

RISK AND RESILIENCE FACTORS FOR NEGATIVE EMOTIONAL OUTCOMES
FOLLOWING ALCOHOL-INVOLVED SEXUAL ASSAULT: A FOCUS ON SELF-
COMPASSION

By

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ABSTRACT

My dissertation explores risk and resilience factors in the association between alcohol-involved sexual assault (AISA; when the survivor was intoxicated) and negative emotional outcomes, focusing on self-compassion. The cognitive model of trauma posits internal, negative, stable appraisals explain the link between AISA and negative emotional outcomes. Socio-cultural stigma (e.g., rape myths) may increase risk of developing such appraisals, including fear of self-compassion (FOSC), self-blame, and shame, and prevent use of protective self-compassionate appraisals. I explored components of self-compassion (i.e., high self-caring, low self-coldness) as attenuating and/or counteracting resilience factors in the association between AISA and negative emotional outcomes among ($N = 785$) undergraduate drinkers (Study 1). High self-caring and low self-coldness counteracted the adverse effects of AISA on anxiety and depression, suggesting increasing self-caring and reducing self-coldness may offset the adverse effects of AISA on emotional outcomes. I also compared six nested confirmatory factor analysis models of the Self Compassion Scale (SCS; Neff, 2003b), using $N=1158$ Canadian undergraduates (Study 2). Results best supported a two-factor hierarchical model. Estimating latent self-caring and self-coldness variables with structural equation modelling (SEM) and avoiding single scores is recommended. Using SEM, I then tested shame, self-coldness, self-caring, FOSC, and characterological (CSB) and behavioural self-blame (BSB) as mechanisms linking AISA and PTSD, anxiety, and depression symptoms, respectively (Study 3). Among a community sample of younger adults ($N = 409$), shame emerged as the strongest mediator linking AISA with all outcomes. FOSC also partially mediated the AISA-PTSD symptom association, self-coldness partially mediated the AISA-anxiety symptom association, and CSB fully mediated the AISA-depression symptom association. Avoidance-based processes, ruminative-/worry-based cognitions, and negative self-evaluative cognitions may be distinctly relevant for AISA-related PTSD, anxiety, and depressive symptoms, respectively, along with shame. Study 4 qualitatively explored eight AISA survivors' lived experiences. Thematic analyses revealed three interrelated themes: 1) negative emotional outcomes of AISA, 2) internalized self-blame, low self-compassion, FOSC, and pre-existing maladaptive tendencies as risk factors, and 3) resisting self-blame and facilitating self-compassion by living by one's values and challenging FOSC, as resilience factors. AISA survivors may benefit from interventions targeting shame, self-blame, low self-compassion, and FOSC, and acknowledging socio-cultural AISA-specific stigma.

LIST OF ABBREVIATIONS AND SYMBOLS USED

AISA	Alcohol-involved sexual assault
ABQ	Attributional Blame Questionnaire
BSB	Behavioural self-blame
CI	Confidence interval
CFA	Confirmatory factor analysis
CFI	Comparative fit index
CH	Common humanity
CPA	Childhood physical abuse
CSA	Childhood sexual abuse
CSB	Characterological self-blame
DWLS	Diagonally weighted least squares
ESS	Experience of Shame Scale
FOSC	Fear of self-compassion
GAD-7	Generalized Anxiety Disorder -7
GA	Generalized anxiety
ISO	Isolation
K10	Kessler Psychological Distress Scale
LL	Lower limit
<i>M</i>	Mean
M	Mindfulness
OI	Overidentification
PCL-5	Post-Traumatic Stress Disorder Checklist – DSM 5
PHQ-9	Patient Health Questionnaire-9
PTSD	Posttraumatic stress disorder
RCT	Randomized control trial
RMSEA	Root mean square error of approximation
SA	Sexual assault
SC	Self-compassion
SCS	Self-Compassion Scale

SD	Standard deviation
SE	Standard error
SEM	Structural equation modelling
SJ	Self-judgement
SK	Self-kindness
SPSS	Statistical Package for the Social Sciences
SRMR	Standardized root mean square residual
TLI	Tucker Lewis index
UL	Lower limit
a	“a” mediation model pathway
α	Cronbach’s alpha
ab_{cs}	Completely standardized indirect effect
B	Unstandardized beta coefficients
β	Standardized betas coefficients
c	Total effect
c'	Direct effect
df	Degrees of freedom
F	F statistic
N	Sample size
n	Proportion of N sample size
p	p-value
r	Pearson’s correlation coefficient
R^2	Variance explained
χ^2	Chi-square
<	Less than
>	Greater than
\geq	Greater than, or equal to
\leq	Less than, or equal to
ΔF	Change in F statistic
ΔR^2	Change in R^2

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CHAPTER 1. INTRODUCTION

My dissertation explores risk and resilience factors for negative emotional outcomes following sexual assault where the survivor was drinking, with a specific focus on self-compassion. My dissertation includes four publication-style manuscripts with primarily emerging (i.e., 18-29 years old) and young adult (i.e., 30-39 years old; Arnett et al., 2014) samples. My first study examined self-compassion as a compensatory resilience factor for anxiety and depression symptoms related to AISA among undergraduates. The second study assessed the factor structure of the frequently utilized Self-Compassion Scale (SCS; Neff, 2003b) through comprehensive nested comparisons of six confirmatory factor analysis models, using an undergraduate sample. Extending the first study, the third study tested the relative mediating effects of self-compassion, fear of self-compassion (FOSC), shame, and self-blame on the associations between AISA and PTSD, anxiety, and depression symptoms, with a community sample. The fourth study qualitatively explored risk and resilience factors for negative emotional outcomes among a community sample of AISA survivors, in the context of socio-cultural AISA-specific stigma. Prior to presenting each study, I introduce the antecedents and consequences of AISA, theoretical models of risk and resilience, the presence and implications of AISA-related stigma within the broader societal context, and the cognitive model of trauma, all of which underpin my dissertation. I then introduce the research objectives of my overall dissertation.

Antecedents and Consequences of AISA

Defining and Measuring Sexual Assault

Sexual assault definitions and nomenclature vary across and within platforms (e.g., legal, empirical, clinical, individual perceptions) and have changed over time, with alternative labels including, for example, rape, sexual victimization, and sexual aggression (Cook et al., 2011).¹ Sexual assault definitions typically reflect one or all of the components of 1) a sexual act, 2) the tactics used to complete or attempt the sexual act, and 3) non-consent, each of which may be operationalized differently or not at all across conceptualizations (Cook et al., 2011). The Criminal Code of Canada defines sexual assault (previously labelled rape) as intentional, expressly non-consensual sexual contact, ranging from touching any sexualized area of the body to penetrative sexual acts, with or without direct or indirect application of threatened or actual physical force (Criminal Code, 1985, s 265(1)(a-c)). Although the Canadian legal definition of sexual assault specifies sexual acts as sexual contact, it does not operationalize the tactic of physical force (i.e., as the presence of injury or absence of physical freedom), nor does it clearly define expressly non-consensual (i.e., verbal expression or behavioural indicators).

Extending the Canadian legal definition, some empirical, public consensus, and clinical characterizations of sexual assault include experiencing perceived threat to sexual and/or personal integrity, which may occur through actual or threatened sexual violence and/or unwanted sexual contact (Avina & O'Donohue, 2002; Testa et al., 2004).

¹ My dissertation uses the term sexual assault for consistency and to reflect the language commonly employed within the current literature (Mellins et al., 2017).

Additionally, some conceptualizations may involve the tactic of psychological sexual coercion, for example, using verbal pressure, threats to withdraw love, respect, or affection (differentiated from threats of physical harm), or purposefully encouraging the potential victim's alcohol intake (Struckman-Johnson et al., 2003). Notably, encouraging alcohol intake to a point of incapacitated physical functioning may overlap with use of physical force, if it is defined as the absence of physical freedom, though it may not if defined as the presence of physical injury. This latter example demonstrates the difficulties often inherent in conceptualizing sexual assault.

A closely related construct, but potentially ambiguous in its distinction from sexual assault, is sexual harassment. This construct captures unwanted sexually oriented behaviors (but not necessarily sexual contact), such as remarks, advances, and/or requests which may be implicitly or explicitly tied to potential negative consequences (e.g., losing employment) and that create a hostile environment (Avina & O'Donohue, 2002). While sexual harassment does not overtly involve physical or sexual contact and thus may not be considered sexual assault by legal definitions, some instances of sexual harassment may arguably fall within sexual assault definitions including perceived violation of integrity and/or psychological sexual coercion (Avina & O'Donohue, 2002; Struckman-Johnson et al., 2003).

Definitions of sexual assault also involve the element of sexual non-consent, which again is inconsistently defined and conceptualized (Muehlenhard et al., 2016; Kazan, 2018). Some approaches require the presence of explicit consent (i.e., verbal expressions of agreement), some the presence of implied consent (i.e., verbal and behavioural indicators that may suggest consent but are not explicit), and some the

absence of explicit non-consent (i.e., not saying “no” or physically resisting; Muehlenhard et al., 2016). A comprehensive definition of the presence of explicit consent for sexual activities includes the shared and equal responsibility of all parties involved to actively obtain ongoing, affirmative, conscious, and voluntary agreement to engage in the sexual activity. This approach specifies that silence or the absence of protest or resistance is insufficient, nor is consent implied by previous encounters, a pre-existing relationship, or intoxication (Muehlenhard et al., 2016). However, implied consent or absence of explicit non-consent are the most commonly used, which may in part contribute to survivors not acknowledging sexual assault experiences as such (e.g., if a victim did not physically resist a non-consensual sexual encounter due to an immobilizing trauma response; Muehlenhard et al., 2016; Kazan, 2018).

Along with variable meanings and operationalizations of the components of sexual assault, individuals may hold their own divergent and ever shifting perceptions, which are intertwined with personal values and current cultural and political climates. For example, marital rape was criminalized in 1983 in Canada and 1993 in the United States, prior to which wives were not permitted to press criminal charges against their husbands as it was not viewed as sexual assault (Lazer, 2010). Despite this legal change, a study among college students conducted almost a decade later showed only 35% of men and 56.5% of women strongly supported that marital rape should be a crime, highlighting a discrepancy between individual and legal sexual assault conceptualizations (Auster & Leone, 2001). More recently, a qualitative study exploring responses to a vignette depicting sexual assault according to the legal definition (i.e., explicit, intentional, and expressly non-consensual sexual contact) and where the victim was intoxicated showed

participants rarely labelled such as sexual assault, often citing that the lack of perceived physical force and the victim's intoxication negated its legitimacy (Starfelt et al., 2015). Auster and Leone's (2001) and Starfelt et al.'s (2015) studies illustrate that people may have different opinions and working definitions of what constitutes sexual assault, which has implications regarding its measurement.

In assessing sexual assault, inconsistent perceptions of the term suggest that using items with labels such as rape or sexual assault may exclude those who have experienced sexual assault according to legal and other working definitions but who do not classify their experience as such (Cook et al., 2011; Testa et al., 2004). Alternatively, measures using behaviourally based descriptions of sexually assaultive actions (e.g., the Sexual Experiences Survey - Revised; SES-R; Koss et al., 1982) tend to perform better in capturing both those who label their experience as sexual assault and those who may not (Testa et al., 2004). Although the SES-R is considered the gold standard in screening for sexual assault prevalence, it is nevertheless not without limitations. Namely, the SES-R and similar measures assume an accurate and consistent interpretation of sexual consent, which may vary between people and over time within the same person (Muehlenhard et al., 2016). Alluding to this, the SES-R showed moderate ($Kappa = .33-.69$) test-retest reliability over four-weeks, with higher consistency for physically violent and completed sexual assault, suggesting that survivors of sexual assault that is less clearly aligned with common conceptualizations, such as those without physical force, may experience less stable interpretations regarding their experiences (Littleton et al., 2019). These shifts in interpretations may reflect changes in whether the survivor perceives their experience was considered consensual, given that the SES-R does not use labels of the behaviours

but does assume unchanging perceptions of consent (Koss et al., 1982; Testa et al., 2004). Another possibility is that, while better at including those who do not label their experience as sexual assault, behaviourally based measures often involve longer questions and potentially complex, multifaceted sentence clauses that may be difficult to comprehend or remember (Cook et al., 2011). There is also evidence that the order of questions influences reported prevalence (Abbey et al., 2005; Cook et al., 2011). Specifically, measures listing the tactic used to compel the sexual assault prior to the type of unwanted sexual act (e.g., has someone taken advantage of you while intoxicated in order to do a specific non-consensual sexual act) resulted in higher reports of sexual assault than when the sexual act was listed first, as used in the SES-R (e.g., have you experienced a specific non-consensual sexual act by being taken advantage of while intoxicated; Abbey et al., 2005; Cook et al., 2011). Altogether, defining and measuring sexual assault is a complex and challenging process, and each approach (e.g., behavioural vs perception-based items) has strengths and limitations that may lend themselves better to particular research questions and platforms. In my dissertation I define sexual assault as involving perceived threat to sexual and/or personal integrity, occurring through actual or threatened sexual violence and/or unwanted sexual contact (Avina & O'Donohue, 2002; Testa et al., 2004). Given the objective of my dissertation is to inform clinical treatment targets among sexual assault survivors, emphasizing perceptions of harm may capture those who may be the most likely to seek treatment, as those who experience sexual assault but do not interpret violations of integrity may be at lower risk of subsequent negative emotional outcomes (Ehlers & Clark, 2000; Resick et al., 2016).

Prevalence of Sexual Assault

Sexual assault is reported by approximately 1 in 5 adults, and occurs more often among women (Mellins et al., 2017; Black et al., 2011). Of sexual assaults, about half involve survivor and/or perpetrator alcohol use, which may be a tactic used to perpetrate sexual assault when the survivor was intoxicated (Cook et al., 2011; Mellins et al., 2017; O’Callaghan & Ullman, 2021). Given the higher rate of heavy drinking among young adults (Howard et al., 2008; O’Callaghan & Ullman, 2021; Windle et al., 2005), being subjected to a sexual assault where alcohol is involved may be more likely during this life stage. Supporting this, over half of sexual assaults, including sexual assaults involving alcohol, occurred between the age of 18-34 among a nationally representative sample of US women (Breiding et al., 2014). Additionally, 8% of community-dwelling women reported alcohol-involved sexual assault (AISA; Black et al., 2011), compared to 14% of undergraduate women (O’Callaghan & Ullman, 2021), suggesting AISA may be more common among university students, potentially due to the normative heavy drinking culture on university campuses (Howard et al., 2008). Therefore, emerging/young adults in the community, and particularly in university, may be at the highest risk of experiencing AISA. Along with broader preventative campaigns targeting potential perpetrators to reduce the incidence of AISA, exploring the risk and resilience factors for AISA-related negative emotional outcomes among community and student emerging/young adults may inform intervention and treatment targets, which if addressed swiftly may circumvent longer term negative effects.

Negative Emotional Outcomes of AISA

Survivors who were intoxicated at the time of the sexual assault (referred to henceforth as AISA) may be at risk of developing subsequent negative emotional outcomes (Dworkin, 2020; Gong et al., 2019). Indeed, despite the potential stress-response dampening effects of alcohol and/or the tendency for AISAs to be less physically violent, experiencing AISA is associated with increased risk of developing PTSD (Gong et al., 2019). A recent meta-analysis showed 36% of sexual assault survivors, including AISA, reported experiencing PTSD in their lifetime, compared to 9% of people who did not experience sexual assault (Dworkin, 2020). PTSD first involves exposure to trauma, defined as actual or threatened death, serious injury, or sexual violence, through direct experience, witnessing the trauma, or learning of a close social contact's experience (American Psychiatric Association, 2013). Following such exposure, symptoms reflecting four main categories may develop. The first symptom category is intrusive symptoms, characterized by distressing, recurrent, involuntary, and invasive memories and/or dreams, and dissociative, anxious, and/or negative emotional reactions to trauma-related cues. The second symptom category is avoidance of internal (e.g., thoughts, memories, and/or emotions) or external (e.g., people, places, conversations, objects) trauma reminders. The third category is negative alterations in cognitions characterized by inability to remember central aspects of the trauma (not due to drug or alcohol use), exaggerated negative beliefs, expectations, and/or interpretations about the self, others, or the world, and the causes and consequences of the trauma. The third category also includes negative alterations in mood, characterized by negative affect (e.g., anger, sadness, hopelessness), inability to feel positive affect, lowered interest in

activities, and perceived alienation or detachment from others. The fourth category is trauma-related changes in arousal and reactivity, characterized by irritability or emotional outbursts, recklessness, hypervigilance, exaggerated startle response, difficulty concentrating, and sleep disturbances. The duration of symptoms must be for one month or longer and cause significant distress and/or impairment in functioning (American Psychiatric Association, 2013).

Along with risk of developing PTSD symptoms following trauma exposure, AISA survivors may also be vulnerable to developing anxiety, particularly generalized anxiety disorder (GAD) symptoms (Carey et al., 2018; Dworkin, 2020). Although there have been no studies comparing AISA to general sexual assault, the risk of developing GAD symptoms post-AISA is supported by the finding that 20% of sexual assault survivors (including AISA) report experiencing GAD in their lifetime, compared to 10% of people who did not experience sexual assault (Carey et al., 2018; Dworkin, 2020). GAD is characterized by distressing and impairing worry, defined as excessive, repetitive, and difficult to control thoughts about feared potential negative future events (American Psychiatric Association, 2013). GAD also involves physiological anxiety, restlessness or nervousness, fatigue, difficulty concentrating, irritability, muscle tension, and sleep disturbances (American Psychiatric Association, 2013).

In addition to PTSD and GAD symptoms, AISA survivors may be at risk of experiencing depression symptoms, including major depression disorder (referred to hereafter as depression). There have been no studies comparing AISA to general sexual assault, though the risk of developing depression symptoms post-AISA is evidenced by the finding that 39% of sexual assault survivors (including AISA) report experiencing a

depressive disorder in their lifetime, compared to 17% of people who did not experience sexual assault (Dworkin, 2020). Depression is characterized by a continuous two-week period of persistent (i.e., most of the day, nearly every day), distressing, and impairing negative mood or diminished interest in activities, significant unintentional change in appetite or weight, sleep disturbances, agitation or sluggishness, fatigue, difficulty concentrating or indecisiveness, and suicidal ideation (American Psychiatric Association, 2013). Depression also involves rumination, conceptualized as excessive, perseverative thoughts about negative emotions, perceived past mistakes, inappropriate attributions of responsibility to themselves (i.e., self-blame), and exaggerated negative implications for their self-concept (Beck & Bredemeier, 2016; Nolen-Hoeksema et al., 2008).

PTSD, GAD, and depression symptoms are often comorbid symptomatologies following sexual assault, including AISA (Dworkin, 2020), suggesting that while they may be unique responses following trauma, they share commonalities. Price and van Stolck-Cooke (2015) found the affective components of depression were most strongly associated with the emotional numbing (e.g., dissociation, inability to feel positive affect) components of PTSD, and the somatic components (e.g., sleep disturbances, appetite changes, fatigue) of depression were most strongly associated with the hyperarousal components (e.g., hypervigilance, intrusive symptoms) of PTSD. Additionally, GAD as a unitary construct was most strongly associated with the hyperarousal components of PTSD (Price & van Stolck-Cooke, 2015).

