum of violence	x	x	x
Identifying risk signals (across continuum of violence) potential perpetrators	x	x	x

Continued

Table 13 Continued

Additional Constructs from ESD Instructor & Student Themes	Measured in Previous Studies	ESD Instructors	ESD Students
Enactment	No	x	x
Self-determination	No	x	No
Nonverbal communication	No	x	x
Relationship quality	No	x	x
Self-worth	No	x	x
Healing	No	x	x
Trusting one's instincts/body	No	No	x
Mental health	x	x	x
Physical strength and power	No	x	x
Downregulation	No	x	No
Support and solidarity	No	x	x

Implications for Practice and Research

Implications for Practice

Convergence of study results from the four data sources suggest several practice implications. The impact of the physical elements of the course (e.g., kicking, striking with elbows, breaking wooden boards with a palm-heel strike) were discussed frequently among ESD instructors and students. The repetition of physical skill practice seemed to

facilitate students' ability to achieve other targeted outcomes, such as the mental and verbal skills, and/or to help them absorb and apply the material more quickly. Even brief sessions that incorporated physical skill practice seemed beneficial in helping students grasp other targeted intervention outcomes. Brief one-time educational sessions have not typically been shown to produce substantial long-term change (Nation et al., 2003). The nature of the ESD physical skill practice, however, may be unique in producing and sustaining change over time. Although further research is needed to determine the veracity of this speculation, investing the resources to offer (or continue offering) brief sessions inclusive of physical skill practice may be a worthwhile endeavor.

Findings suggest that ESD may be well suited to function as a therapeutic intervention. Many instructors and students indicated healing from past trauma as a targeted or actual outcome for ESD. Moreover, both quantitative and qualitative studies have reported improved mental health outcomes associated with sexual violence survivors' participation in ESD (David et al., 2006; Mouilso et al., 2011). ESD may be an effective therapeutic strategy for social work practitioners to adopt when working with survivors of sexual violence.

ESD may also be well-suited as an intervention *for* social work practitioners. Depending on the type of social work they practice, social workers experience personal safety concerns when working with clients. Universally, social work practitioners must set personal boundaries as a function of their job. Similarly, empowerment is a fundamental component of the social work profession. Delivering ESD to social workers

will promote personal safety while also strengthening their social work practice to promote empowerment for individuals, groups, and communities.

The importance of continuing the use of women-only spaces (Lewis et al., 2015) for ESD and resistance education programs was supported by the findings reported in chapters 3 and 4. Previous research has reported the significant role of women-only spaces for ESD in facilitating positive intervention outcomes (e.g., Fraser & Russell, 2000). Specifically, having an all-women's space highlighted universal commonalities of women's experiences, which in turn facilitated group cohesiveness and bonding, eliminated individual competition (i.e., success was a collective group phenomenon, not an individual achievement), created a sense of shared purpose, provided emotional containment for the intense emotional experiences of the class, and increased the women's tolerance for managing intense emotions (Fraser & Russell, 2000).

The importance of maintaining women-only spaces—as supported by theory and evidence—is further bolstered by findings from this dissertation study. Much like Fraser and Russell (2000) reported, the importance of all-women spaces was described by ESD instructors in this study as an essential feature of ESD courses that facilitate desired intervention outcomes. Similarly, many ESD students reported the support from other women as being the most important outcome they gained from participating in ESD.

ESD instructors and scholars currently disagree to some extent about the necessity of adhering to all-women spaces. As reported by some ESD instructor participants (see chapter 2), instructor roles have been filled by men in some ESD programs. For example, programs incorporating padded attackers for staged scenario drills often include men as

the padded attackers and/or as co-lead instructors. The debate about all women spaces also extends to stakeholders who are sometimes reluctant or refuse to adopt ESD programming because of their perception that ESD, as women-only programs, are victim-blaming—even though these assumptions have been empirically refuted (see Hollander, 2016).

Implications for Research

Combined results from the three studies point to several gaps in the battery of measures currently available and utilized in ESD research. To address these gaps, I propose three priority areas recommendations for future research. First, there is a need to develop and apply additional standardized measures that are capable of measuring a broader range of outcomes as identified by instructors, researchers, and multiple theoretical frameworks and their associated hypothesized outcomes. A second priority is to expand psychometric evaluation on existing measures, and a third area for future research is to adapt existing measures and/or develop new measures for diverse populations, particularly in relation to age and cultural diversity.