Despite commonalities, there is evidence that PTSD, GAD, and depression are distinct reactions following trauma (Grant et al., 2008). Specifically, Grant et al. (2008) used confirmatory factor analyses (CFA) and compared four nested models, including

one with three separate PTSD, GAD, and depression factors, one with all symptoms loading on to a single general distress factor, and two models with two factors each (i.e., PTSD-GAD and depression, and PTSD-depression and GAD). Results showed the model with three separate PTSD, GAD, and depression factors fit best (Grant et al., 2008). Therefore, AISA-related PTSD, GAD, and depression symptoms, although interconnected, are unique potential negative emotional outcomes and may correspond to different (albeit related) risk and resilience factors. These findings support the separate exploration of PTSD, GAD, and depression symptoms rather than an amalgamated, global negative emotional outcomes construct. Although these outcomes are collectively referred to as negative emotional outcomes for conciseness, they are nonetheless deemed as separable yet intercorrelated emotional responses.

Theoretical Models of Risk and Resilience

Rather than only focusing on risk factors for negative emotional outcomes following trauma, a positive psychology, strength-based approach recognizes that exploring and acknowledging resilience is equally important (Luthar et al., 2014). Resilience is the process of overcoming or coping adaptively with traumatic experiences and circumventing trajectories that are associated with trauma exposure, and resilience factors are those that protect from negative emotional outcomes (Fergus & Zimmerman, 2005; Rutter, 1985). Alternative conceptualizations differentiate coping from resilience, in that resilience is the absence of the need to cope following stressful experiences or being impervious to negative effects of stressful and traumatic situations (e.g., Fletcher & Sarkar, 2013); however, the focus of this approach is on stressful situations encountered within everyday life. Given that trauma such as AISA is qualitatively more severe than

daily stressors and subsequent brief negative reactions are expected and common (e.g., sadness, guilt, shame) even if they do not persevere and develop into PTSD, anxiety, or depression (Mason & Lodrick, 2013), the absence of negative responses and/or need for coping following AISA is arguably not realistic. Moreover, even if daily stressors are not experienced or perceived as stressful, this is potentially due to preceding neutral or positive cognitive appraisals about the stressor, which are coping strategies (Yeung et al., 2016). As such, the resilience framework used regarding AISA includes the process of coping adaptively with the negative after-effects of the trauma (Fergus & Zimmerman, 2005; Rutter, 1985).

Resilience can also be interpreted using the social-ecological framework (Ungar, 2013), whereby resilience is affected by both socio-cultural (e.g., media, community, family, social network) and individual (e.g., personality traits) risk and resilience factors. Further, risk and resilience factors may work together in different ways, with the protective model positing the resilience factor attenuates, or moderates, the association between the risk factor and the negative outcome (Fergus & Zimmerman, 2005). One example of a protective model is high social support attenuating the link between AISA and PTSD symptoms, in that AISA is more strongly linked to PTSD symptoms in those with low rather than high social support. Additionally, the compensatory model involves two main effects, where the resilience factor compensates for (i.e., acts in the opposite direction to) the effect of the risk factor on the negative outcome. One example of a compensatory model is presence of trauma-informed health care resources counteracting the negative effects of AISA on PTSD symptoms (Fergus & Zimmerman, 2005).

Examining resilience, particularly from the social-ecological framework (Ungar, 2013), may be best accomplished using mixed quantitative and qualitative methods, as their distinct but complimentary approaches may contribute to a thorough, more balanced understanding (Gelo et al., 2008). Quantitative approaches are deductive in that they allow for testing preconceived theories or hypothesis (e.g., the protective vs compensatory models of resilience, and the cognitive model of trauma; Ehlers & Clark, 2000; Fergus & Zimmerman, 2005; Gelo et al., 2008). The larger samples used in quantitative methods also delineate overall patterns that are potentially generalizable to others' experiences (Gelo et al., 2008). Comparatively, qualitative methods are inductive in that theories and conclusions are generated from the data rather than a preconceived theory. The smaller sample used in qualitative methods and in depth, person-centered exploration of unique lived experiences as they are integrated within the cultural context allows for a rich understanding of resilience among AISA survivors that may guide future theory and hypothesis testing. By providing an opportunity to explore and capture the complex nuances and subjective nature of lived experiences, qualitative approaches may additionally enrich the understanding of an existing theory and contextualize the general patterns found using quantitative methods (Gelo et al., 2008).

Self-Compassion

One potential resilience factor among AISA survivors may be self-compassion, which is nonjudgmentally, gently, and mindfully relating to oneself and one's experiences (Gilbert 2010; Neff, 2003). Neff (2003) presents a global self-compassion concept comprised of the presence of three positively-oriented facets, including *self-kindness*, which is treating oneself gently, *mindfulness*, which is balanced, non-evaluative

awareness of emotions and thoughts, and *common humanity*, which is understanding failures as part of being human, and the absence of three negatively-oriented facets, including *self-judgement*, which is treating oneself harshly, *over-identification*, which is ruminating, worrying, and/or catastrophizing, and *isolation*, which is believing one's failures are unique and specific to the self. Studies using the SCS (Neff, 2003b) often utilize total scores as suggested by Neff (2003b); however, a unidimensional factor structure has been difficult to replicate, calling into question the validity of a global, singular self-compassion factor and scale scoring approach (Brenner et al., 2017).

Gilbert (2010) posits an alternative but potentially complimentary conceptualization of self-compassion whereby self-compassion involves the activation of the safeness and deactivation of the threat/defense processing systems. Such processing systems may correspond to the three positively oriented (labelled self-caring) and three negatively oriented (labelled self-coldness) facets of the SCS (Gilbert, 2010; Neff, 2003b). Supporting this, rather than a single self-compassion factor, Brenner et al. (2017) and Strickland et al. (in press) found results supporting two overarching factors, with the three positive and three negative SCS facets each loading onto higher-order self-caring and self-coldness factors, respectively. Self-compassion may therefore reflect the separate but related components of high self-caring and low self-coldness.

Self-compassion (i.e., high self-caring and low self-coldness) may function as a resilience factor following AISA. Namely, negative emotional outcomes may be lessened by using self-kindness in the face of perceived failure or difficult experiences instead of self-coldness, mindfully accepting painful thoughts and emotions rather than evaluating them as positive or negative, and recognizing that experiencing AISA may not have been

unique to them and a supportive social network for survivors may exist, rather than interpreting they are somehow causing bad things to occur and no one is available to support them. Further, self-compassion may enable a survivor to experience less avoidance and rumination, increasing opportunities for memory reprocessing, and in turn reducing negative emotional outcomes (Zeller et al., 2015). In contrast, the absence of self-compassion, or low self-caring and high self-coldness, may be a risk factor for AISA-related negative emotional outcomes (Fergus & Zimmerman, 2005). In summary, higher self-caring and lower self-coldness may be interrelated resilience and risk factors among AISA survivors and exploring avenues to increase self-caring and reduce self-coldness may be indicated. This is particularly warranted because AISA survivors may be vulnerable to societal factors, such as stigma, potentially further impeding self-caring and worsening self-coldness.

AISA Related Stigma

Socio-cultural stigma about AISA survivors is exhibited through rape myths, which are harmful, false beliefs reflecting societal stereotypes and misinformation about sexual assault, often dismissing the gravity of the trauma and/or redirecting responsibility for AISA from the perpetrator to the survivor (i.e., victim-blaming; Stubbs-Richardson et al., 2018). Such attitudes typically capture gendered biases, such as beliefs that sexually active women are promiscuous, that men have less control over their sexual impulses than women and are thus less culpable for perpetrating sexual assault, and that men cannot be sexually assaulted (Ryan, 2011). Despite overall positive strides in challenging rape myth acceptance (Aroustamian, 2020), rape myths about AISA survivors unfortunately prevail and may be communicated and reinforced through interrelated

societal levels, including macro (e.g., news and social media, laws, systemic institutional practices), community (e.g., social and family networks), and individual (e.g., rape myth acceptance and internalized self-blame) contexts (Edwards et al., 2011). AISA survivors may be at heightened risk of developing negative emotional outcomes if rape myths are internalized (Brown et al., 2018; Testa & Livingston, 1999).

The legal system is one macro-level context where rape myths may be communicated, particularly among law enforcement officers (Garza & Franklin, 2021). Indeed, although rape myth acceptance may be declining, law enforcement officers are more likely to accept AISA-specific victim-blaming rape myths compared to those about general sexual assault where the survivor was not drinking (Garza & Franklin, 2021; Grubb & Turner, 2012). Rape myth acceptance among law enforcement officers negatively influences their responses to survivors' reports of sexual assault, resulting in more cases being dismissed, disbelieving survivors' reports, and blaming them for the AISA, which may increase distress (Garza & Franklin, 2021; Schwarz et al., 2017). Unsurprisingly, fear of receiving victim-blaming responses is a barrier to disclosing AISA to the police, which may also limit opportunities for support and trauma memory reprocessing (Schwarz et al., 2017).

Social media is a relatively new macro-level context, serving as a unique platform where rape myths may be both perpetuated and resisted. Stubbs-Richardson et al. (2018) analyzed user-lead discussions about prominent sexual assault cases over social media. The authors identified user rape-myth acceptance and victim-blaming content, including beliefs the survivor was lying, wanted to be sexually assaulted, and/or deserved it because of her clothing choices or for being sexually active, and disparaging survivors as

“whores” or “sluts” who are thus presumed to be unworthy of dignity or safety (p. 98). Additionally, perpetrators were excused of culpability due to beliefs they misunderstood the survivor’s non-consent, that they are unable to control their sexual impulses, and the survivor should not have “tempted” them (p. 99; Stubbs-Richardson et al., 2018). Similarly, analysis of newspaper reports of prominent sexual assault cases showed there was an emphasis on the survivor’s perceived role in causing, or not adequately resisting/preventing, the sexual assault, while excusing the perpetrators (Aroustamian, 2020).

Encouragingly, while Stubbs-Richardson et al. (2018) found the posts communicating rape myth acceptance tended to be more popular and shared more widely, users also utilized social media to challenge rape myths, for example, emphasizing the perpetrators responsibility for choosing to sexually assault someone rather than blaming the survivor’s vulnerability due to alcohol use (Stubbs-Richardson et al., 2018). Aroustamian (2020) also showed an improvement over time (i.e., fewer rape myths in news reports). This improvement corresponded to women’s rights social media and political movements countering stigma and rape myths (e.g., MeToo), attesting to the reach social media may have in both perpetuating and counteracting societal rape myth acceptance (Aroustamian, 2020).

AISA rape myths may be communicated at the community level through negative responses to disclosure by social supports and negative attitudes towards AISA survivors within social networks (Relyea & Ullman, 2015). Compared to general sexual assault survivors, AISA survivors are more likely to receive negative, victim-blaming responses to disclosure from their social contacts (Littleton et al., 2009; Relyea & Ullman, 2015;

Ullman & Najdowski, 2010), which are associated with worsened PTSD, depression, and anxiety symptoms and may limit informal opportunities for trauma memory reprocessing (Orchowski et al., 2013; Schwarz et al., 2017).

Demonstrating the acceptance of AISA-related rape myths within AISA survivors' social networks, Brown et al. (2018) explored rape myth acceptance and how participants might respond to someone disclosing AISA. A sample of undergraduates, comprised mostly of women, reviewed four vignettes depicting women who had experienced 1) AISA when they were intoxicated and where the perpetrator used force, 2) AISA when they were intoxicated and where the perpetrator did not use force, 3) sexual assault without being intoxicated and where the perpetrator used force, and 4) sexual assault without being intoxicated and where the perpetrator did not use force. Results showed participants perceived the hypothetical survivor was more responsible when she was drinking compared to when she was not intoxicated, and when the perpetrator used more force compared to when he did not, an effect stronger among men in the sample (though there were a small number of men in the study). Survivor intoxication did not change perceptions of perpetrator responsibility, although it was used as a reason to hold the survivor more accountable (Brown et al., 2018). Starfelt et al.'s (2015) qualitative analysis of reactions to a vignette depicting AISA showed comparable juxtaposing themes: while participants believed the perpetrator was responsible for the AISA, they simultaneously perceived the perpetrator's intoxication reduced the perpetrator's culpability, citing the potential for misunderstanding the survivor's non-consent despite it being verbally explicit in the vignette. In contrast, rather than excusing their behaviours, participants perceived the survivor's intoxication *increased* their culpability for the

AISA, for example through reduced ability to detect and avoid risk or resist sufficiently, a failing they assumed the survivor would feel ashamed of (Starfelt et al., 2015). Brown et al.'s (2018) and Starfelt et al.'s (2015) results highlight that other people within AISA survivors' social network may apply implicit victim-blaming rape myths and double standards to them.

Among AISA survivors themselves, AISA-specific stigmatizing messages from legal professionals, social and news media, and others in their social network may silence and isolate them, and deter support seeking (Orchowski et al., 2013; Schwarz et al., 2017). Further, internalizing this messaging may reduce the resilience factor of self-caring-related interpretations about AISA, and increase the risk factors of self-coldness, FOOSC, and potentially self-blame and shame-related interpretations about AISA (Budden, 2009; Ehlers & Clark, 2000; Peter-Hagene & Ullman, 2018). In turn, such interpretations may contribute to negative emotional outcomes (Bhuptani, 2020; Peter-Hagene & Ullman, 2018). Acknowledging the influence of socio-cultural AISA-related stigma may consequently be an important consideration in understanding the association between AISA and negative emotional outcomes.

Cognitive Models of Trauma-Related Emotional Disorders

The Cognitive Model of Trauma: PTSD

Theoretically useful in understanding the role of internalized stigma following AISA, the cognitive model of trauma posits that underlying interpretations (i.e., appraisals) about the cause, experience, and consequences of the trauma may be central in the development of PTSD symptoms (Ehlers & Clark, 2000; Resick et al., 2016). Within this model, PTSD symptoms are characterized and maintained by negative

thoughts and emotions, a persistent sense of current threat, and avoidance of such perceived threat (Ehlers & Clark, 2000). A persistent sense of current threat and avoidance are thought to be a contributing factor to intrusive and anxious-arousal PTSD symptoms and are categorized as fear-based processes. Along with negative cognitions and affect, such fear-based processes are theorized to arise from survivors' appraisals about the trauma, and the ensuing implications for their sense of self and future security. In other words, the cognitive model theorizes that trauma is followed by appraisals, which – depending on the content of the appraisal – may in turn influence the development of PTSD symptoms, suggesting a mediational process (Ehlers & Clark, 2000). Survivors' appraisals may be *positive* (e.g., perceiving they became more assertive following AISA) or *negative* (e.g., perceiving they have been irreparably damaged by AISA), *external* (e.g., the perpetrator caused the AISA) or *internal* (e.g., the survivor caused the AISA), and *unstable* (e.g., based on modifiable behaviours or situational factors) or *stable* (e.g., based on unchangeable character-traits; Ehlers & Clark, 2000).

While positive, internal, and stable appraisals may prevent or reduce the severity of negative emotional outcomes, negative, internal, and stable appraisals may be particularly important in the development and strengthening of PTSD symptoms following AISA (Ehlers & Clark, 2000). In particular, the negative implications of such appraisals regarding the survivors' self-concept, for example perceptions the survivor caused AISA because they are inherently flawed and therefore deserved it, may contribute to low self-worth and negative affect PTSD symptoms. Additionally, the perceived stable, unchangeability nature of appraisals, for example perceptions the survivor attracts trauma because of who they are as a person, and future trauma is therefore inevitable, may

contribute to fear of AISA reoccurring and beliefs that the world is unsafe, and thus increase fear-based PTSD processes (e.g., intrusive symptoms, hypervigilance) and avoidance. Negative, stable appraisals may also interfere with successful trauma memory processing, whereby the trauma experience is integrated into a coherent, acceptable sense of self and contextualized in time and space (i.e., connected to memories prior to and following AISA). Negative, internal, and stable appraisals may be incongruent with the survivors' pre-existing sense of self, contributing to difficulty incorporating the trauma memory into an acceptable sense of self. By potentially impeding trauma memory processing, negative, stable appraisals may be linked to intrusive PTSD symptoms, which are predominantly sensory, including emotions, physical sensations, smells, and images, and experienced as currently occurring (i.e., not attached to temporal context). Thus, despite the trauma having already occurred, intrusive symptoms are experienced as occurring "here-and-now" and may maintain a persistent sense of current threat, a central component of PTSD. Further, the negative appraisals and effects on self-worth, mood, and fear-based PTSD symptoms may be reinforced by biased recall of aspects of the trauma memory that are consistent with the negative trauma appraisals, reducing opportunities to challenge them (Ehlers & Clark, 2000).

Cognitive Model of Trauma: Anxiety and Depression

Similar to the cognitive model of PTSD, the cognitive models of anxiety and depression posit analogous processes in that persistent, entrenched negative appraisals about the self and dangerousness of the world contribute to the development and maintenance of depression and anxiety symptoms (Clark & Beck, 2010). Such appraisals may also bias information that is processed and recognized to be congruent with the

negative appraisals, while simultaneously filtering out the processing and recognition of incongruent positive or neutral information, thereby perpetuating anxiety and depression symptoms. Importantly, regardless of whether anxiety and depression are remitted, stressful, negative life experiences, such as AISA, that match pre-existing negative appraisals about the self and how they fit within the world (i.e., their self-schema), may reactivate anxiety and depression if they have been experienced previously even at a subclinical level (Clark & Beck, 2010).

Appraisals involving exaggerated perceived current and future threat, dangerousness of the world, and vulnerability of the self and others are most relevant to anxiety, particularly GAD, although they are also present in depression symptomatology to a lesser extent (Clark & Beck, 2010; Yook et al., 2010). Like PTSD, GAD is maintained and worsened by attempts to avoid or prevent feared negative experiences from occurring. One potentially counter-intuitive form of avoidance is worrying, characterized by excessive thoughts about the possibility of experiencing feared negative experiences in the future (American Psychiatric Association, 2013; Yook et al., 2010). Borkovec et al.'s (2004) model of GAD postulates worry is a cognitive strategy to prepare for negative outcomes or discover ways to prevent them, which Mennin et al. (2002, 2005) builds on by suggesting worry may be used to avoid experiencing negative emotions by engaging in verbal cognitive processes and limiting imagery and emotional functions. According to the contrast avoidance model, worry may be used to avoid or mute emotional and physiological reactivity to a feared experience by purposefully increasing anxiety and negative affect prior to exposure, thereby shrinking the magnitude of the emotional and physiological shift (Newman & Llera, 2011). In other words, worry

is used to avoid experiencing an unexpected emotional contrast from happy/neutral to unhappy/anxious states. Relatedly, worry may be a strategy to avoid feeling uncertainty about *what* potential feared adverse outcomes may occur (e.g., being called into the boss's office and worrying it might be about being fired), or uncertainty about *when* a feared adverse outcome or negative emotional contrast may occur (Newman & Llera, 2011; Yook et al., 2010). Worry may be reinforced by the perceived avoidance of a negative emotional experience or a surprising negative emotional contrast when the feared experience does occur, and by the feeling of relief when it does not. Moreover, by preventing or muting the fear response to the trigger, worry may prevent emotional processing and perpetuate anxiety symptoms (Borkovec et al., 2004; Mennin et al. 2002, 2005; Newman & Llera, 2011). Within the broader cognitive model of anxiety, appraisals that unexpected negative emotional experiences, particularly negative emotional contrasts, are intolerable may underly the fear and resulting avoidance (Clark & Beck, 2010; Newman & Llera, 2011).

Appraisals involving overly negative beliefs about the self, world, and future (i.e., the cognitive triad) are most relevant to depression, although again such appraisals are also part of GAD to a lesser extent (Beck & Bredemeier, 2016; Garnefski & Kraaij, 2018). Such appraisals may in turn bias attention towards negative information, maintaining depression symptoms (Beck & Bredemeier, 2016; Garnefski & Kraaij, 2018). Depression is also characterized by rumination, which may further entrench the cognitive attentional bias and interfere with effective problem solving and corresponding behaviours, ultimately maintaining and exacerbating symptoms (Beck & Bredemeier, 2016; Nolen-Hoeksema et al., 2008). Altogether, AISA-related GAD and depression may

collectively fit within a cognitive model of trauma along with PTSD, despite the general nature of the cognitive models of GAD and depression.

Self-Compassion and AISA-Related Negative Emotional Outcomes

Extending the compensatory model, interpreting self-compassion within the cognitive model may illuminate the processes by which self-compassion may counteract the adverse effects of AISA. Specifically, it may be a challenge for AISA survivors to develop positive, protective, self-compassionate appraisals, perhaps worsened in light of AISA-specific stigma, which in their absence may predict negative emotional outcomes. Demonstrating this, experiencing sexual assault was associated with higher self-coldness compared to not experiencing sexual assault (Williamson, 2019), and self-compassion was lower among adult survivors of childhood maltreatment than those not reporting maltreatment (Miron et al., 2016). Evidencing low self-compassion as an appraisal-related process, low self-compassion was related to negative, internal, and stable appraisals and shame among childhood trauma survivors (Barlow et al., 2017). Further, low self-compassion and negative cognitive appraisals (including self-blame) simultaneously explained the association between childhood abuse and PTSD symptoms (Barlow et al., 2017). In conclusion, low self-caring and high self-coldness-related appraisals may explain the link between AISA and negative emotional outcomes.

FOSC and AISA-Related Negative Emotional Outcomes

Given the potential for self-compassion in fostering resilience towards negative emotional outcomes, identifying the barriers to self-compassion may be important. One such barrier may be FOSC, characterized by the tendency to fear, or be reluctant to engage in, self-compassionate attitudes and behaviors (Gilbert et al., 2011). FOSC

involves appraisals involving negative self-concept (e.g., perceiving oneself as undeserving of compassion or social acceptance), fear-based processes (e.g., expecting bad things to happen if self-compassionate), and emotional avoidance (e.g., avoiding strong emotions arising from self-compassion; Geller et al., 2019).

Although there is overlap, FOSC is a theoretically and empirically distinct construct from self-compassion, particularly the self-caring component of self-compassion (Gilbert et al., 2011). This is supported by Naismith et al.'s (2019) results showing self-caring was not significantly associated with FOSC. FOSC is hypothesized to involve processes that correspond to activation of the threat/defense psychophysiological systems involved in the stress-response, while high self-caring is hypothesized to involve processes that correspond to activation of the safeness/self-soothing psychophysiological systems involved in prosocial, affiliative responses (Gilbert, 2010, 2011). Comparatively, low self-caring as measured with the SCS (Neff, 2003b) may not necessarily indicate activation of either the threat/defense or safeness/self-soothing systems, given that it does not capture perceived threat, nor does it indicate safeness/self-soothing processing *hypoactivity* (i.e., feeling numb, detached, dissociated; Gilbert, 2010; Naismith et al., 2019; Neff, 2003a). Rather, low self-caring may correspond most to a neutral/baseline psychophysiological state, which may be one possible explanation for the somewhat surprising tendency for there to be relatively weaker associations between low self-caring and other constructs compared to the self-coldness facet of self-compassion (e.g., Naismith et al., 2019; Strickland et al., 2019).

The conceptual overlap and distinction between FOSC and the self-coldness component of self-compassion is less clear, and it may be that higher self-coldness shares

more commonality with FOSC than low self-caring, given they may both activate threat/defense psycho-physiological processes (Gilbert, 2010). Beyond this potential commonality, self-coldness and FOSC may be differentiated in that FOSC appears to involve more avoidance- and fear-based processes than self-coldness. This interpretation is supported by Naismith et al.'s (2019) findings that FOSC was associated with avoidant-attachment style and Geller et al.'s (2019) results suggesting an FOSC includes an avoidance-based factor. In contrast, self-coldness may capture more ruminative and cognitive self-critical components. The commonalities and distinctions between self-compassion and FOSC is an interesting area for future research.

Complicating the conceptual understanding between FOSC and self-compassion further, experiencing both abuse *and* care from loved ones during childhood and/or as an adult may condition a fear response to receiving compassion, including from oneself. In such cases, self-caring may activate the threat/defense processing systems (Gilbert, 2010, 2011; Naismith et al., 2019). Together, self-compassion, particularly the unique roles of self-caring, self-coldness, and FOSC are processes deserving of more exploration, and they may be each distinctly associated with trauma-related outcomes. Research about their relative contributions to such outcomes is in its infancy.

The hypothesis that FOSC may activate threat/defense processing systems, while also specifically posing as a barrier to self-caring (and thus posing a barrier to activation of the safety/self-soothing processing systems), suggests FOSC may be important in the healing process following trauma. Specifically, FOSC-related appraisals may be another potential mediator in the AISA—negative emotional outcomes link (Gilbert et al., 2011). Moreover, given self-caring involves activation of the safety/self-soothing systems which

may motivate socially affiliative behaviours, the fear of such suggests that FOSC may be especially relevant for highly stigmatized, interpersonal trauma, including AISA.

Supporting this, adult survivors of childhood sexual abuse (CSA) showed higher FOSC compared to survivors of childhood physical abuse (CPA; Miron et al., 2016). FOSC also explained the associations between CSA and depression and PTSD symptoms, but not the associations between the arguably less stigmatized trauma of CPA and these outcomes (Miron et al., 2016). Indeed, given the components of negative self-concept and avoidance captured within FOSC, it be more strongly associated with negative emotional outcomes following trauma than low self-caring (Geller et al., 2019; Naismith et al., 2019).

Self-Blame and AISA-Related Negative Emotional Outcomes

Internalizing AISA-related stigma may predict self-blaming trauma appraisals, suggesting they may be relevant to ensuing negative emotional outcomes among AISA survivors, particularly regarding PTSD and depression symptoms (Ehlers & Clark, 2000). Importantly, self-blaming appraisals can be differentiated into behavioural self-blame (BSB), which targets specific actions (e.g., the survivor caused AISA because they drank alcohol) and corresponds to internal, *unstable* cognitive appraisals, and characterological self-blame (CSB), which targets dispositional character traits (e.g., the survivor caused AISA because they are too trusting and/or naïve) and corresponds to internal, *stable* cognitive appraisals (Ehlers & Clark, 2000; Janoff-Bulman, 1979). Aligned with the theorized greater impact of negative, internal, stable appraisals and the mediational process of the cognitive model, CSB explained the link between AISA and more severe PTSD symptoms, while BSB did not (Ehlers & Clark, 2000; Peter-Hagene & Ullman,

2018). CSB may contribute to and maintain PTSD-related negative cognitions such as low self-worth, which may then increase negative affect, for example guilt, sadness, and shame. Negative, internal, and stable self-blaming appraisals corresponding to CSB are also robustly associated with depression symptoms, especially for women (Hu et al., 2015; Tilghman-Osborne et al., 2008; Zahn et al., 2015), further suggesting the relevance of CSB for AISA-related negative emotional outcomes, including depression symptoms.

Shame and AISA-Related Negative Emotional Outcomes

Shame involves a physiologically intense, aversive emotional experience and judgements of the self as inferior, damaged, or not socially acceptable, often inspiring withdrawal or a desire to hide (Tangney et al., 1996). Shame can be contrasted to guilt, which involves regret about behaviours and does not threaten the self-concept or sense of social belonging (Tangney et al., 1996). Guilt may be similar to BSB in that it is an internal, unstable appraisal, and shame is similar to CSB in that they both involve negative, character-based appraisals and have implications for a person's self-concept (Tilghman-Osborne et al., 2008). However, shame is unique from CSB given the experiential emotional component and fears of social rejection, or negative appraisals about their *social self*, defined as congruence felt between a person's character and their social environment, norms, and culture (Budden, 2009). The fear of social condemnation is thought to arise from perceived violation of social norms, suggesting shame may function as a powerful motivator to maintain harmonious communal relationships by adhering to social conventions and thus, avoiding shame (Budden, 2009). The interpersonal context of shame suggests shame appraisals may be especially relevant to

negative emotional outcomes following trauma that violates expected social and personal boundaries, including AISA (Budden, 2009).

Shame is associated with PTSD symptoms, particularly following stigmatized traumas, supporting the potential role of shame appraisals within the cognitive model of trauma (Budden, 2009; Ehlers & Clark, 2000; López-Castro et al., 2019). Negative, shame-related appraisals about the social self may function similarly to CSB by contributing to negative alterations in cognitions and mood (e.g., low self-worth, alienation from others, sadness; Budden, 2009). Additionally, the painful emotional experience of shame may be avoided by evading internal (thoughts) and external (situations) reminders of the trauma, which may further decrease opportunities to challenge negative social and self-concept appraisals and in turn reduce the emotional experience of shame. Negative self-appraisals and emotional avoidance may also prevent memory processing and integration into a cohesive self-concept, in turn contributing to intrusive symptoms and a current sense of threat (Budden, 2009; Ehlers & Clark, 2000).

In addition to PTSD, shame is associated with GAD symptoms (Carey et al., 2018), a finding bolstered by a meta-analysis showing that shame-proneness, but not guilt-proneness, was associated with GAD ($r = .32$). Reductions in shame were also associated with improved GAD symptoms (Cândea et al., 2018; Fergus et al., 2010). The link between shame and GAD may develop particularly through intolerance of shameful emotions following the occurrence of a feared negative experience, especially if it was unexpected and results in a negative emotional contrast (Newman & Llera, 2011; Schoenleber et al., 2014). Given the intolerance of shame and/or shame-related negative emotional contrasts, such experiences may be avoided by using worry (Newman & Llera,

2011; Schoenleber et al., 2014). Worry offers the perceived opportunity to prepare for, and thus potentially reduce, the magnitude of the shame response (Newman & Llera, 2011; Schoenleber et al., 2014). Although no studies have yet explored this, AISA survivors may also use worry to avoid shame, potentially explaining how shame may contribute to more frequent AISA-related GAD symptoms (Cândeia & Szentagotai-Tătar, 2018).

Shame is also associated with depression symptoms, with a meta-analysis showing an association between external shame (i.e., shame about how others view them) and depression symptoms ($r = .56$; Kim et al., 2011). The link between shame and depression may develop through negative appraisals about the self, and rumination may prolong and/or worsen symptoms (Beck & Bredemeier, 2016; Nolen-Hoeksema et al., 2008). Illustrating the role of shame for depression symptoms following trauma, along with PTSD, shame-related appraisals of being separate and alienated from others predicted depression symptoms in a sample of interpersonal trauma survivors (DePrince et al., 2011). Additionally, attesting to the role of rumination, Bhuptani (2017) found that sexual assault-related shame among sexually assaulted adults was associated with depression symptoms, and this link was mediated by rape-related rumination, which was exacerbated by experiential avoidance.

Pre-Existing Risk Factors for Negative Emotional Outcomes

Along with the relevance of the potential risk and resilience factors (e.g., self-compassion, FOOSC, CSB, BSB, and shame) following AISA, there may be pre-existing factors that increase AISA survivors' vulnerability to both negative emotional outcomes and affecting the risk and reduced resilience factors mentioned above. Pre-existing

mental illness such as anxiety and depressive disorders are associated with higher risk for negative emotional outcomes following sexual assault (Kesslet et al., 2014; McLaughlin et al., 2013). Additionally, prior trauma history may be a pre-existing risk factor for worsened negative emotional outcomes following AISA, indicated by Briere et al.'s (2020) results showing that reported history of childhood sexual abuse (CSA) had an additive effect on negative emotional outcomes of adult sexual assault. Similarly, repeated sexual assault victimization in adulthood uniquely predicted worsened outcomes, after controlling for CSA (Sigurvinsdottir et al., 2016). Sociodemographic factors are also important, as people who experience greater oppression and marginalization, for example, Black, Indigenous, and People of Colour (BIPOC), sexual orientation and gender identity minorities, people from a low socioeconomic background, and disabled people are at greater risk of developing negative emotional outcomes following sexual assault (Bryant-Davis et al., 2010; Littleton & DiLillo, 2021; Sigurvinsdottir et al., 2016; Solomon et al., 2021). In addition, such pre-existing risk factors may also worsen self-compassion, FOSC, CSB/BSB, and shame (e.g., through mental illness-related trait shame, self-criticism, and/or perfectionism; Erb, 2016; Egan et al., 2014), potentially in turn increasing negative emotional outcomes to AISA.

Altogether, using the social-ecological framework and building on the compensatory resilience model, the cognitive model of trauma suggests that developing negative, internal, and stable appraisals may be mechanisms that contribute to negative emotional outcomes (Budden, 2009; Ehlers & Clark, 2000). If survivors perceive they have violated social norms and/or expectations, which may occur if negative attitudes and beliefs are present about AISA survivors within the socio-cultural context, they may be at

greater risk of developing appraisals reflecting low self-caring and higher self-coldness, FOSC, CSB, and shame (Budden, 2009). As such, exploring these mechanisms may elucidate the processes connecting AISA to negative emotional outcomes.

Summary

AISA is common among emerging and young adults, potentially due to the normative heavy drinking that occurs among this age group (Breiding et al., 2014), and is related to negative emotional outcomes including PTSD, GAD, and depression symptoms (Dworkin, 2020; Gong et al., 2019). Moreover, PTSD, GAD, and depression symptoms, while related, are distinct outcomes and may be developed and maintained by different, although again, interconnected, underlying processes (Grant et al., 2008; Price & van Stolck-Cooke, 2015). PTSD symptoms may reflect the presence of a sense of current threat, avoidance, and negative self-concept, and while GAD and depression symptoms incorporate similar elements, GAD symptoms are differentiated by the additional component of worrying and avoidance of unexpected emotional experiences, and depression symptoms are differentiated by the additional component of ruminative processes (American Psychiatric Association, 2013; Beck & Bredemeier, 2016; Newman & Llera, 2011; Nolen-Hoeksema et al., 2008).

Informed by the cognitive model of trauma, negative emotional outcomes following AISA may be linked by negative, stable appraisals about the causes and consequences of the trauma (Ehlers & Clark, 2000). AISA survivors may be at heightened risk of developing negative, stable appraisals given sociocultural AISA-related stigma, including victim-blaming rape myths in social and news media, the legal system, and social networks (e.g., the survivor caused AISA for being intoxicated and making herself

vulnerable; Brown et al., 2018; Edwards et al., 2011). If internalized, sociocultural AISA-related stigma may contribute to specific appraisals following AISA. These appraisals include CSB, shame, low self-caring and high self-coldness, and FOOSC, which may in turn be associated with negative emotional outcomes (Barlow et al., 2017; Carey et al., 2018; Gong et al., 2019; Peter-Hagene & Ullman, 2018). Conceptualized within the cognitive model of trauma, these AISA specific appraisals may function as mechanisms explaining the links between AISA and negative emotional outcomes (Ehlers & Clark, 2000).

From a positive psychology, strength-based approach, AISA specific appraisals may also be conceptualized as risk and resilience factors in AISA survivors' resilience towards negative emotional outcomes (Fergus & Zimmerman, 2005; Luthar et al., 2014). Using the social-ecological framework, resilience is influenced by interrelated societal and individual risk and resilience factors (Ungar, 2013), and risk and resilience factors may function as protective or compensatory (Fergus & Zimmerman, 2005). Namely, resilience following AISA may be bolstered via the self-compassion elements of high self-caring and low self-coldness and undermined via low self-caring and high self-coldness, and high FOOSC, CSB, and shame.

Identifying the mechanisms and risk/resilience factors related to the negative emotional outcomes of AISA may inform which intervention and treatment targets to address to increase resilience and facilitate subsequent recovery. However, although one study explored CSB as a mechanism linking AISA to PTSD symptoms (Peter-Hagene & Ullman, 2018), no studies have examined the collective roles of self-caring and self-coldness, FOOSC, CSB, and shame in the associations between AISA and PTSD, GAD,

and depression symptoms. Additionally, there is a dearth of studies incorporating the potential influence of socio-cultural context, an important gap to fill in light of AISA-specific stigma. As such, investigating this topic further, particularly using mixed methods, may be a worthwhile endeavor.

Dissertation Aims

The objectives of my dissertation were to explore risk and resilience factors linking AISA and negative emotional outcomes, focusing on the components of self-compassion, including self-caring and self-coldness. I chose to focus on emerging and young adults because AISA is most likely to occur during this life stage (Breiding et al., 2014), and identifying risk and resilience factors may allow for prompt, effective intervention and treatment, potentially preventing or reducing long term negative emotional outcomes. Using mixed quantitative and qualitative methods, my studies each sought to accomplish the following:

Study 1

Study 1, entitled “*Self-Compassion as a compensatory resilience factor for the negative emotional outcomes of alcohol-involved sexual assault among undergraduates*” (Strickland et al., 2019), examined self-compassion as a resilience factor for the negative emotional consequences of AISA. Self-compassion is associated with lower depression and anxiety in general (MacBeth & Gumley, 2012), and may be particularly relevant for AISA-related depression and anxiety symptoms. Specifically, refraining from self-judgement and self-coldness may allow a person to experience self-kindness, engage in more self-care behavior, experience less avoidance coping and ruminative self-blame, and think of the trauma as a painful, rather than a self-defining, experience (Zeller et al.,

2015). Together, these self-compassion-relevant processes may facilitate natural exposure to trauma-related cues and thus less frequent anxiety and depression symptoms among AISA survivors (Thompson & Waltz, 2008). This study tested whether self-compassion attenuates and/or counteracts the association between AISA and negative emotional outcomes. Canadian undergraduate drinkers completed measures tapping past-term AISA (Kehayes, et al., 2019), self-compassion (i.e., SCS; Neff, 2003b), and anxiety and depression symptoms (Kessler et al., 2002). It was hypothesized that: (1) the experience of AISA would be positively related to anxiety and depression, (2) self-compassion would be negatively related to anxiety and depression, and (3) self-compassion would attenuate the effect of AISA on anxiety and depression. Support for the third hypothesis through this interactive effect would favor the protective model of self-compassion as a resilience factor for survivors of AISA. Main effects but no interactive effects would favor the compensatory model. The role of the six specific self-compassion facets (e.g., the presence of self-kindness, the relative absence of isolation) as well as the higher-order domains of self-compassion (i.e., the presence of self-caring and relative absence of self-coldness) were also explored as resilience factors as specific self-compassion facets may be differentially tied to mental health outcomes (Valdez & Lilly, 2016).

Study 2

Entitled “*Clarifying the factor structure of the self-compassion scale: Nested comparisons of six confirmatory factor analysis models*” (Strickland et al., in press), Study 2 explores the factor structure of the SCS (Neff, 2003b). Neff (2003b) suggested a hierarchical factor structure with a single higher order factor and using total SCS scores. Few have replicated this factor structure, however, calling into question the validity of

total SCS scores (Castilho et al., 2015). Instead, studies have supported a lower order six factor model, a lower order two factor model, and a hierarchical model with the three positive and negative subscales each loading on to two higher order factors, labelled self-caring and self-coldness (Brenner et al., 2017; Coroiu et al., 2018; Williams et al., 2014). The inconsistent evidence regarding the best factor structure of the SCS across different studies and samples precludes evaluation of the strength of factor structure models relative to other models. Therefore, the objective of Study 2 was to comprehensively test the previously supported and theoretically plausible factor structures of the SCS within the same sample, allowing for nested comparisons to find the best fitting *relative* factor structure. Using the same sample of Canadian undergraduates and cross-sectional design from Study 1, I completed CFA analysis and nested comparisons of six previously posited factor structures of the SCS. I predicted a six-factor (Petrocchi et al., 2014) or a hierarchical model with six lower-order factors loading on to two higher-order factors (Montero-Marín et al., 2016) would fit best. The results of Study 2 inform future research using the SCS and the ensuing studies in my dissertation.