Some of the critical outcomes identified by ESD instructors and students have not yet been measured quantitatively in ESD intervention research (see Table 13). These outcomes include: enactment, self-determination, nonverbal communication, relationship quality, self-worth, healing, trusting one's instincts, physical strength and power, downregulation, and support and solidarity with other women. Future research should include the development of additional standardized measures that are capable of measuring this expanded range of outcomes. These measures are needed to identify the

mechanisms of change caused by ESD and to expand empirical knowledge about the effects of ESD.

Of the 14 primary and secondary outcomes that ESD logic models tend to identify, two have not yet been measured in any ESD study: sexual violence perpetration and other societal-level social change. It is not surprising that they have not yet been measured because evidence has only recently emerged to support the effectiveness of ESD in reducing rates of victimization (Senn et al., 2015, 2017).

Future research is needed to determine the psychometric performance of existing scales when used with diverse populations. An initial goal of this study was to use COSMIN methodology to evaluate the methodological quality and measurement properties of scale studies. With the exception of several scales, many measures had no corresponding studies detailing the conceptual framework or psychometric property testing of the measures. Again, with the exception of several measures, few have ever been evaluated by researchers independent of those who developed the measure.

There is a need to adapt and/or develop measures that are reliable, valid, and appropriate for diverse populations, particularly for adolescents and culturally diverse populations. Results from the systematic review (chapter 2) and results from the researcher interviews (chapter 4) indicated the lack of measures available for adolescent populations. One of the nine principles for effective prevention programming includes delivering interventions at appropriate times across the lifespan when they will have the maximum effect (Nation et al., 2003). Delivered too early, the positive effects from a

prevention program may dissipate before they become relevant in the participants' lives, but delivered too late, the harm may have already occurred (Mrazek & Hagerty, 1994).

Sexual violence prevention efforts should ideally occur prior to experiences of victimization. Exposure to sexual violence begins early in life (Kilpatrick et al., 2000). Adolescent and young-adult women have a heightened risk of experiencing sexual assault (Carey et al., 2018; Kilpatrick et al., 2000), and first-year college students have an even greater risk of sexual assault compared to their older peers attending college (Carey et al., 2018). Although most ESD studies have focused primarily on college student populations, ESD could likely have a substantial effect on sexual violence prevention when delivered to adolescent women before they transition to college. The potential for positive outcomes when delivered to younger women is also supported by evidence from several studies that reported a reduction in sexual assault among young girls who participated in an ESD program in Kenya and Malawi (Baiochi et al., 2017; Decker et al., 2018; Sarnquist et al., 2014, 2017; Sinclair et al., 2013). Ensuring the availability of standardized measures that are valid, reliable, and appropriate for adolescents is an appropriate precursor to conducting this research.

Although it was not the focus of this dissertation study, the results have implications for future ESD research beyond measurement science. One additional consideration is the intervention dosage. In addition to being appropriately timed, prevention programs should include appropriate dosage—session length, spacing between sessions, and program length should be sufficient to maintain positive outcomes over the long-term (Nation et al., 2003). Knowledge about optimal dosage for ESD is still

unknown and requires further research. Single-session prevention programs are generally considered to be ineffective or minimally effective in producing long-term change.

Results from the second study aim, which was to explore ESD instructor and student perspectives about key outcomes, suggested that single-session ESD programs could potentially have longer-term positive effects because of the physical and experiential components of ESD. At minimum, further research about sufficient dosage for ESD, and how dosage may shift based on the participant population, is warranted.

Implications for Policy

ESD researchers reported the significant challenge of obtaining stakeholder buy-in and permission to include critical outcome measures that are needed to determine program effectiveness. Some stakeholders indicated concerns about ESD because they perceived the intervention to be victim-blaming or to be an unviable strategy for prevention. More commonly, stakeholders were reluctant or refused to provide permission for researchers to include measures of victimization in their surveys. In most cases, this reluctance or refusal stemmed from the perception that including these items would cause harm to the participants or would be perceived as victim-blaming. However, empirical research does not support this perception (Lakeman, 2012; McClinton Appollis et al., 2020). Given the importance of including these outcome measures to determine whether programs are effective in reducing rates of victimization, institutional review boards and other ethics review boards should adopt policies that reduce this resistance.