Study 3

Study 3 is entitled “*Linking alcohol-involved sexual assault to negative emotional outcomes: The relative mediating roles of shame, self-compassion, fear of self-compassion, and self-blame*” (Strickland et al., submitted). The cognitive model of trauma posits the link between AISA and negative emotional outcomes may be explained through negative, stable (i.e., character-based) appraisals about the cause and consequences of the trauma (Budden, 2009; Clark & Beck, 2010; Ehlers & Clark, 2000). Socio-cultural stigma (e.g., victim-blaming rape myths) is heightened regarding AISA

survivors (Brown et al., 2018). Internalizing such stigma may contribute to negative, stigma-related appraisals; namely, shame, low self-caring, high self-coldness, FOOSC, CSB, and BSB, which in turn may be associated with PTSD, GAD, and depression symptoms (Barlow et al., 2017; Carey et al., 2018; Gong et al., 2019; Peter-Hagene & Ullman, 2018). Therefore, Study 3 used structural equation modelling (SEM) to test the relative mediating effects of shame, low self-caring, high self-coldness, FOOSC, CSB, and BSB on the associations between AISA and PTSD, GAD, and depression symptoms, respectively, controlling for gender and the overlap between outcomes. I used a Canadian community sample and a cross-sectional mediational design. I hypothesized that shame, self-coldness, low self-caring, FOOSC, CSB, and BSB would each partially mediate the association between AISA and all outcomes. I also predicted that shame would be a stronger mediator than CSB and BSB (Bhuptani, 2020), self-coldness stronger than low self-caring (Williamson, 2019), FOOSC stronger than low self-caring and self-coldness (Miron et al., 2016), and CSB stronger than BSB (Peter-Hagene & Ullman, 2018). The relative strengths of the other mediators and differences in strength of mediation on each outcome were not predicted a priori, given a lack of previous research.

Study 4

Study 4 was entitled *“Fostering resilience and countering stigma: A qualitative exploration of risk and protective factors for negative emotional consequences among alcohol-involved sexual assault survivors”* (Strickland et al., submitted). Aligned with the social-ecological framework of resilience (Ungar, 2013), AISA survivors may have unique, interrelated socio-cultural and individual risk and protective/resilience factors for developing subsequent negative emotional outcomes. Specifically, the socio-cultural

level risk factor of AISA-specific stigma, and the individual level risk factors of self-blame, low self-compassion, and FOOSC may collectively contribute to negative emotional outcomes following AISA, particularly if survivors are already self-critical and shame-prone (Egan et al., 2014; McLean et al., 2018). In contrast, counteracting societal AISA-specific stigma, reducing individual self-blame and FOOSC, and increasing self-compassion may be resilience factors, suggesting the importance of exploring these processes among AISA survivors from a positive psychology perspective (Luthar et al., 2014). While quantitative methods are useful in illuminating relative, unique effects of potential mechanisms, they may not capture the nuances of AISA survivors' interpretations and lived experiences within the socio-cultural context (Ungar, 2013). In contrast, qualitative methods allow for an in-depth, person-centered exploration of AISA survivors' experiences as they are situated within the societal context and using their own voices. Thus, using individual qualitative interviews among a sample of community-dwelling, Canadian women, I explored the above-mentioned socio-cultural and individual resilience and risk factors for negative emotional consequences following AISA. Interviews were coded using thematic analysis, preserving the survivors' perspectives and providing a rich picture of their experiences.

Outline

Each study is presented sequentially in the ensuing chapters, with Study 1 in Chapter 2, Study 2 in Chapter 4, and Study 3 in Chapter 6, and Study 4 in Chapter 8. Transitions between studies are in Chapters 3, 5, and 7, respectively. A discussion in which I synthesize my dissertation's findings is in Chapter 9, including clinical and theoretical implications.

CHAPTER 2. STUDY 1: SELF-COMPASSION AS A COMPENSATORY
RESILIENCE FACTOR FOR THE NEGATIVE EMOTIONAL OUTCOMES OF
ALCOHOL-INVOLVED SEXUAL ASSAULT AMONG UNDERGRADUATES

The manuscript based on this study is presented below. Noelle Strickland, under the supervision of Dr. Sherry Stewart, was responsible for developing the research question and analytic approach, using data collected at Dalhousie as part of a larger study called the Caring Campus project. Noelle Strickland was the lead on data analysis and interpretation, with the support of her co-authors, and wrote the initial draft of the manuscript. Prior to submission, she received and incorporated feedback from the study's co-authors. The manuscript underwent peer-review and Ms. Strickland led the relevant revisions. The manuscript was accepted for publication in *International Journal of Child and Adolescent Resilience* in April, 2019. The full reference for this manuscript is:

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H. (2019). Self-compassion as a compensatory resilience factor for the negative emotional outcomes of alcohol-involved sexual assault among undergraduates.

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Abstract

Approximately half of sexual assaults involve alcohol; these assaults tend to be more severe and may be more likely to result in negative emotional outcomes like anxiety and depression (Ullman & Najdowski, 2010). Self-compassion (SC; extending kindness and care towards oneself) may promote resilience from the negative emotional consequences of alcohol-involved sexual assault (AISA). **Objectives:** This study examined SC as a resilience factor, testing whether it attenuates and/or counteracts the association between AISA and negative emotional outcomes. **Method:** Undergraduate drinkers ($N = 785$) completed measures tapping past-term AISA (Kehayes, et al., 2019), SC (i.e., Self-Compassion Scale; SCS; Neff, 2003b), and anxiety and depression (Kessler et al., 2002). The SCS was scored as two higher-order domains (self-caring, self-coldness) each with three lower-order facets (self-kindness, mindfulness, and common humanity; over-identification, self-judgement, and isolation). **Results:** Supporting compensatory effects, the higher-order SC domains showed main effects: the presence of self-caring and relative absence of self-coldness counteracted the adverse effects of AISA on both anxiety and depression. Similarly, the lower-order SC facets showed main effects: the presence of self-kindness and relative absence of over-identification counteracted the adverse effects of AISA on anxiety/depression – with the relative absence of self-judgement and isolation additionally counteracting the effect of AISA on depression. **Conclusion:** SC works as a compensatory resilience factor for the association between AISA and anxiety/depression. **Implications:** SC interventions with attention towards increasing self-kindness and decreasing negative facets of SC may be important for negative emotional outcomes in general, including those following AISA.

Self-Compassion as a Compensatory Resilience Factor for the Negative Emotional Outcomes of Alcohol-Involved Sexual Assault among Undergraduates

Although sexual assault is often thought to consist of non-consensual sexual contact, a broader definition includes violations of sexual integrity such as threats of sexual violence or unwanted contact (Testa et al., 2004). Among undergraduates, 6.6% of women and 3.2% of men report experiencing sexual assault (Hines et al., 2012). Further, it is estimated that alcohol is used by the perpetrator, survivor, or both in about half of sexual assaults (Ullman & Najdowski, 2010). Alcohol-involved sexual assault (AISA) is particularly relevant to university students as rates of AISA are higher on university campuses than in the broader community, in part due to the high prevalence of heavy drinking on campuses (Howard et al., 2008).

Relative to other sexual assaults, some studies suggest that AISAs tend to be more severe and are more likely to involve multiple perpetrators (Gilbert et al., 2018; Ullman & Najdowski, 2010). Additionally, AISA survivors who were drinking engage in more self-blame, endure more stigma, receive more negative reactions from others following disclosure, and experience more depression compared to sexual assault not involving alcohol and AISA involving perpetrator-only drinking (Littleton et al., 2009; Ullman & Najdowski, 2010). Intoxication at the time of a sexual assault may dampen the stress response and thus potentially reduce the distress a survivor later experiences (Clum et al., 2002). However, subsequent self-blame interpretations (e.g., that they could have avoided the assault if they were not drinking) may exacerbate anxiety and depression in AISA survivors and counteract any protective effect of their drinking at the time of the assault

(Littleton et al., 2009; Ullman & Najdowski, 2010). Thus, exploring resilience factors that mitigate the potential negative emotional consequences related to AISA is important.

Resilience is the process of overcoming or coping adaptively with traumatic experiences and circumventing trajectories that are associated with risk exposure (Fergus & Zimmerman, 2005; Rutter, 1985). Two alternative models have been proposed for how resilience factors operate (see Figure 1; see Fergus & Zimmerman, 2005 for a review). The first is a *protective model*, where the resilience factor attenuates, or moderates, the association between the risk factor and the negative outcome. One example is high parental support attenuating the link between poverty and violent behaviour such that poverty is more strongly linked to violent behavior in those with low than those with high parental support. The second is a *compensatory model*, involving two main effects, where the resilience factor compensates for (i.e., acts in the opposite direction to) the effect of the risk factor on the negative outcome. One example is community resources counteracting the negative effects of child abuse on poor academic achievement. This model would involve main effects of both community resources (the resilience factor) and child abuse (the risk factor) on the outcome of academic achievement. As compared to the protective model where the resilience factor would interact with the risk factor, the compensatory model involves the risk and resilience factor both predicting the same outcome but in opposite directions, such that the resilience factor compensates for the adverse effects of the risk factor (Fergus & Zimmerman, 2005). This suggests that a compensatory effect may have a general effect as a resilience factor, while a protective factor may work to attenuate the adverse effects of a specific traumatic experience. Thus, compensatory factors might warrant being fostered among all people and protective

factors may be especially relevant for people who have experienced a specific trauma (Fergus & Zimmerman, 2005; Windle, 2011).

Self-Compassion

Extending compassion toward the self (i.e., “self-compassion”; SC; Neff, 2003a) might serve as a resilience factor that protects from or compensates for associations between AISA and negative emotional outcomes. Some studies suggest that SC is broadly comprised of two high-order domains: the presence of self-caring and the absence of self-coldness (e.g., Brenner et al., 2017). Within the higher-order self-caring domain, there are three components. The first component is *self-kindness*, which involves providing kindness to the self through benevolent self-talk. The second component is *mindfulness*, which involves holding painful emotions in balanced awareness. Finally, *common humanity* is the understanding that one’s failures and shortcomings are part of being human. Within the higher-order self-coldness domain, there are also three components: self-judgement (harshness toward the self, critical self-talk), over-identification (over-identifying with, ruminating on, or avoiding painful emotions), and isolation (believing one’s failures are isolated to the self), for a total of six facets comprising the overall SC construct (Neff, 2003a). In general, SC is robustly related to less psychopathology such as lower depression and anxiety (MacBeth & Gumley, 2012).

Although not examined in relation to AISA, SC may help AISA survivors cope with traumatic events. Neff (2003a) theorized that refraining from self-judgement and self-coldness may allow a person to experience self-kindness, subsequently mitigating the otherwise harmful effects of traumatic experiences. Further, a survivor may engage in more self-care behavior and less self-coldness, experience less avoidance coping and

ruminative self-blame, and think of the trauma as a painful, rather than a self-defining, experience (Zeller et al., 2015). Together, these SC-relevant processes may facilitate natural exposure to trauma-related cues and thus promote a faster recovery from trauma among AISA survivors (Thompson & Waltz, 2008). Further, although SC is often conceptualized as an individual difference (Neff et al., 2007) there is evidence that it can be increased (e.g., Mindful SC; Neff & Germer, 2013). Altogether, SC may be a resilience factor that could be targeted in treatment with AISA survivors.

No studies have yet examined the role of SC as a resilience factor for experiences of AISA and negative emotional outcomes; however, results from related areas support that SC may act as a protective resilience factor. In one study, SC moderated the association between shame and eating disorder severity, in that shame was related to more severe eating disorder symptoms only among those with low SC (Ferreira et al., 2014). In another study, SC attenuated the association between exposure to negative events and feelings of shame and embarrassment, such that negative events showed stronger associations with shame and embarrassment for those with low (vs. high) SC (Leary et al., 2007). This may have been due to SC facilitating perceptions the negative event was not the survivor's fault. In the same study, SC also attenuated negative emotional reactions to ambiguous social feedback provided after participants gave a speech (Leary et al., 2007). Similar patterns may be at play in AISA in that SC may protect AISA survivors who were drinking at the time of the sexual assault from experiencing subsequent negative emotional effects. In fact, in a study of traumatized adolescents, higher levels of SC at baseline predicted lower depressive, suicidal, panic, and posttraumatic stress disorder (PTSD) symptoms at follow-up (Zeller et al., 2015).

However, moderation could not be examined because Zeller et al.'s (2015) study did not include non-traumatized adolescents.

Given these findings and the dearth of research examining SC in the context of AISA, this study examined AISA and the role of SC as a resilience factor. It was hypothesized that: (1) the experience of AISA would be positively related to anxiety and depression, (2) SC would be negatively related to anxiety and depression, and (3) SC would attenuate the effect of AISA on anxiety and depression. Support for the third hypothesis through this interactive effect would favor the protective model of SC as a resilience factor for survivors of AISA. Main effects but no interactive effects would favor the compensatory model. The role of the six specific SC facets (e.g., the presence of self-kindness, the relative absence of isolation) as well as the higher-order domains of SC (i.e., the presence of self-caring and relative absence of self-coldness) were also explored as resilience factors given recent research suggesting that specific SC facets may be differentially tied to mental health outcomes (Valdez & Lilly, 2016).

Method

Participants

Respondents were a pooled sample of $N = 1,315$ Canadian first- and second-year undergraduates who completed one of two surveys administered at different time points as part of a larger longitudinal study. The first time point was in the fall semester of 2016 and the second in the winter semester of 2017. Students who completed the survey at both time points had only their first survey included, and students who completed the survey at the second time point were only included if they had not completed the first

survey. To be included in the present analysis, the participant had to report drinking in the past term.

Independent sample t-tests and chi square tests between the two cohorts of drinkers showed no significant differences between cohorts on age or gender. Additionally, chi square tests showed that the proportion who reported past-term drinking did not differ significantly between cohorts. Thus, cohort one and cohort two participants (i.e., 60%; $n = 789$) were combined into a single sample. Four respondents were dropped due to identification of their gender as “other” ($n = 3$; too small a group to permit reliable gender comparison), or to missing data on the AISA item ($n = 1$). The final combined sample of $n = 785$ was 75.2% female and 24.8% male, and the mean age was 18.9 ($SD = 1.5$) years.

Procedure

As part of the larger multi-site Movember-funded Caring Campus Project (see Stuart et al., 2019), two waves of survey data were collected; data relevant to the current project were only collected at the Dalhousie University site. In the first wave (Fall 2016), all first-year students were sent an invitation email to complete a 30-minute online survey as were second-year students who had completed at least one prior survey in the longitudinal study. In the second wave (Winter 2017), all first- and second-year students who had completed a prior survey were sent an invitation email. Three reminder emails were sent on a weekly basis. Participants were also recruited through on-campus posters, newsletters, and social media advertisements. Both cohorts were included in the present analysis. The response rate to the email recruitment was 35%, similar to other Canadian undergraduate surveys (e.g., American College Health Association, 2013). Participants were compensated with their choice of a \$5 gift card, a 0.5% course-credit in a

participating psychology course, or a cash value donation of their compensation to on-campus mental health promotion and alcohol harm reduction activities. This study was approved by an institutional Research Ethics Board.

Measures

SCS (Neff, 2003b). This 26-item measure consists of two higher-order domains and six lower-order facets. The first higher-order domain, self-caring, comprised three lower-order subscales: 1) self-kindness (e.g., “I try to be loving towards myself when I am feeling emotional pain”), 2) mindfulness (e.g., “When something upsets me I try to keep my emotions in balance”), and 3) common humanity (e.g., “I try to see my failings as part of the human condition”). The second higher-order domain, self-coldness, comprised the remaining three subscales: 4) self-judgement (e.g., “When times are really difficult, I tend to be tough on myself”), 5) over-identification (e.g., “When I’m feeling down I tend to obsess and fixate on everything that’s wrong”, and 6) isolation (e.g., “When I fail at something that’s important to me, I tend to feel alone in my failure”; Neff, 2003b). Each item is rated on a 5-point Likert scale (1 = never to 5 = almost always). I used the means of these six lower-order subscales as well as two higher-order self-caring and self-coldness scales (means of the positive and negative items) in analyses in order to examine more general aspects of the positive and negative domains of the SC construct, as well as the more specific SC facets, as resilience factors. This scoring is supported through a recent factor analytic study showing that a bifactor structure involving these six lower-order facets and two higher-order domains provided the best fit for the SCS (Brenner et al., 2017). All SCS facet and domain scales showed acceptable to excellent internal consistency (α) in the present sample (facets: self-kindness = .84; mindfulness =

.75; common humanity = .78; self-judgement = .83; isolation = .80; over-identification = .79; domains: SC = .90; self-coldness = .92).

AISA. Past term AISA was measured using the item: “As a result of using alcohol... I was taken advantage of sexually,” rated on a 6-point scale from 0 (*never*) to 5 (*more than 10 times*). This item was part of a larger questionnaire assessing a variety of potential harms associated with drinking used in a separate study (Chinneck et al., 2018). AISA was dichotomized (never [0] vs. once or more [1]), since frequency was positively skewed. This AISA item was correlated with anxiety and depression in a previous study measured using the Mood and Anxiety Symptoms Questionnaire, indicative of its validity (cf., Kehayes et al., 2019).

Kessler Psychological Distress Scale. This 10-item measure assesses emotional distress on a scale of 1 (*none*) to 5 (*all of the time*) over the last 30 days (K10; Kessler et al., 2002). For the present study, I used the sum of the 4-item anxiety subscale (possible range 4-20) and the sum of the 6-item depression subscale (possible range 6-30). Separation of these two subscales has been supported by previous factor analytic results (Brooks et al., 2006; Chinneck et al., 2018). In the present sample, Cronbach’s alphas were .79 and .89 for the anxiety and depression scales, respectively.

Data Analysis

Multivariate regression analyses ($N = 785$) were tested using SPSS version 24. All dependent and predictor variables were within the acceptable ranges of normality (Kim, 2013; West et al., 1996), residuals appeared to be normally distributed (examined using a P-P plot), and variance appeared to be constant (examined using a scatterplot of standardized residuals and standardized predicted values). Data were screened for outliers

using boxplots, but no values were more than three times the inter-quartile range. The Durbin-Watson value was above the suggested cut-off of 1.50 for all models, satisfying the independent errors assumption. No variables were correlated higher than $r = .75$, all Tolerance values were above .20, and all variance inflation factor values were below 10, suggesting no problematic multicollinearity among variables (Schroeder et al., 1990).

Hypotheses were tested using a set of four multivariate hierarchical regression models. Each model added gender as a covariate in block one, the main effects of the predictors in block two, and the interaction terms in block three (excepting interactions with gender). AISA was effect-coded (i.e., -1 and 1) in order to create interaction terms (West et al., 1996) and all predictor variables were mean-centered for interpretation. The first two models tested AISA, the positively (self-caring) and negatively (self-coldness) worded SC domains as predictors in the second block, and the interactions between AISA and positively (self-caring) and negatively (self-coldness) worded SC domains in the third block, with anxiety and depression as the outcomes, respectively. The third and fourth models tested AISA and each of the six SCS facets in the second block, and the six AISA – SCS facet interactions in the third block, with depression and anxiety as the outcomes, respectively.

Results

Descriptive Statistics

Means, standard deviations, and correlations were examined (see Table 1.1). About six percent (6.1%) of participants reported past-term AISA. Based on Cohen's (1992) classification of correlations as small ($r = .10-.29$), moderate ($r = .30-.49$) and large ($r \geq .50$), there were small significant positive associations between AISA and depression and

small significant negative associations between mindfulness and anxiety, and common humanity and anxiety. All other significant associations were moderate except for large positive associations between self-judgement, isolation, and over-identification with depression, and large negative associations between self-kindness and depression. Gender differences were observed as overall self-coldness, self-judgement, over-identification, and isolation were higher in females and mindfulness was higher in males. Thus, gender was added as a covariate in all regression models.

Models Involving Self-Compassion and Self-Coldness Domain Scores

Results from the model that predicted anxiety (Table 1.2) showed significant main effects of gender in the first block, and significant main effects of self-caring and self-coldness and a marginal main effect of AISA in the second block of predictors. Female, as opposed to male, gender was associated with higher anxiety, AISA was marginally positively associated with anxiety, the presence of self-caring and the relative absence of self-coldness were negatively associated with anxiety. Together, these three main effects and gender showed significant associations with anxiety, $F(3, 784) = 67.93, p < .001$, and explained about 21% of the variance in anxiety scores. The addition of the interaction terms failed to add significant incremental variance in explaining anxiety scores ($\Delta R^2 = .00, p > .05$), suggesting no moderation. Thus, the block two model was retained as the final model (Field, 2013).

Results from the model with depression as the outcome (see Table 1.3) showed that there were significant effects of gender in the first block, and significant main effects of AISA, self-caring, and self-coldness in the second block of predictors. Female gender and AISA were positively associated with depression, and the presence of self-caring and the

relative absence of self-coldness were negatively associated with depression. Together, these three main effects plus gender showed significant associations with depression, $F(3, 785) = 147.25, p < .001$, and explained about 36% of the variance in depression scores. The interaction terms failed to add significant incremental variance ($\Delta R^2 = .00, p > .05$), suggesting no moderation. Thus, the block two model was retained as the final model (Field, 2013).

Models Involving the Six SCS Facet Scores

Results from the model with anxiety as the outcome (see Table 1.4) showed that in the first block, gender was a significant predictor, and in the second block of predictors, there was a main effect of AISA. Results showed positive associations between female gender and anxiety and AISA and anxiety. Additionally, self-kindness was negatively associated with anxiety as was the relative absence of over-identification, even after controlling for the other lower-order SC facets, AISA, and gender. This main effect only model with anxiety as the outcome explained a significant 24% of the variance in anxiety scores, $F(7, 780) = 33.28, p < .001$. The interaction terms failed to add significant incremental variance in explaining anxiety scores ($\Delta R^2 = .01, p > .05$), suggesting no moderation. Thus, the block two model was retained as the final model (Field, 2013).

Results from the model with depression as the outcome (see Table 1.5) showed a significant main effect of gender in block one and a main effect of AISA in block two. Namely, female gender and AISA were positively associated with depression. Additionally, self-kindness and the relative absence of self-judgement, over-identification, and isolation were negatively associated with depression in block two even after controlling for the other lower-order SC facets, AISA, and gender. This main effect

only model explained a significant 37% of the variance in depression scores, $F(7, 780) = 64.90, p < .001$. The addition of the interaction terms failed to add significant incremental variance in explaining depression scores ($\Delta R^2 = .00, p > .05$), suggesting no moderation. Thus, the block two model was retained as the final model (Field, 2013).

Discussion

This study examined the role of SC as a resilience factor in the association between AISA and anxiety and depression. The first hypothesis that AISA would be positively related to anxiety and depression was supported in that there were small associations between AISA and anxiety and depression. The second hypothesis that SC would be negatively related to both depression and anxiety was supported. Finally, the third hypothesis that high SC would moderate the association between AISA and depression and anxiety – was not supported. Instead, results supported the compensatory resilience model in that there were main effects of both SC and AISA predicting anxiety and depression, with SC exerting effects in an opposing direction to the effects of AISA.

Of this sample of past-term drinkers, 6.1% reported experiencing AISA. AISA was positively related to depression and anxiety, consistent with previous studies showing that sexual victimization in general is associated with greater depression and anxiety (Xu et al., 2013) and that AISA is associated with high levels of distress including high levels of depression (Ullman & Najdowski, 2010). Additionally, results are consistent with previous studies showing direct inverse associations between SC and negative emotional outcomes (Ehret et al., 2015; Hoge et al., 2013; Krieger et al., 2013; MacBeth & Gumley, 2012; Trompetter et al., 2017).

Expanding on the current literature by examining SC and AISA together, this study showed opposing main effects of both AISA and SC domains/facets on negative emotional outcomes. Specifically, findings showed the two higher-order domains of SC – the presence of self-caring and relative absence of self-coldness – both compensated for (i.e., worked in opposition to) the adverse effects of AISA on depression and anxiety. Results showed similar patterns in the more nuanced analyses of the six SCS facets (i.e., the presence of self-kindness, mindfulness, and common humanity; and the relative absence of self-judgement, over-identification, and isolation). The presence of self-kindness and the relative absence of over-identification counteracted the significant adverse effects of AISA on both anxiety and depression. Additionally, the relative absence of self-judgement and of isolation also counteracted against, or worked in opposition to, the adverse effect of AISA on depression. This pattern of results is consistent with the *compensatory* model of resilience (Fergus & Zimmerman, 2005), especially given the lack of significant interactive effects of SC and AISA on negative emotional outcomes – support for which would have suggested a protective model of resilience. Altogether, these results suggest that everyone, including but not limited to AISA survivors, may benefit from SC interventions, supported by the association with SC and decreased anxiety and depression.

Self-Coldness Facets and Negative Emotional Outcomes

The relative absence of the self-coldness facets of self-judgement, over-identification, and isolation compensated for the effect of AISA on depression. Overall, these three facets of SC appear to have repetitive, negative thoughts about the self, or rumination, in common (Raes, 2010). Other work has shown that rumination mediates the

association between SC and depression after controlling for anxiety (Raes, 2010) and that increases in SC are associated with lower depression via decreases in rumination (Krieger et al., 2013). Similarly, the current study results suggest that the relative absence of over-identification compensated for the marginal adverse effect of AISA on anxiety, which may indicate the role of both worry and rumination. Worry and rumination have been shown to mediate the association between SC and anxiety, with worry having the strongest effect (Raes, 2010). Together, the relative absence of certain lower-order negative SC facets may be associated with lower depression and anxiety via less unproductive, repetitive thought (Raes, 2010).

The relative absence of isolation counteracted the adverse effect of AISA on depression (but not anxiety). Social support is important for the well-being of sexual assault survivors (Borja et al., 2006). Survivors of AISA may feel more loneliness and social isolation than survivors who experience non-alcohol involved sexual assault or perpetrator drinking AISA, as AISA survivors tend to receive more negative reactions to their disclosures (Ullman & Najdowski, 2010). Additionally, given societal victim-blaming notions that survivors could have avoided sexual assault had they not been drinking, AISA survivors may be less likely to disclose their assault, further increasing isolation (Weiss, 2010). The lack of effects of isolation on anxiety indicates the compensatory effect of the relative absence of isolation is more important for depression; consistent with the well-established link of perceived isolation to depression (Matthews et al., 2016). These results highlight the potential benefits of reducing isolation for survivors of AISA which may increase feelings of social connectedness and ultimately reduce depressive affect.

Findings that the relative absence of self-judgement counteracted the effect of AISA on depression (but not anxiety) is not surprising given the conceptual links of self-judgement to self-blame and the established links of self-blame to depression (Frazier, 1991; Janoff-Bulman, 1979). Although no studies have examined this possibility, self-judgement and self-blame are conceptually related in that they both involve criticizing the self for past behaviours, thoughts, and/or emotions, and they both may lead to guilt or shame (Bensimon, 2017; Weiss, 2010). Reduced self-judgement may foster the ability of AISA survivors to absolve themselves of guilt for their traumatic experience which may in turn lessen feelings of depression.

Self-Compassion Facets and Negative Emotional Outcomes

Self-kindness compensated for the effect of AISA on both depression and anxiety, which may relate to the emotion regulatory benefits of self-kindness. The self-soothing aspect of self-kindness may provide emotional regulatory benefits for people experiencing the negative emotional outcomes of AISA. Previous studies found that SC is associated with emotion regulation (see Trompeter et al., 2017; Vettese et al., 2011) and the link between low SC and PTSD was mediated by emotion dysregulation (Scoglio et al., 2015). Together, this suggests that rumination, worry, social isolation, self-blame, and/or emotion dysregulation may be important processes helping to explain the role of specific SC facets as compensatory resilience factors in the face of traumatic experiences such as AISA.

This study indicates that SC interventions may be a promising avenue to explore in compensating for the negative emotional consequences of AISA – as well as for students experiencing anxiety and depression symptoms in general, given the main effects of SC

domains and facets on anxiety and depression. Currently, there are various self-compassion and compassion-centered interventions that have been empirically explored (see Kirby, 2017 for a review), with the most well-developed being compassion-focused therapy (Gilbert, 2014; Leaviss & Uttley, 2015). Although compassion-focused therapy includes a SC component and does increase SC in uncontrolled intervention studies (e.g., Beaumont et al., 2016; Gilbert & Procter, 2006), SC is not the primary focus of the therapy. In contrast, mindful SC is a therapy that specifically addresses SC (Neff & Germer, 2013). Evidence for the efficacy of mindful SC in increasing SC includes a brief three-week mindful SC intervention study with female undergraduates. Mindful SC, compared to a time-management control, resulted in higher SC immediately post-intervention (Smeets et al., 2014). Additionally, a randomized control trial (RCT) showed that an eight-week mindful SC intervention resulted in increases in SC and lower depression and anxiety six weeks later, compared to a wait-list control (Neff & Germer, 2013). Further, a RCT of a mindful SC intervention compared to treatment-as-usual showed that SC increased, and depression decreased, immediately following the treatment, and these effects were maintained three months later (Friis et al., 2016).

The present results must be interpreted in light of study limitations and strengths. One important limitation is that the cross-sectional design of the study precludes assessment of directionality and causality, for example whether SC precedes and contributes to reduced anxiety and depression and/or whether lower anxiety and depression precede and contribute to high SC. Longitudinal studies will be required in future to explore the directionality question. Additionally, while I tested the protective and compensatory models, other models of the relations between the study variables are

possible and could be explored in future. For example, it is possible that AISA leads to low SC which in turn contributes to anxiety and depression (i.e., SC as a mediator).

Another limitation includes restricted power given the relatively low rate of AISA reported in the sample. Relatedly, the association between AISA and anxiety was small and thus should be explored in future replication studies. The assessment of AISA with a single item that did not measure assault severity was also a limitation. Moreover, the AISA item used wording that may have captured participants with less severe assault experiences, and/or only those who perceived drinking as a causal factor in their sexual assault. While validity of the measure is suggested through its links with depression and anxiety in this and prior research (Kehayes et al., 2019), along with perception-based items as used in the current study, future studies should use multi-item behaviorally based measures of AISA (Cook et al., 2011). An additional limitation was the exclusive focus on survivor-drinking AISA without comparison to perpetrator-drinking AISA or non-alcohol-involved sexual assault. However, prior research suggests that AISA survivors who were drinking tend to experience heightened self-blame and depression (Ullman & Najdowski, 2010), making the present research particularly relevant to this group of sexual assault survivors.

Finally, this study focused on anxiety and depression as emotional outcomes of AISA, while survivors may display other maladaptive responses (e.g., PTSD; Ullman & Filipas, 2001; drinking to cope post-assault; Littleton et al., 2009). In addition, neither history of sexual abuse nor other traumatic events were measured and thus their influence could not be controlled; consequently, anxiety and depression may be the result of childhood sexual abuse experiences and not the AISA given their high co-occurrence

(Amado et al., 2015). Similarly, self-esteem was not measured; however, prior research suggests that SC is related to emotional distress even after controlling for self-esteem (Neff, 2003b).

Despite these limitations, an important strength of this study is that it is the first to examine SC as a resilience factor in the association between AISA exposure and negative emotional outcomes. By suggesting the compensatory role of SC in this context, this study fills an important gap identified in the trauma literature (Zeller et al., 2015). This study identified which specific SC facets play compensatory roles in the case of the relations of AISA with both depression and anxiety, thus identifying which particular SC facets should be targeted in interventions to reduce students' experiences of anxiety and depression generally, but also for AISA survivors specifically.

Table 1.1. Inter-Correlations Among Study Variables ($N = 785$).

		<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12
1	AISA (% Yes)	6.1	--	--	-.01	-.05	-.01	-.03	-.03	.02	-.02	-.01	.06	.09*	-.02
2	Self-kindness	2.89	.82		--	.69*	.57*	-.51*	-.36*	-.37*	.89*	-.45*	-.35*	-.45*	.03
3	Mindfulness	3.18	.75			--	.65*	-.30*	-.31*	-.25*	.88*	-.32*	-.23*	-.35*	.11*
4	Common Humanity	3.07	.82				--	-.23*	-.22*	-.23*	.84*	-.25*	-.16*	-.30*	.04
5	Self-judgement	3.30	.89					--	.73*	.73*	-.42*	.90*	.41*	.52*	-.13*
6	Over- identification	3.23	.93						--	.70*	-.34*	.90*	.42*	.48*	-.17*
7	Isolation	3.20	.93							--	-.34*	.90*	.36*	.51*	-.08*
8	Self-caring domain	3.03	.69								--	-.40*	-.29*	-.43*	.06
9	Self-coldness domain	3.24	.82									--	.43*	.55*	-.13*
10	Anxiety	9.66	3.26										--	.63*	-.14*
11	Depression	13.47	5.30											--	-.17*
12	Gender (% F)	75.2	--												--

Notes. * $p < .01$; AISA = past-term alcohol-involved sexual assault (0 = no; 1 = yes). Self-kindness, mindfulness, common humanity, self-judgement, over-identification, isolation, self-caring, and self-coldness assessed with Self-Compassion Scale (SCS; Neff, 2003b). Anxiety and depression assessed with K10 (Kessler et al., 2002). Gender: 1 = female, 2 = male.

Table 1.2. *Hierarchical Multivariate Regression Model with Positive and Negative Self-Compassion Domains Predicting Anxiety (N = 785).*

		B	SE	95% CI of B		p	β	Overall	R ²	ΔR^2	ΔF
				LL	UL						
Block one	Gender	-1.08	.27	-1.60	-.55	.000	-.14	16.26***	.02		
Block two	Gender	-.63	.24	-1.10	-.15	.010	-.08	53.31***	.21	.19**	64.35**
	AISA	.81	.43	-.04	1.66	.062	.06				
	Self-caring	-.63	.16	-.95	-.31	.000	-.13				
	Self-coldness	1.47	.14	1.20	1.75	.000	.37				

Notes. * $p < .05$; ** $p < .01$; *** $p < .001$. B = unstandardized beta coefficients; SE = standard error; LL = lower limit of CI of B, UL = upper limit of CI of B; β = standardized betas; ΔR^2 = change in R²; ΔF = change in F statistic. AISA = past-term alcohol-involved sexual assault (0 = no; 1 = yes). Self-caring and self-coldness assessed with Self-Compassion Scale (SCS; Neff, 2003b). Anxiety assessed with K10 (Kessler et al., 2002). Gender: 1 = female, 2 = male.

Table 1.3. Hierarchical Multivariate Regression Model with Positive and Negative Self-Compassion Domains Predicting Depression ($N = 785$).

		B	SE	95% CI of B		p	β	Overall	R^2	ΔR^2	ΔF
				LL	UL			Block F			
Block one	Gender	-2.05	.43	-2.90	-1.20	.000	-.17	22.42***	.03		
Block two	Gender	-1.11	.35	-1.80	-.42	.002	-.09	113.73***	.37	.34**	140.18**
	AISA	1.83	.63	.59	3.06	.004	.08				
	Self-caring	-1.87	.24	-2.34	-1.41	.000	-.24				
	Self-coldness	2.84	.20	2.45	3.24	.000	.44				

Notes. * $p < .05$; ** $p < .01$; *** $p < .001$. B = unstandardized beta coefficients; SE = standard error; LL = lower limit of CI of B, UL = upper limit of CI of B; β = standardized betas; ΔR^2 = change in R^2 ; ΔF = change in F statistic. AISA = past-term alcohol-involved sexual assault (0 = no; 1 = yes). Self-caring and self-coldness assessed with Self-Compassion Scale (SCS; Neff, 2003b). Depression assessed with K10 (Kessler et al., 2002). Gender: 1 = female, 2 = male.

Table 1.4. Hierarchical Multivariate Model with AISA and Six Self-Compassion Facets Predicting Anxiety ($N = 785$).

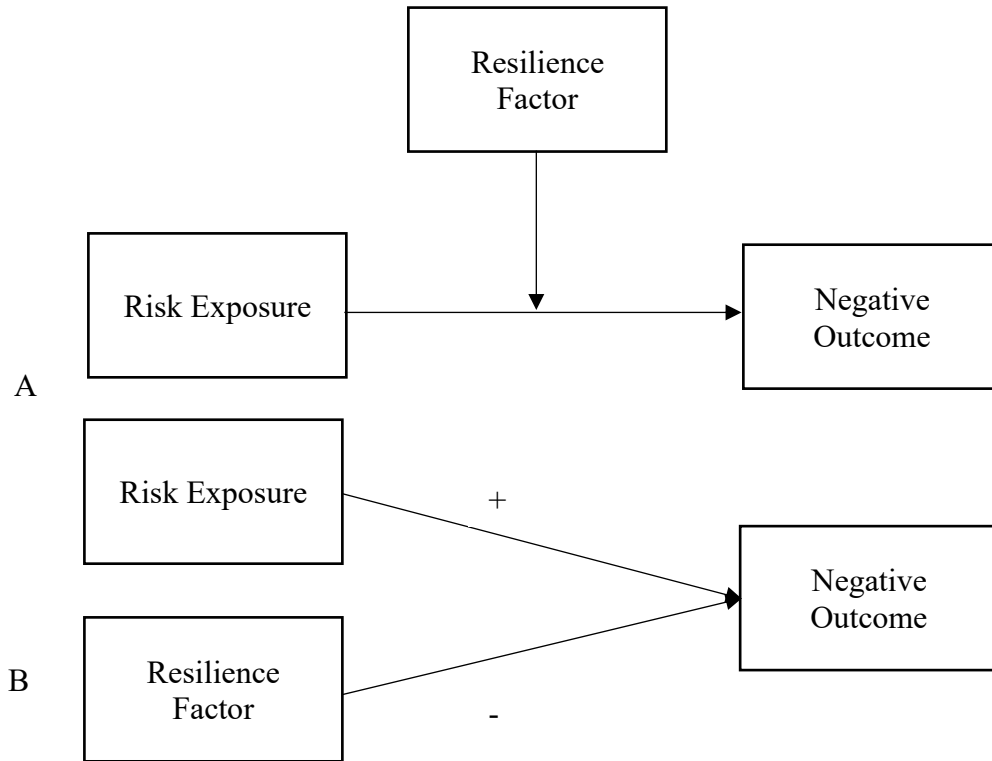
		B	SE	95% CI of B		p	β	F	R^2	ΔR^2	ΔF
				LL	UL						
Block One	Gender	-1.08	.27	-1.60	-.55	.000	-.14	16.26***	.02		
Block Two	Gender	-.64	.24	-1.11	-.16	.009	-.09	30.40***	.23	.21**	31.78**
	AISA	.89	.43	.05	1.73	.040	.07				
	Self-kindness	-.98	.20	-1.37	-.59	.000	-.25				
	Mindfulness	.18	.21	-.24	.60	.405	.04				
	Common humanity	.18	.17	-.15	.51	.291	.05				
	Self-judgement	.33	.20	-.07	.74	.102	.09				
	Over-identification	.86	.18	.51	1.20	.000	.24				
	Isolation	.15	.17	-.19	.49	.397	.04				

Notes. * $p < .05$; ** $p < .01$; *** $p < .001$. B: unstandardized beta coefficients; SE: standard error; CI of B: LL = lower limit, UL = upper limit; β : standardized betas; ΔR^2 , ΔF : change in R^2 and F statistic. AISA: past-term alcohol-involved sexual assault (0 = no; 1 = yes). Self-kindness, mindfulness, common humanity, self-judgement, over-identification, and isolation assessed with Self-Compassion Scale (SCS; Neff, 2003b). Anxiety assessed with K10 (Kessler et al., 2002). Gender: 1 = female, 2 = male.