Federal legislation, including Title IX and the Campus Sexual Violence Elimination Act (SaVE), which is Section 304 of the Violence Against Women (VAWA)

Reauthorization Act of 2013 (Pub. L. 113-4, 127 Stat. 54), mandates that universities implement gender-based violence prevention strategies and provide proper support to student survivors. Given the increasing evidence that ESD prevents risk of victimization and promotes healing for survivors, educational policies could promote the inclusion of ESD as a viable strategy for maintaining compliance with federal legislation.

Additional policy considerations relate to sexual health programs for adolescents. The National Sexuality Education Standards (NSES) provides national standards for school-based sexuality education programs in the United States; the NSES delineates seven topics that are considered to be essential to sexual health education, two of which include healthy relationships and personal safety (Future of Sex Education Initiative, 2012). Although NSES recommends that content related to sexual consent, personal boundaries, and gender roles be addressed in all sexual health programs, a review of sexual health programs in the United States indicated that most evidenced-based sexuality programs in schools omit components related to healthy relationships and gender roles (Schmidt et al., 2015). Compounding this gap in sex education, minors are exposed to the pervasive media messages about sex and sexualization (Carroll et al., 2008; Wolak et al., 2007), which is associated with damaging outcomes (American Psychological Association [APA], 2007; Bridges et al., 2010). Given that minors have frequent and easy access to depictions of sexual behavior that often include and normalize violence (Bridges et al., 2010), there needs to be accompanying education related to mutuality, consent, and respect within sexual relationships. Consequently, training and educational efforts for children and adolescents should aim to develop self-

efficacy related to communication about sexual boundaries, including asking for and giving or denying consent to sexual behaviors and activities.

ESD programs align with the NSES standards for healthy relationships and personal safety. A defining feature of ESD is the gendered lens through which it frames all programmatic content. Moreover, targeted outcomes include self-efficacy related to boundary setting and assertive communication, both of which are necessary for achieving healthy sexual relationships. These components align with the NSES standards for school-based sexual health programs. As such, national and state policies for sexual health education should promote implementation of ESD programs as part of a comprehensive sexual health education strategy.

Conclusion

The social work profession strives to achieve social justice and social change by working to address basic human needs of all people, enhance the well-being of individuals, dismantle systems of oppression, and empower those who are most vulnerable, oppressed, and living in poverty (National Association of Social Workers [NASW], 2021). ESD is theoretically and empirically positioned to support violence prevention and healing efforts for at-risk populations (e.g., youth, immigrants, sexual and gender minorities, survivors of previous victimization) (Jones & Mattingly, 2016), and is, therefore, well-suited to function as a social work intervention for individuals, communities, and practitioners. As the delivery of ESD programs to diverse populations continues to expand, social workers and scholars require strong evaluation frameworks to ensure programs are achieving desired outcomes and to inform intervention adaptation

and improvement. Results from this dissertation study illuminate directions for future research to strengthen measurement tools that can be used in evaluation and research with an overarching aim to reduce violence and empower vulnerable populations.

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Appendix A. Semi-Structured Interview Guide: ESD Instructors

Interview Questions for ESD Instructors: Open-ended

1. Can you please share your background as it relates to becoming an ESD instructor, including your background with ESD training?
2. Thinking about the groups you typically work with, how would you describe them? (*Additional probes: Could you describe the groups you work with in terms of race, class, gender, ability or other dimensions you think are important? Are the students in your classes fairly similar to each other or do they vary? Do you sometimes teach specifically for a group that represents a particular demographic? What demographic groups do you typically work with?*)
3. Could you describe the content of one of your typical classes/courses? What do you normally cover in your curriculum?
4. When students leave your classes or the classes of other ESD instructors, what do you think the most important lessons they have learned are?
(*Additional ways of framing question: What is it that you hope to see change in your students by the end of the course? What do you think are the most important outcomes from participation in ESD?*)
5. To what extent do you feel that your program addresses this/these outcome?
6. Which components of an ESD course do you believe are most essential?
7. Are you currently conducting any evaluations in your classes?
(*Note: For example, most instructors use simple open-ended or rating scale kinds of evaluations that ask about perceptions of the instructor and/or the class. More rarely people might try to measure the kind of knowledge and skills or attitude that they are trying to impart to see if students have made the gains we hope for...*)
8. [If respondent responded yes to Q9]: How do you conduct these evaluations?
(*Additional probes: What does the evaluation entail? Are you using any standardized measures? What measures are you currently using?*)
9. Are you currently satisfied with the way that your program is being assessed?
10. If yes/no, can you please explain why?