Table 1.5. Hierarchical Multivariate Model with AISA and Six Self-Compassion Facets Predicting Depression ($N = 785$).

		B	SE	95% CI of B		P	β	F	R^2	ΔR^2	ΔF
				LL	UL						
Block one	Gender	-2.05	.43	-2.90	-1.20	.000	-.17	22.42***	.03		
Block two	Gender	-1.23	.36	-1.93	-.53	.001	-.10	58.83***	.37	.34**	62.28**
	AISA	1.79	.63	.55	3.02	.005	.08				
	Self-kindness	-1.36	.29	-1.94	-.79	.000	-.21				
	Mindfulness	-.20	.31	-.82	.42	.525	-.03				
	Common humanity	-.30	.25	-.79	.19	.225	-.05				
	Self-judgement	.78	.30	.19	1.37	.010	.13				
	Over-identification	.68	.26	.17	1.18	.009	.12				
	Isolation	1.26	.26	.76	1.76	.000	.22				

Notes. * $p < .05$; ** $p < .01$; *** $p < .001$. B: unstandardized beta coefficients; SE: standard error; CI of B: LL = lower limit, UL = upper limit; β : standardized betas; ΔR^2 , ΔF : change in R^2 and F statistic. AISA: past-term alcohol-involved sexual assault (0 = no; 1 = yes). Self-kindness, mindfulness, common humanity, self-judgement, over-identification, and isolation assessed with Self-Compassion Scale (SCS; Neff, 2003b). Depression assessed with K10 (Kessler et al., 2002). Gender: 1 = female, 2 = male.

Figure 1*Theoretical Models of Resilience Factors*

Note. A) Protective model where the resilience factor interacts with the risk factor to buffer the effects of the risk factor on the adverse outcome. B) Compensatory model where the resilience factor exerts a main effect that works in opposition to (i.e., counteracts) the main effect of the risk factor on the adverse outcome.

CHAPTER 3. TRANSITION FROM STUDY 1 TO STUDY 2

As mentioned in the introduction to this dissertation (Chapter 1) and in the introduction to Study 1 (Chapter 2), self-compassion is a promising, relatively new construct in relation to well-being and emotional disorders. Meta-analyses show robust associations with greater well-being ($r = .62$; Zessin et al., 2015), and lower anxiety ($r = -.51$), depression ($r = -.52$), and stress ($r = -.54$; MacBeth & Gumley, 2012). Further, intervention studies have shown that increases in self-compassion are associated with lower depression and anxiety (Zessin et al., 2015). Moreover, self-compassion may be an important factor in relation to the effects of trauma, including AISA, on negative emotional outcomes. This conclusion is supported by the results of Study 1 showing the high self-caring and low self-coldness components of self-compassion counteracted the negative effects of AISA on anxiety and depression symptoms (Strickland et al., 2019). Similarly, self-compassion has previously been shown to be related to lower PTSD symptoms among trauma survivors (Winders et al., 2020), and self-compassion mediated the association between childhood abuse and PTSD symptoms (Barlow et al., 2017).

Despite growing evidence for the utility of self-compassion in the emotional disorders field, there is ongoing controversy as to the factor structure and most appropriate scoring for the SCS (Neff, 2003b), a frequently used measure of self-compassion. To date, proposed and tested SCS factor structures of the SCS include lower order models with one general self-compassion factor, a two-factor model with each factor representing the positively worded self-compassion items (labelled self-caring) and the negatively worded items (labelled self-coldness), a three-factor model with factors representing self-kindness, mindfulness, and common humanity, and their respective

negative counter parts, and, most commonly, a six-factor model with each factor representing a self-compassion domain (Costa et al., 2016; Neff, 2003b; Williams et al., 2014).

Hierarchical models have also been examined, where it is assumed that the higher-order factors influence observed responses (i.e., items) through the first-order factors, similar to mediation (Reise et al., 2010). Hierarchical SCS factor structures include a model with one higher-order self-compassion factor and six lower order facets and a model with two higher order factors representing self-caring and self-coldness, each with the three corresponding positive and negative lower order facets. Finally, bifactor models, where the general and group factors are estimated as direct pathways to individual item responses, rather than assuming a hierarchical order to factors (Reise et al., 2012), have been explored, with models including one general and six group factors, and two general factors and six group factors.

Support for each proposed model has been inconsistent, with Neff (2003b) concluding a hierarchical one factor-model fit best, although this has been yet to be replicated at a hierarchical or lower order level. Importantly, a one factor structure has only been duplicated using bifactor models, a finding that should be cautiously interpreted given the limitations of bifactor models (e.g., a tendency to overfit the data even when modelling random data or when the true model is hierarchical, and to accommodate implausible and invalid data patterns; Bonifay & Cai, 2017; Murray & Johnson, 2013; Reise et al., 2016). In contrast, some studies have supported a lower order two- factor structure (Costa et al., 2016; Lopez et al., 2015), but not a three-factor model, and several other studies have supported a lower order six-factor structure (Kotsou &

Leys, 2016; Garcia-Campayo et al., 2015; Petrocchi et al., 2014; Williams et al., 2014). Some have also supported a hierarchical two-factor structure (Brenner et al., 2017; Coroiu et al., 2018; Montero-Marín et al., 2016).

Clarifying the factor structure of the SCS and in turn ensuring accurate scoring of the measure is an important step in fostering valid, replicable research progress regarding self-compassion in general and as it relates to AISA. However, no studies have directly compared nested models of all previously supported and theoretically plausible and previously tested factor structures within the same sample, leaving open the possibility that sample differences are contributing to the inconsistent findings. Therefore, using confirmatory factor analysis, the objective of Study 2 was to conduct nested model comparisons of six SCS factor structures within a single sample to determine the relative best fitting model, avoiding bifactor models as per their limitations. The results of Study 2 inform the scoring approach used in Study 3 and may serve as a guide for other researchers exploring self-compassion in future.

CHAPTER 4. STUDY 2. CLARIFYING THE FACTOR STRUCTURE OF THE SELF-COMPASSION SCALE: NESTED COMPARISONS OF SIX CONFIRMATORY FACTOR ANALYSIS MODELS

The manuscript based on this study is presented below. Noelle Strickland, under the supervision of Dr. Sherry Stewart, was responsible for developing the research question and analytic approach, using data collected at Dalhousie as part of a larger study called the Caring Campus project. Noelle Strickland was the lead on data analysis and interpretation, with the support of her co-authors, and wrote the initial draft of the manuscript. Prior to submission, she received and incorporated feedback from the study's co-authors. The manuscript underwent peer-review and Ms. Strickland led the relevant revisions. The manuscript was accepted for publication in *European Journal of Psychological Assessment* in June, 2021. The full reference for this manuscript is: Strickland, N. J., Nogueira, R. MacKinnon, S., Wekerle, C., & Stewart, S. H. (2021).

Clarifying the factor structure of the Self-Compassion Scale: Nested comparisons of six confirmatory factor analysis models. *European Journal of Psychological Assessment*. Advance online publication. <https://doi.org/10.1027/1015-5759/a000672>

Abstract

Self-compassion is associated with greater well-being and lower psychopathology. There are mixed findings regarding the factor structure and scoring of the Self-Compassion Scale (SCS). Using confirmatory factor analysis, I tested and conducted nested comparisons of six previously posited factor structures of the SCS. Participants were $N = 1158$ Canadian undergraduates (72.8% women, 26.6% men, 0.6% non-binary; $M_{\text{age}} = 19.0$ [$SD = 2.3$]). Results best supported a two-factor hierarchical model with six lower-order factors. A general self-compassion factor was not supported at the higher- or lower-order levels; thus, a single total score is not recommended. Given the hierarchical structure, researchers are encouraged to use structural equation models of the SCS with two latent variables: self-caring and self-coldness. A strength of this study is the large sample, while the undergraduate sample may limit generalizability.

Keywords: self-compassion, confirmatory factor analysis, Self-Compassion Scale, nested comparison, hierarchical factor structure.

Clarifying the Factor Structure of the Self-Compassion Scale: Nested Comparisons of Six Confirmatory Factor Analysis Models

Self-compassion – treating oneself with the same kindness as one would others – is a protective factor following trauma and a promising target in psychological therapy (Zeller et al., 2015). However, disagreement about the factor structure and validity of total self-compassion scores of the Self-Compassion Scale (SCS; Neff, 2003b), a popular self-compassion measure, warrants clarification, the objective of the current study.

Neff (2003b) posits a nested structure with six subdimensions (self-kindness, mindfulness, common humanity, self-judgement, overidentification, and isolation), three subdimensions, each with two corresponding positive and negative components (self-kindness/self-judgement, mindfulness/overidentification, common humanity/isolation), and one over-arching self-compassion factor, suggesting a one-, three-, or six-factor lower-order model may represent the construct. Gilbert (2010) argues self-compassion is comprised of factors aligned with the safeness processing system (self-caring; positive items) and the threat/defense processing system (self-coldness; negative items), suggesting a two-factor lower-order model.

In studies examining theoretically plausible factor structures of the SCS at the lower-order level, neither one- nor three-factor models were supported (e.g., Brenner et al., 2017; Coroiu et al., 2018; Petrocchi et al., 2014). A six-factor structure was supported in several studies ($N = 424$, Williams et al., 2014; $N = 1554$, Kotsou & Leys, 2016), but others report substantial model misfit (Coroiu et al., 2018; Costa et al., 2016; Zeng et al., 2016). After modifications, Costa et al. (2016; $N = 1263$) supported two factors (self-

caring and self-coldness), as did Lopez et al. (2015; $N = 1643$) using exploratory factor analysis.

Supporting hierarchical models, Neff (2003b; $N_1 = 391$, $N_2 = 232$) reported six lower-order factors loading on a single higher-order self-compassion factor, though subsequent studies failed to replicate this structure (Castilho et al., 2015; Williams et al., 2014). Conversely, others found that two higher-order factors (self-caring, self-coldness) with six lower-order factors showed marginal ($N = 2448$, Coroiu et al., 2018) to good fit ($N = 1115$, Brenner et al., 2017; $N_1 = 406$, $N_2 = 416$, Montero-Marín et al., 2016).

Recently, the SCS factor structure has been examined using bifactor models, where all factors are estimated as direct pathways to items (Markon, 2019). Bifactor models with two general factors (self-caring, self-coldness) and six specific factors (Brenner et al., 2017; Coroiu et al., 2018) and with only one general factor and six specific factors were supported (Cleare et al., 2018; $N = 526$; Neff et al., 2017; four samples; Tóth-Király et al., 2017; $N = 505$). There are numerous reasons why bifactor models were not included in the present study. In simulations, Murray and Johnson (2013) found that the bifactor model has more favorable fit indices than any other model, even when the true model is hierarchical. Bonifay and Cai (2017) found that bifactor models typically overfit the data and tend to have favorable fit indices when modelling random data. Reise et al. (2016) similarly caution readers that bifactor models can accommodate implausible and invalid data patterns (see also Markon, 2019). Moreover, Neff (2003b) conceptualized the higher-order SCS factors are explained by, or meaningful in the context of their association with, the lower-order factors. Given bifactor general and specific factors are orthogonal, clinically relevant factor

interpretation is difficult (e.g., the meaning of self-caring exclusive of self-kindness; Bonifay et al., 2016). Therefore, bifactor analyses should be cautiously interpreted and avoided in nested comparisons, and as such were not tested in the current study (Markon, 2019).

Clarifying whether a single factor (and hence a single total score) reflects the factor structure of the SCS is important for more accurate and valid measure scoring. Unclear also is which model is superior *relative* to other posited models. I compared nested models of six different factor structures of the SCS, avoiding bifactor models. I predicted a six-factor (Petrocchi et al., 2014) or a hierarchical model with six lower-order factors loading on to two higher-order factors (Montero-Marín et al., 2016) would fit best.

Method

Participants

I report how I determined the sample size, all data exclusions (if any), all data inclusion/exclusion criteria, whether inclusion/exclusion criteria were established prior to data analysis, all measures in the study, and all analyses. I report absolute and comparative model fit indices and exact p-values (see Data Analyses section). A power analysis showed a sample of $N = 818$ is required to detect a small effect ($.15$; $\alpha = .05$; 80% power), estimating the most complex model in the current study (Soper, 2021). With the only eligibility criteria being participants were in their first- or second-year, Canadian undergraduates ($N = 1158$, 72.8% women, 26.6% men, .6% non-binary; $M[SD]$ age = 19.0[2.3], $n = 157$ excluded for missing data) completed a survey in fall 2016 and winter 2017 as part of a larger study (Strickland et al., 2019).

Procedure

All first- and second-year students were emailed invitations to complete a 30-minute online survey (compensated with gift cards or course credits), with three weekly reminders (response rate: 30.4%).

Measures

Participants completed the 26-item SCS (Neff, 2003b), using a 5-point frequency scale (1 = never to 5 = almost always), including three positively oriented and three negatively oriented facets.

Data analyses

Lower-order one, two (self-caring, self-coldness), three (corresponding to the three positive/negative self-compassion components; Neff 2003b), and six-factor models were tested. Hierarchical models tested included one higher-order global self-compassion factor with six lower-order factors, and two higher-order factors (self-caring, self-coldness) with six lower-order factors.

Models were tested using the lavaan package in R using the diagonally weighted least squares (DWLS) estimator for ordinal items. Fit indices and standard errors used the robust variation. The following absolute fit indices suggest adequate fit: Standardized Root Mean Square Residual (SRMR) < .08, Comparative Fit Index (CFI) and Tucker Lewis Index (TLI) > .90, and Root Mean Square Error of Approximation (RMSEA) < .06 (Hu & Bentler, 1999). Nested models were compared with likelihood ratio tests. While the code and full output from all models are accessible (see Strickland, 2021), the raw data needed to reproduce all reported results are not due to ethical constraints.

Results

The lower-order one-factor model fit indices were poor: $\chi^2(299, N = 1129) = 12966, p < .001$, SRMR = .14, RMSEA = .19, CFI = .78, TLI = .76. Standardized factor loadings ranged from .43-.74. The lower-order two-factor model showed acceptable fit on absolute fit indices and poor fit on relative fit indices: $\chi^2(298, N = 1129) = 2245, p < .001$, SRMR = .06, RMSEA = .08, CFI = .90, TLI = .89. Standardized factor loadings ranged from .54-.77 for self-caring and .62-.82 for self-coldness. The factors were significantly intercorrelated ($r = -.46, p < .001; SE = 0.02$). The three-factor model fit poorly: $\chi^2(296, N = 1129) = 12669, p < .001$, SRMR = .14, RMSEA = .13, CFI = .79, TLI = .77. Standardized factor loadings ranged from .61-.77 for self-kindness vs. self-judgement, .45-.76 for mindfulness vs. overidentification, and .45-.75 for common humanity vs. isolation. Latent variables were strongly related, ranging from $r = .86, p < .001; SE = 0.02$ (self-kindness, common humanity) to $r = .93, p < .001; SE = 0.02$ (mindfulness, common humanity). The correlated six-factor structure produced a non-positive definite covariance matrix. Inspection of the eigenvalues suggested that the overidentification factor had a negative eigenvalue and large latent correlations with other factors (i.e., $> .90$) suggesting it is non-unique/inseparable from the other factors.

The hierarchical model involving one higher-order factor and six lower-order factors showed poor fit: $\chi^2(293, N = 1129) = 9303, p < .001$, SRMR = .12, RMSEA = .12, CFI = .82, TLI = .80. At the lower-order level, standardized factor loadings ranged from .71-.79 for self-kindness, .55-.79 for mindfulness, .60-.78 for common humanity, .66-.83 for self-judgement, .63-.87 for overidentification, and .66-.83 for isolation. The lower-order factors showed standardized factor loadings from .64-.88 on the self-

compassion factor. The hierarchical model with two higher-order factors (self-caring, self-coldness) and six lower-order factors (three facets/higher-order factor) showed fit indices approaching adequate fit: $X^2(292, N = 1129) = 1728, p < .001$, SRMR = .05, RMSEA = .07, CFI = .92, TLI = .91 (see Figure 2).

The following models were compared to the hierarchical two-factor model using likelihood ratio tests: one-factor ($X^2(7) = 176.5, p < .001$), two-factor ($X^2(6) = 239.7, p < .001$), three-factor ($X^2(4) = 99.3, p < .001$), and one higher-order and six lower-order factors ($X^2(7) = 22.1, p < .001$). In all cases, the hierarchical two-factor model fit best.

Discussion

Several models of the SCS were compared using nested model comparisons. Contrary to Neff (2003b), a one-factor structure of the SCS was not supported. Few have replicated Neff's (2003b) findings and recent studies did not test the two-factor hierarchical model (e.g., Neff et al., 2019). A general factor may therefore be an inappropriate and invalid representation of the SCS (e.g., Brenner et al., 2017, Cleare et al., 2018; Williams et al., 2014), and use of a single SCS total score is not recommended. Rather, nested model comparisons suggest a plausible two-factor structure, with the more complex hierarchical two-factor model showing slight improvement over the lower order two-factor model, potentially because it better captured measure flaws (e.g., cross-or low-loading items). It should be noted that while model fit was improved compared to the alternative models, results fell short of showing good or excellent fit (Hu & Bentler, 1999). As such future studies should explore avenues to improve the measure and model fit, including re-evaluating items for problematic wording and/or cross-loading on multiple factors and modifying the scale accordingly. The two higher-order factors

appear to represent self-coldness and self-caring, each explained by their corresponding three subfactors (e.g., self-coldness: self-judgement, isolation, and overidentification). The SCS should be analyzed with structural equation modelling using the higher- and lower-order factors rather than summed scores as predictors/outcomes.

The finding that the SCS is better reflected by two related factors than one general factor matches Gilbert's (2010) conceptualization of self-compassion as a two-process construct, supported by the moderate correlation between the higher-order self-caring and self-coldness factors. Moreover, the hierarchical two-factor structure advances findings supporting a two-factor lower-order structure: Costa et al. (2016) and Lopez et al. (2015) undertook modifications before finding good fit indices, suggesting higher-order domains with lower-order facets. Brenner's (2017) results also suggest the hierarchical two-factor model is a better alternative than a one factor higher-or lower-order model, accounting for the difficulty interpreting nested bifactor model comparison (Markon, 2019).

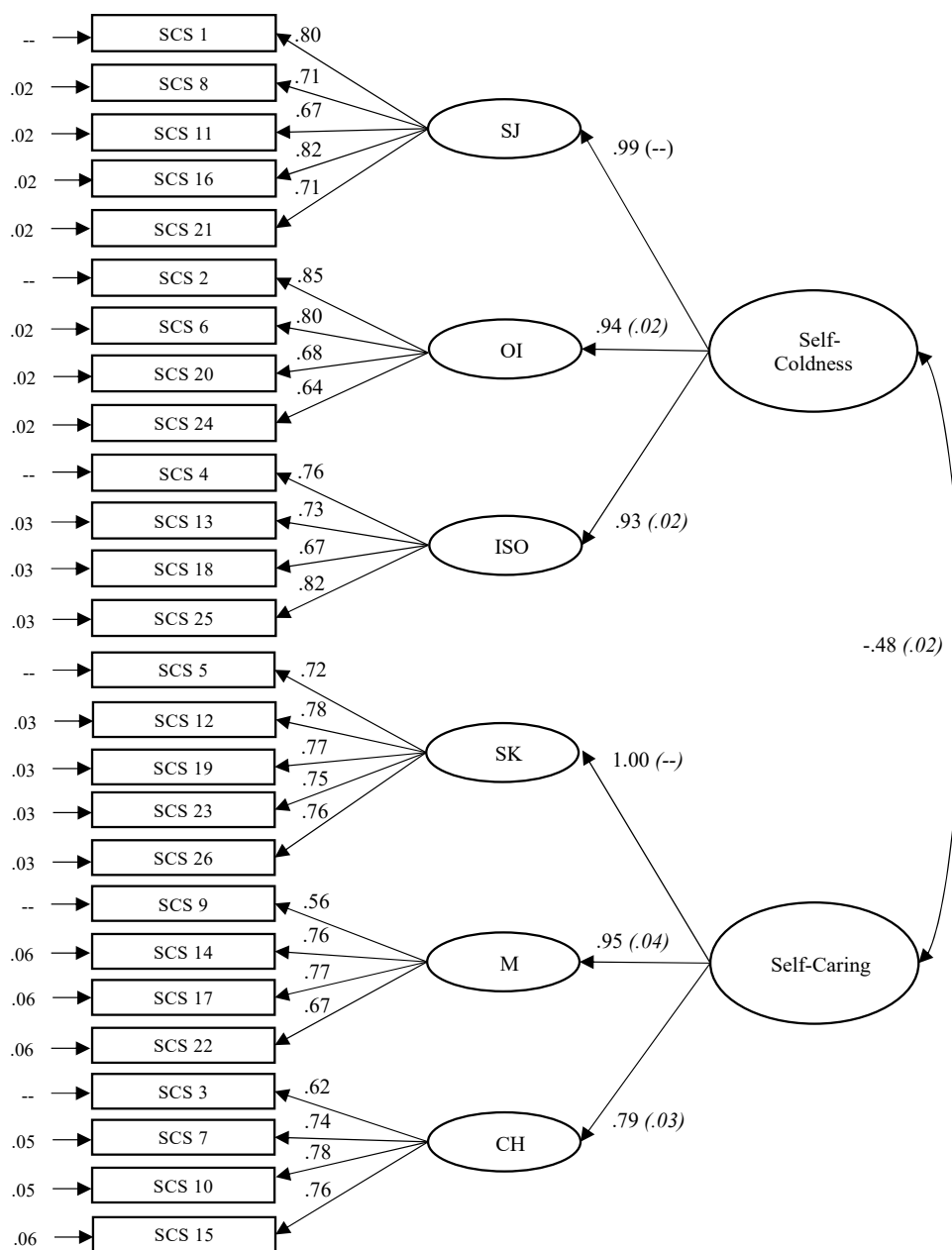
Difficulty estimating the six-factor model, as found in the current study, has also been reported in previous studies (e.g., Lopez et al., 2015). Notably, Coroiu et al. (2018) found a six-factor structure showed good fit indices when items were randomly assigned to each factor, suggesting six factors may be an unreliable representation of the SCS. Further, although Williams et al. (2014) supported a six-factor structure, they did not compare the relative fit of a hierarchical two-factor structure.

The large sample and ordinal scoring are strengths of this study, but the undergraduate sample may restrict generalizability of the results. The non-unique factor in the six-factor model and the high lower-order factor loadings in the hierarchical model (e.g., $> .95$) suggests redundant items. Additionally, there is room for improvement on

the fit of the two-factor hierarchical model, a result potentially driven by poorly specified items. The differences favoring the hierarchical model were also relatively slight and the lower-order two factor model is an alternative generally well-fitting structure. Future research might explore the factor structure of the 12-item short-form SCS (Raes et al., 2011). Altogether, nested comparisons informed the selection of the two-factor hierarchical model as the better-fitting relative factor structure of the SCS.

Figure 2

Two-Factor Hierarchical Model of the Self-Compassion Scale



Note. Standardized factor loadings ($*p < .001$). Standardized coefficients are reported with standard errors (*SE*) and error terms are left of items. SJ: self-judgement, OI: overidentification, ISO: isolation, SK: self-kindness, M: mindfulness, and CH: common humanity. All factor loadings and correlations were significant ($p < .001$).

Open Science

Open Data: Raw data needed to reproduce all of the reported results are not openly accessible due to ethical constraints, however, the code and output are accessible (Strickland, 2021).

Open Materials: I confirm that there is sufficient information for an independent researcher to reproduce all of the reported methodology, including the code and results output (Strickland, 2021).

Preregistration of Studies and Analysis Plans: This study was not preregistered with an analysis plan.

CHAPTER 5. TRANSITION FROM STUDY 2 TO STUDY 3

Study 1 (Chapter 2) explored components of self-compassion as attenuating and/or counteracting resilience factors for the association between AISA and negative emotional outcomes. Results showed high self-kindness and low over-identification counteracted the significant adverse effects of AISA on anxiety, and high self-kindness and low self-judgement, isolation, and over-identification counteracted the significant adverse effects of AISA on depression. Self-caring, specifically the self-kindness component of self-caring, may compensate for the effect of AISA on both depression and anxiety through self-soothing emotional regulation processes (Trompetter et al., 2017; Vettese et al., 2011). Additionally, self-coldness and the three negative subcomponents of self-compassion (i.e., self-judgement, over-identification, and isolation) may compensate for the negative effects of AISA on outcomes through different processes. Specifically, over-identification compensated for the negative association between AISA and anxiety and depression. Over-identification may involve repetitive, negative thoughts about the self and future, potentially reflecting worry-based and ruminative processes, with worry-based being most central to anxiety, and rumination being most central to depression (Raes, 2010). Along with over-identification, self-judgement and isolation compensated for the negative association between AISA and depression, which may both be linked to negative self-evaluations and poor self-concept, potentially involving self-blame and shame, which may be particularly relevant to depression (Bensimon, 2017; Weiss, 2010). These findings indicate that self-compassion may be beneficial among AISA survivors by potentially offsetting the adverse effects on such on anxiety and depression, and that

increasing self-compassion may also be a pre-emptive strategy to bolster resilience against future stressful or traumatic experiences in general.

To ensure the validity of the scoring of the SCS scale and thus, the results of studies exploring self-compassion, Study 2 (Chapter 4) compared six nested confirmatory factor analysis (CFA) models of previously posited factor structures of the Self Compassion Scale (SCS; Neff, 2003b). Results did not support a general self-compassion factor structure, contraindicating a single total SCS score. Instead, a two-factor hierarchical structure was the best fitting model, suggesting self-caring and self-coldness should be estimated as latent variables with structural equation modeling (SEM), informing the approach used in Study 3.

Study 3 built on Study 1 by testing a more comprehensive model exploring the role of self-compassion in AISA-related negative emotional outcomes and incorporated the scoring suggestions resulting from Study 2 by using SEM and latent self-caring and self-coldness variables. Study 1 suggested self-compassion (high self-caring and low self-coldness) may function as a compensatory, rather than a protective, resilience factor in that a model involving main effects, but not an interaction, was supported (Fergus & Zimmerman, 2005). These findings indicate that while higher self-compassion is a resilience factor, low self-compassion (i.e., low self-caring and high-self-coldness) may thus be a risk factor in the links between AISA and negative emotional outcomes.

The cognitive model of trauma suggests a mediational process where AISA may be linked to emotional outcomes through appraisals about the trauma (i.e., interpretations; Ehlers & Clark, 2000). Within the cognitive model of trauma, high self-caring and low self-coldness may counteract the association between AISA and negative emotional

outcomes through the absence of negative appraisals and presence of positive, compassionate appraisals, and low self-caring and high self-coldness may be a risk factor for negative emotional outcomes via the presence of negative, uncompassionate appraisals and absence of positive appraisals.

It should be noted that in Study 1 self-caring and self-coldness were examined as variables competing with AISA in predicting negative emotional outcomes, while in Study 3 self-caring and self-coldness were examined as mediating variables where AISA is specified as predicting lower self-caring and higher self-coldness as well as their indirect effects to negative emotional outcomes. Although the role of self-compassion is conceptualized differently, the mediation model extends the compensatory model by adding a pathway from AISA to self-caring and self-coldness, and the indirect effects. Thus, the compensatory model of resilience and the cognitive model of trauma may not be mutually exclusive, rather the later may build on the former by examining an arguably more comprehensive model of these processes as they are associated with negative emotional outcomes in the context of AISA. As such, self-caring and self-coldness were tested as mediators for the association between AISA and negative emotional outcomes in Study 3.

Moreover, the pattern of results in Study 1 indicated that worry-and ruminative-based processes may be important in the links between AISA and negative emotional outcomes, suggesting other mechanisms may be also relevant. Additionally, some effects were small (e.g., main effects of AISA on anxiety), warranting exploration and replication. A literature review also suggested related processes of self-blame, shame, and fear of self-compassion (FOSC) may be relevant to adverse emotional outcomes

following AISA. Finally, PTSD symptoms were examined in addition to anxiety and depression symptoms to explore the possibility of differential associations and connecting mechanisms among these associated but distinct emotional responses following trauma (Grant et al., 2008; Price & van Stolck-Cooke, 2015). As such, in Study 3, I used SEM to test the relative mediating effects of self-coldness, self-caring, FOSC, shame, and characterological (CSB) and behavioural self-blame (BSB) in helping explain the associations between AISA and PTSD, anxiety, and depression symptoms, respectively, while controlling for gender. By testing all mechanisms and outcomes within the same model, the results indicate patterns after controlling for the potential influence of the other mechanisms and outcomes, allowing for the identification of unique processes and pathways.

Along with testing multiple mechanisms in the same model given their unique features despite commonalities, the same may be applicable to PTSD, GAD, and depression symptoms. Namely, PTSD, GAD, and depression symptoms are frequently comorbid among AISA survivors (Dworkin, 2020) and share affective and somatic components (Price & van Stolck-Cooke, 2015), however results of CFA showed differentiation among the disorders supporting three separate PTSD, GAD, and depression factors (Grant et al., 2008). Despite being interconnected, these results support exploring PTSD, GAD, and depression separately rather than as a unitary negative emotional outcome construct. Moreover, the inter-associations among these symptomatology supports the need to explore all three outcomes within the same model to potentially identify unique processes for each.

CHAPTER 5. STUDY 3. LINKING ALCOHOL-INVOLVED SEXUAL ASSAULT TO
NEGATIVE EMOTIONAL OUTCOMES: THE RELATIVE MEDIATING ROLES OF
SHAME, SELF-COMPASSION, FEAR OF SELF-COMPASSION, AND SELF-
BLAME

The manuscript based on this study is presented below. Noelle Strickland, under the supervision of Dr. Sherry Stewart, was responsible for developing the research question, methodology, and analytic approach, and obtaining ethical approval. The project was funded through a CIHR Team Grant on promoting resilience in survivors of sexual violence (PI: Dr. Christine Wekerle; Dalhousie site PI: Dr. Sherry Stewart), and data was collected through Qualtrics Survey Panels. Noelle Strickland was the lead on data analysis and interpretation, with the support of her co-authors, and wrote the initial draft of the manuscript. Prior to submission, she received and incorporated feedback from the study's co-authors. The manuscript was submitted for publication in the *Journal of Interpersonal Violence* in July, 2021 and is under review. The full reference for this manuscript is:

Strickland, N. J., Nogueira-Arjona, R., Wekerle, C., & Stewart, S. H. (Submitted 2021). Linking alcohol-involved sexual assault to negative emotional outcomes: The relative mediating roles of shame, self-compassion, fear of self-compassion, and self-blame. *Journal of Interpersonal Violence*.

Abstract

Alcohol-involved sexual assault survivors who were drinking at the time of the assault (i.e., AISA survivors) may be at risk of internalizing victim-blaming rape myths and stigma. The cognitive model of trauma posits the link between AISA and negative emotional outcomes may be explained through internalized stigma-related mechanisms, including shame, the self-coldness and low self-caring self-compassion components, fear of self-compassion (FOSC), and characterological (CSB) and behavioural self-blame (BSB). Using structural equation modelling, I examined these mechanisms' unique effects in mediating the associations between AISA and posttraumatic stress disorder (PTSD), generalized anxiety disorder (GAD), and depression symptoms, respectively, controlling for gender and the overlap between outcomes. Using a cross-sectional design and community sample of younger adults ($N = 409$ Canadians, $M = 28.2$ years old, 51.3% women), shame emerged as the strongest mediator linking AISA with all outcomes. FOSC also partially mediated the AISA-PTSD symptom severity association, self-coldness partially mediated the AISA-GAD symptom frequency association, and CSB fully mediated the AISA-depression symptom frequency association. Results indicate that avoidance-based processes, ruminative-/worry-based cognitions, and negative self-evaluative cognitions may be distinctly relevant for AISA-related PTSD, GAD, and depressive symptoms, respectively, after accounting for the overarching mediation through shame. These internalized stigma-related mechanisms may be useful to prioritize in treatment to potentially reduce AISA-related negative emotional outcomes, particularly for AISA survivors with PTSD, GAD, and/or depression symptoms. The comprehensive mediation model tested with a gender-balanced, community sample increases

generalizability, but the cross-sectional design prohibits causal inferences. Future studies should longitudinally explore the sequencing of the mechanisms in a larger, more diverse sample.

Linking Alcohol-Involved Sexual Assault to Negative Emotional Outcomes: The
Relative Mediating Roles of Shame, Self-Compassion, Fear of Self-Compassion, and
Self-Blame

Sexual assault (i.e., non-consensual sexual contact and/or violation of sexual integrity) can lead to negative emotional outcomes, including posttraumatic stress disorder (PTSD), generalized anxiety disorder (GAD), and depression symptoms (Carey et al., 2018; Gong et al., 2019; Testa et al., 2004). About half of sexual assaults involve survivor and/or perpetrator alcohol use, which is more common among younger adults given the tendency for heavier drinking during this life stage (Blayney et al., 2016; O’Callaghan & Ullman, 2021). Further, sexual assault where the survivor was drinking (hereafter referred to as alcohol-involved sexual assault [AISA]) predicts negative emotional outcomes, despite the potential stress-response dampening effects of alcohol and/or the tendency for AISAs, where the survivor was drinking, to be less physically violent (Gong et al., 2019). Given the established links between AISA and PTSD, GAD, and depression symptoms (e.g., Carey et al., 2018; Strickland et al., 2019), exploring potential mechanisms is warranted to identify intervention targets. False victim-blaming beliefs (e.g., the survivor’s drinking provoked the sexual assault) and stigma may be especially salient for those who have experienced AISA (Brown et al., 2018). Indeed, AISA survivors perceived more stigma and are blamed more than non-intoxicated survivors which, if internalized, may predict shame and self-blame (Brown et al., 2018; Littleton et al., 2009). The risk of internalized stigma also suggests low self-compassion and fear of self-compassion (FOSC) may be important additional mediators (Barlow et al., 2017; Miron et al., 2016). Additionally, although women are more likely to report

AISA and have been the focus of most studies on AISA, men who survive AISA experience worsened negative outcomes, potentially due to increased stigma (Kehayes et al., 2018).

The cognitive model of trauma posits that survivors' negative, internal, stable appraisals about the cause (e.g., blaming their own character) and subsequent effects of trauma (e.g., fearing of social judgement), and avoidance coping may underpin the development of PTSD symptoms (Budden, 2009; Ehlers & Clark, 2000). Along with PTSD symptoms, negative, character-based appraisals may also be relevant for AISA-related depression symptoms (Clark & Beck, 2010), and rumination and worry about such appraisals, thought to be a strategy to avoid aversive emotions (i.e., avoidance coping), may be relevant for AISA-related GAD symptoms (Rutter & Brown, 2017). As such, there may be an indirect link between AISA and more severe PTSD and more frequent GAD and depression symptoms, through multiple AISA stigma-related mechanisms including shame, low self-compassion, FOSE, and self-blame. Accordingly, the current study explored their relative mediating roles in the associations between AISA and PTSD, GAD, and depression symptoms.

Shame is a physiologically intense, aversive emotional experience accompanied by judgements of the self as inferior or damaged; shame can be contrasted with guilt, which involves regret about behaviours (Tangney et al., 1996). The evolutionary function of shame may be to maintain harmonious communal relationships by motivating adherence to social norms, the perceived violation of which may inspire shame-related appraisals involving fear of social condemnation (Budden, 2009). The theorized role of cognitive appraisals featuring fear of social judgement suggests shame may be an

important mechanism linking AISA to negative emotional outcomes, given the potential for self-perceived violations of social norms if AISA-specific stigma is internalized (Budden, 2009). Supporting this, shame is robustly associated with PTSD symptoms, particularly following stigmatized traumas, and with GAD and depression symptoms (Carey et al., 2018; López-Castro et al., 2019; Tilghman-Osborne et al., 2008). Similarly, adult survivors of child sexual abuse (CSA) report high shame, and in turn more negative emotional outcomes (MacGinley et al., 2019). Sexual assault is also associated with greater shame than physical assault (Aakvaag et al., 2016), and shame mediates the association between interpersonal trauma, including sexual assault, and PTSD symptoms (La Bash & Papa, 2014). In a cross-sectional study of sexually assaulted women, shame, but not guilt, was associated with PTSD symptoms through negative self-appraisals (Badour et al., 2020), suggesting shame may be an important mechanism linking AISA to negative emotional outcomes.

An additional mechanism may be low self-compassion (i.e., nonjudgmentally, gently relating to oneself; Gilbert 2010; Neff, 2003). Neff (2003) presents a global self-compassion concept comprised of three positive facets: treating oneself gently (self-kindness), balanced emotional awareness (mindfulness), understanding failures as part of being human (common humanity); and three negative facets: treating oneself harshly (self-judgement), ruminating, worrying, and/or catastrophizing (over-identification), and believing one's failures are unique (isolation). Though most studies have utilized total Self-Compassion Scale (SCS; Neff, 2003) scores, a unidimensional factor structure has been difficult to replicate (Brenner et al., 2017). Gilbert (2010) argues self-compassion involves the activation of the safeness (high self-caring) and deactivation of the

threat/defense (low self-coldness) processing systems. Similarly, Strickland et al. (in press) found the three positive and three negative SCS facets each loaded onto higher-order self-caring and self-coldness factors, respectively – the approach used herein.

AISA survivors may struggle to adopt positive, protective, self-compassionate appraisals, predicting negative emotional outcomes in their absence. Indeed, sexual assault survivors reported higher self-coldness than non-sexual trauma survivors (Williamson, 2019), and adult survivors of childhood maltreatment reported lower self-compassion than those not maltreated (Miron et al., 2016). Low self-compassion was also associated with negative, internal, and stable appraisals and shame among childhood trauma survivors (Barlow et al., 2017). Furthermore, low self-compassion was related to higher PTSD symptoms among trauma survivors (Winders et al., 2020), and low self-caring and high self-coldness independently predicted higher anxiety and depression symptoms among AISA survivors, controlling for gender (Strickland et al., 2019). Moreover, low self-compassion and negative cognitive appraisals (including self-blame) simultaneously mediated the cross-sectional association between childhood abuse and PTSD symptoms (Barlow et al., 2017). Therefore, low self-compassion (i.e., low self-caring, high self-coldness) may explain the link between AISA and negative emotional outcomes.