11. Could you please describe what kind of evaluations would be ideal from your perspective? *(If it is different from what you are currently doing).*
12. Can you please share your thoughts about whether the learning outcomes for your courses vary based on the age group, or other demographic, of your students?

Demographic & Background Items

1. What is your Age?
2. How would you describe your Gender Identity?
3. How would you describe your Sexual Identity.
4. How would you describe your Race/Ethnicity.
5. Do you identify as someone who is living with disability?
 - a. If you feel comfortable sharing, could you identify your disability/ies?
6. What is your Highest Level of Education?
 - Some High School
 - Completed High School
 - Some College/University
 - Completed College/University
 - Advanced Degree
 - Other: _____
7. From what organization(s) did you receive your ESD instructor training?
8. What city/cities did you take the training in?
9. In what year did your instructor training first begin?
10. How long (in total) was your instructor training? *(If training has been/was intermittent? How long in total?)*
11. Have you received certification to teach ESD from an accrediting organization?
12. **[If yes to Q11]:** Which accrediting body issued your certification?
13. How long (sum total) have you taught ESD?
 - a. Was your teaching continuous during that time?
 - b. If not, please explain.
14. Please share the places you have *ever* taught an ESD course:
 - a. College or University
 - b. Community center
 - c. Elementary School
 - d. Fitness center/gym
 - e. High School
 - f. Impact Safety
 - g. Junior High School
 - h. Informal Group of friends, co-workers, community members, etc.
 - i. Martial Arts School/Organization
 - j. Police department
 - k. Profession-related organization (e.g., *National Association of Social Workers, child-welfare agency, etc.*)

- l. Therapeutic Setting
- m. Other [Text Box]

15. Are you currently employed at a school, organization, or agency to instruct ESD
(*e.g., Impact Safety, ESD Global, a martial arts school, etc.*)?
16. [If yes to Q15]: Where are you currently employed to instruct ESD?
17. [If respondent said “no” or “prefer not to answer” in Q15]: Have you *ever* been
employed at a school, organization, or agency to instruct ESD?

Appendix B. Semi-Structured Interview Guide: ESD Researchers

ESD Researchers: Interview Guide

Interview items

1. Can you please describe the nature (or type) of the research you conduct/have conducted as it relates to ESD?
 - a. Have you used standardized scales in your research? If so, please explain...
2. How did you determine which evaluation/assessment strategies to use in your various research projects? (i.e., what factors were a priority to you when determining the methods (e.g., qualitative? Quantitative? Choosing scales?)
3. Did you think these assessment/evaluation plans were successful?
 - a. Or: Can you give me an example of a time with the assessment/evaluation was successful?
4. [If yes to Q5]: What was successful about using the assessments/evaluations/scales you have used in your stud/ies?
5. Could you please tell me about any challenges you encountered when implementing evaluations/assessments/scales, if any?
 - a. Or: Could you tell me about a time when you encountered a challenge with implementing evaluations/assessments/standardized scales?
6. What would you have done differently if you could change your data collection as it relates to evaluation/assessment (*e.g., the scales you used, how they were used, etc.*)?
7. Is there anything else about your experience with using evaluations/assessments/scales that you would like to share with me?
8. Could you share what you perceive to be the most important outcomes for students who participate in ESD?
9. To what extent do you believe you have been able to assess those outcomes?

10. What constructs (outcomes) do you think are missing from the existing scales used in ESD research that should be measured?
11. Are there constructs and/or behaviors that you wanted to measure quantitatively, but could not do so because of a lack of valid and reliable measures?
12. Have you developed survey items to use in your research because a measurement tool has not yet been developed?
13. [If yes to Q14]: Do you have plans to conduct measurement studies to determine the measurement properties of your survey items?

Demographic/Background Items

1. What is your primary academic discipline?
2. How many years have you been engaged in ESD or ESD-related research?
3. Would you feel comfortable sharing your Age?
4. How would you describe your Gender Identity & Expression.
5. How would you describe your Sexual Identity.
6. How would you describe your Race and Ethnicity.
7. Do you identify as someone who is living with disability?
 - a. If you feel comfortable sharing, could you identify your disability/ies?