Along with low self-compassion, the tendency to fear, or be reluctant to engage in, self-compassionate attitudes and behaviors (i.e., FOSC) may be another potential mediator in the AISA—negative emotional outcomes link (Gilbert et al., 2011). Supporting this, adult survivors of CSA showed higher FOSC compared to survivors of childhood physical abuse (CPA; Miron et al., 2016), suggesting FOSC may be especially

relevant for highly stigmatized trauma, such as AISA. Similarly, FOSC, but not self-compassion, mediated the associations between CSA and depression and PTSD symptoms, whereas neither self-compassion nor FOSC mediated the associations between CPA and depression and PTSD symptoms (Miron et al., 2016). Notably, FOSC is an independent construct and not simply the absence of self-compassion; for example, one can be compassionate toward the self despite fearing negative consequences (Gilbert et al., 2011). Together, although low self-compassion may be associated with AISA, FOSC may be a stronger mechanism linking AISA to negative emotional outcomes, given that FOSC potentially better captures avoidance-related negative self-appraisals (Geller et al., 2019).

Aligned with the cognitive model of trauma, self-blame is higher among AISA survivors (particularly women) compared to survivors of sexual assault not involving alcohol (Ehlers & Clark, 2000; Littleton et al., 2009). However, these studies did not distinguish behavioural self-blame (BSB), which targets specific actions (e.g., drinking the day of assault), from characterological self-blame (CSB), which targets dispositional, stable, character traits (e.g., being too trusting; Janoff-Bulman, 1979). Given CSB appraisals are perceived as unchangeable, they may predict more negative emotional outcomes following AISA than BSB (Ehlers & Clark, 2000). Accordingly, self-blame failed to significantly mediate the association between AISA and PTSD symptoms in a two-wave longitudinal study when CSB and BSB were undifferentiated (Blayney et al., 2016). However, when differentiated, AISA survivors reported higher CSB than survivors of sexual assault not involving alcohol, and CSB, but not BSB, mediated the link between AISA and higher PTSD in a three-wave longitudinal study (Peter-Hagene &

Ullman, 2018). Likewise, while BSB, CSB, and disengagement coping simultaneously mediated the cross-sectional association between low self-compassion and PTSD symptoms, only CSB mediated the association between low self-compassion and depression symptoms among sexual assault survivors (Hamrick & Owens, 2019). These results indicate that CSB, and to a lesser extent BSB, may mediate the link between AISA and negative emotional outcomes. Attesting to the need to test the relative influence of potential mediators, shame mediated the associations between undifferentiated self-blame and PTSD and depression symptoms in a sample of sexually assaulted women (Bhuptani, 2020). Thus, although BSB and CSB were not separated, this is preliminary evidence that shame may be a stronger (more proximal) predictor of negative emotional outcomes than CSB and BSB.

The Current Study

Informed by the cognitive model of trauma (Clark & Beck, 2010; Ehlers & Clark, 2000), I aimed to ascertain the unique mediating effects of shame, low self-caring, high self-coldness, FOSC, CSB, and BSB in the links of AISA with PTSD, GAD, and depression symptoms by testing these mediators simultaneously. PTSD, GAD, and depression symptoms were also tested simultaneously to explore potential differential associations for each, because they may be comorbid but separable responses to AISA (Gong et al., 2019; Strickland et al., 2019). Given studies examining AISA show gender differences or only included women (e.g., Peter-Hagene & Ullman, 2018; Kehayes et al., 2018), gender was controlled. I used a community sample and a cross-sectional mediational design – acceptable when well-founded theories (i.e., the cognitive model;

Ehlers & Clark, 2000) indicate mediators occur prior to outcomes (Shrout, 2011).

Hypotheses

It was hypothesized that: (H1) AISA would be significantly positively associated with PTSD (H1a), GAD (H1b), and depression (H1c) symptoms.

(H2) AISA would be significantly associated with higher shame (H2a), self-coldness (H2b), FOOSC (H2c), CSB (H2d), and BSB (H2e), and lower self-caring (H2f).

(H3) In a model with all mediators and outcomes entered simultaneously and controlling for gender, shame (H3a), self-coldness (H3b), low self-caring (H3c), FOOSC (H3d), CSB (H3e), and BSB (H3f) would each partially mediate the association between AISA and all outcomes.

(H4) Shame would be a stronger mediator than CSB (H4a) and BSB (H4b; Bhuptani, 2020), self-coldness stronger than low self-caring (H4c; Williamson, 2019), FOOSC stronger than low self-caring (H4d) and self-coldness (H4e; Miron et al., 2016), and CSB stronger than BSB (H4f; Peter-Hagene & Ullman, 2018). The strengths of shame compared to self-coldness, low self-caring, and FOOSC, of CSB compared to FOOSC, self-coldness, and low self-caring, and differences in strength of mediation on each outcome were not predicted a priori, given a lack of previous research.

Method

Participants

Canadian participants ($N = 409$ after excluding 271 respondents;² $M [SD] = 28.2$ [4.9] years old; 51.3% women, 48.7% men; see Table 3.1 for demographics) were

²Seventy-three panelists were excluded for infrequent alcohol use, 29 for being outside the eligible age range, 35 for not consenting to the study, 58 for the gender quota being fulfilled, 11 non-binary participants for insufficient n for analyses, 3 for being from

obtained through Qualtrics Survey Panels, which recruits from various sources (e.g., website intercept recruitment, member referrals, targeted email lists, gaming sites, customer loyalty web portals, permission-based networks, social media). Participants were recruited for a gender balanced and Canada wide sample. Panelists were eligible if they were 18-35 years old, drank alcohol at least once/month, and had not completed a self-compassion intervention. As per Qualtrics Survey Panel member agreements, participants were compensated with \$6-8 (CAD) in gift cards/other rewards.

Procedure

Survey panel members received an email invitation or prompt on their respective survey platform informing them of the 30-minute survey, specifying the survey was about common responses to sexual trauma, the compensation, and providing a survey link. After initial screening, eligible and willing participants completed the survey followed by written debriefing. This study received institutional ethics approval.

Measures

Sociodemographic questions included age, gender, racial background, province of residence, highest level of education, and employment status.

Frequency of AISA since the age of 18 was measured with the item: “*As a result of using alcohol... I was taken advantage of sexually,*” rated on a 4-point scale from 0 (*never*) to 4 (*more than five times*), part of a larger questionnaire assessing potential drinking-related harms (Strickland et al., 2019). AISA was positively skewed and dichotomized (never [-.5] vs. once or more [.5]). The AISA item was positively

outside Canada, and 62 for failing a speeder check performed by Qualtrics to ensure the survey was completed in plausible amount of time, thereby improving data quality.

correlated with anxiety and depression symptoms in a previous study, indicative of its validity (Kehayes et al., 2018).

Shame intensity was assessed with the 25-item Experience of Shame Scale (ESS; Andrews et al., 2002). Items (e.g., “*Have you felt ashamed of the sort of person you are?*”) were rated on a 4-point scale (1 = *not at all* to 4 = *very much*), referring to the last year. The ESS has a multidimensional structure and consists of three scales: characterological (12 items), behavioural (9 items), and body-related shame (4 items). The ESS total correlates with an alternative shame measure ($r = .61$; construct validity), shows good test-retest reliability (11 weeks; $r = .83$), and internal consistency (Cronbach’s $\alpha = .92$; Andrews et al., 2002; current study $\alpha = .97$).

Self-compassion was assessed with the 26-item SCS (Neff, 2003b). The SCS consists of six 4-5 item subcomponents: (1) self-kindness (e.g., “*I try to be loving towards myself when I am feeling emotional pain*”), (2) mindfulness (e.g., “*When something upsets me, I try to keep my emotions in balance*”), (3) common humanity (e.g., “*I try to see my failings as part of the human condition*”), (4) self-judgement (e.g., “*When times are really difficult, I tend to be tough on myself*”), (5) isolation (e.g., “*When I fail at something that’s important to me, I tend to feel alone in my failure*”), and (6) over-identification (e.g., “*When I’m feeling down, I tend to obsess and fixate on everything that’s wrong*”; Neff, 2003b). Items were rated on a 5-point scale (1 = *never* to 5 = *almost always*). Using structural equation modelling (SEM), the latent variables self-caring (scales 1-3 above) and self-coldness (scales 4-6 above) were estimated with their three respective subscales, consistent with evidence supporting a two-factor hierarchical

structure (Brenner et al., 2017; Strickland et al., in press). Current study internal consistencies were excellent (self-coldness $\alpha = .93$, self-caring $\alpha = .91$).

FOSC was assessed with the 15-item Fear of Self-Compassion Scale (Gilbert et al., 2011). Items (e.g., *“I feel that I don’t deserve to be kind and forgiving to myself”*) were rated using a 5-point scale (0 = *do not agree at all* to 4 = *completely agree*). Factor analyses show the measure is unidimensional (Gilbert et al., 2011). The FOSC was associated with self-coldness ($r = .56$) and self-caring ($r = -.54$), supporting construct validity, and has shown excellent internal consistency (i.e., Cronbach’s $\alpha = .92$, Gilbert et al., 2011; current study $\alpha = .95$).

CSB and BSB were assessed with a revised version of the Attributional Blame Questionnaire (ABQ; Tilghman-Osborne et al., 2008; see Appendix C). Originally targeting adolescents, I adapted it for adults (available on request). Following four brief scenarios describing potentially distressing events (e.g., being laughed at for making a mistake during a presentation, under-performing on a group project and receiving a bad evaluation), participants were asked 10 questions with five each addressing CSB (e.g., *“This happens because I am not a very good worker/person,”*) and BSB (e.g., *“I should have worked/tried harder!”*). Questions were rated on a 5-point scale (1 = *definitely would not think* to 5 = *definitely would think*). The original version CSB and BSB items loaded on to two distinct factors using exploratory factor analysis (Tilghman-Osborne et al., 2008), and the subscales were positively associated with the State Shame and Guilt Scale (CSB $r = .47$, BSB $r = .26$), supporting construct validity. The original subscales showed good test-retest reliability (five months; CSB $r = .98$, BSB $r = .94$) and internal

consistency (CSB Cronbach's $\alpha = .86$, BSB $\alpha = .84$, Tilghman-Osborne et al., 2008), as did the subscales from the current study's revised measure (CSB $\alpha = .95$, BSB $\alpha = .91$).

PTSD symptom severity was assessed with the 20-item Post-Traumatic Stress Disorder Checklist – DSM 5 (PCL-5; Weathers et al., 2013). Participants were instructed that the items (e.g., “*Repeated, disturbing dreams of the stressful experience*”) represent possible responses to a “very stressful experience,” and to rate how bothersome each symptom was over the past month on a 5-point scale (1 = *not at all* to 5 = *extremely*). Participants completed this measure regardless of AISA status. Factor analyses support a hierarchical structure with six facets (i.e., reexperiencing, avoidance, negative cognitions and mood, anhedonia, dysphoric arousal, and anxious arousal) loading onto a single higher order factor (Blevins et al., 2015); thus, a total score was used in the current study. The PCL-5 correlates with the Posttraumatic Distress Scale ($r = .85$), supporting construct validity, and shows good test-retest reliability (one week; $r = .82$) and internal consistency (Cronbach's $\alpha = .94$, Blevins et al., 2015; current study $\alpha = .96$).

GAD symptom frequency was measured with the 7-item Generalized Anxiety Disorder -7 (GAD-7) scale (Spitzer et al., 2006). Items (e.g., “*Feeling nervous, anxious, or on edge*”) were rated on a 4-point scale (0 = *not at all* to 3 = *almost every day*) for the past two weeks. The scale shows a unidimensional structure (Rutter & Brown, 2017). The GAD-7 was positively correlated with the Beck Anxiety Scale ($r = .72$), supporting construct validity, and showed excellent internal reliability (Cronbach's $\alpha = .92$, Spitzer et al., 2006; current study $\alpha = .94$).

Depression symptom frequency was measured with the 9-item Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001). Items (e.g., “*Feeling down, depressed, or*

hopeless”) were rated on a 4-point scale (0 = *not at all* to 3 = *almost every day*) for the past two weeks. The scale shows a unidimensional structure (Keum et al., 2018). The PHQ-9 was positively correlated with the depression subscale of the Short-Form General Health Survey ($r = .73$), supporting construct validity, and showed good test-retest reliability (48 hours; $r = .84$) and good to excellent internal consistency (Cronbach’s $\alpha = .89$, Kroenke et al., 2001; current study $\alpha = .92$).

Analysis Plan

Along with correlations (H1 & H2), the mediation model (H3) was tested with the lavaan package in R, using SEM with Maximum Likelihood and full information maximum likelihood estimation for missing data (bootstrapped; 1,000 iterations). The AISA item and gender variables were specified as observed variables. The latent variables CSB, BSB, shame, self-coldness, self-caring, and PTSD severity were specified using their respective previously supported factors, and FOOSC, frequency of GAD and depression symptoms were specified using three randomly assigned item parcels given their unidimensional structures (see Measures section; Matsunaga, 2008). The *a* pathways were specified as the effect of AISA on each respective mediator, the *b* pathways were specified as the effect of each respective mediator on each outcome, the direct effects were specified as the effect of AISA on each respective outcome controlling for the mediator, the indirect effects (i.e., the pathways from AISA to the respective outcome through each mediator) were specified separately as the product of the direct effect and the *a* pathway, and the total effects were specified as the sum of the direct and indirect effects on each respective outcome (Gunzler et al., 2013). All effects were considered significant at $p < .05$. Mediators were allowed to covary (i.e., modelled as inter-related).

Gender (men and women)³ was added as a covariate for the links between AISA and mediators and outcomes (*a* pathways and direct effects). There were no elevated error covariances among latent variable residuals, indicators of multicollinearity, or problematic skewness (O'Brien, 2007). All reported effects are standardized including the completely standardized indirect effect (ab_{cs}). Standardized Root Mean Square Residual (SRMR) $\leq .08$, Comparative Fit Index (CFI) $\geq .90$, and Root Mean Square Error of Approximation (RMSEA) $\leq .06$ were taken as evidence of acceptable to good fit (Hu & Bentler, 1999). The chi-square value was reported ($p \geq .05 = \text{good fit}$); however, given its sensitivity to sample size, I used $X^2/df < 5.00$ (Hu & Bentler, 1999; Wheaton et al., 1977). For H4, the relative strength of each mediator was assessed using percent mediation and Bonferroni corrected post hoc difference tests ($p \leq .0011$; 45 tests). A power analysis based on the mediation model showed $N = 281$ was required to detect a small-to-medium effect (.80 power, $p < .05$; Soper, 2021).

Results

Of the AISA survivors ($n = 127$; 31.1% of sample), 62% ($n = 79$) were women and 38% ($n = 48$) men. AISA was significantly positively related to PTSD severity and GAD and depression symptom frequency, consistent with H1a-H1c, and to shame, self-coldness, FOSC, CSB, and BSB, consistent with H2a-H2e. Contrary to H2f, AISA was unrelated to self-caring (see Table 3.2). All mediators were significantly inter-correlated, except self-caring with FOSC, CSB, and BSB. The three negative emotional outcomes were significantly inter-correlated. FOSC was higher in men, and self-coldness higher and GAD symptoms more frequent in women (see Table 3.3 for gender differences).

³Other genders were excluded due to insufficient *n*.

Mediation Model

Our model with shame, self-coldness, low self-caring, FOOSC, CSB, and BSB simultaneously mediating the associations between AISA and PTSD severity and frequency of GAD and depression symptoms, controlling for gender (see Figure 3) showed acceptable fit: SRMR = .06, RMSEA = .08, CFI = .91, and $\chi^2/df = 3.40$ ($\chi^2 [474, N = 409] = 1612.75, p < .001$). The associations between AISA and negative emotional outcomes were partially (PTSD severity and GAD symptom frequency) to fully (depression symptom frequency) explained by the set of mediators (see Table 3.4 for correlations between all latent mediator variables). Consistent with H3a, shame significantly mediated the associations between AISA and all outcomes, accounting for 42% of the total effect of AISA on GAD, 52% on depression, and 49% on PTSD symptoms. Partially consistent with H3b, self-coldness significantly mediated the associations between AISA and GAD, but not PTSD or depression symptoms, accounting for 7% of the total effect of AISA on GAD (vs. only 6% on depression and less than 1% on PTSD symptoms). Contrary to H3c, low self-caring did not significantly mediate any associations, accounting for less than 1% of the total effect of AISA on each outcome. Partially consistent with H3d, FOOSC significantly mediated the associations between AISA and PTSD, but not GAD or depression symptoms, accounting for 14% of the total effect of AISA on PTSD (vs. only 7% on GAD and 4% on depression symptoms). Partially consistent with H3e, CSB significantly mediated the association between AISA and depression, but not GAD or PTSD symptoms, accounting for 14% of the total effect AISA on depression (vs. only 8% each on GAD and PTSD symptoms). Contrary to H3f, BSB did not significantly mediate associations between AISA and any outcome,

accounting for only 9% of the total effect of AISA on depression, 7% on PTSD, and 2% on GAD symptoms.

Bonferroni corrected post hoc difference tests showed the indirect effect through shame was significantly stronger than through all other mediators for each outcome, including FOSC (difference = .20, $p < .0001$) in the case of PTSD severity, self-coldness (difference = .22, $p < .0001$) in the case of GAD symptom frequency, and CSB (difference = .21, $p < .0001$) in the case of depression symptom frequency. This pattern is consistent with H4a and H4b. No other indirect effects significantly differed. Thus, while self-coldness mediated the AISA-GAD symptom frequency link and low self-caring did not, contrary to H4c, the magnitude of mediation between these two mediators did not differ significantly. While FOSC mediated the AISA-PTSD symptom severity link and low self-caring did not, contrary to H4d and H4e, FOSC was not a significantly stronger mediator than either self-caring or self-coldness. While CSB mediated the AISA-depression symptom frequency link and BSB did not, contrary to H4f, the strength of mediation did not differ significantly between them.

Discussion

This study examined the relative mediating effects of shame, self-coldness, low self-caring, FOSC, CSB, and BSB on the associations between AISA and PTSD symptom severity and GAD and depression symptom frequency, controlling for gender. AISA was positively related to all outcomes and mediators, except self-caring, consistent with H1-H2 (except H2c). The mediation model showed shame and FOSC partially mediated the association between AISA and PTSD symptom severity, shame and self-coldness partially mediated the association between AISA and GAD symptom frequency,

and shame and CSB fully mediated the association between AISA and depression symptom frequency, partially consistent with H3.

Supporting the cognitive model of trauma, previous findings, and H3a/H4a-b, shame emerged as the strongest mechanism linking AISA with all outcomes, even after accounting for the other mediators and associations between outcomes (Bhuptani, 2020; Ehlers & Clark, 2000). Shame may deter disclosing AISA and support seeking, in turn predicting more severe PTSD and more frequent GAD and depression symptoms (López-Castro et al., 2019). Moreover, the aversive emotional effects of shame may motivate avoidance of reminders of AISA in attempts to reduce future emotional shame experiences, impeding opportunities to reprocess traumatic memories and potentially contributing to PTSD symptoms (La Bash & Papa, 2014). AISA survivors may also use worry and ruminative processes, both of which characterize GAD, to avoid shame, potentially explaining how shame may contribute to more frequent AISA-related GAD symptoms (Cândeia & Szentagotai-Tătar, 2018). Shame may explain the links between AISA and more frequent depression symptoms through shame-related appraisals involving fear of social judgement, which may have negative implications for their sense of self, a central component of depression symptoms (Clark & Beck, 2010). Within the cognitive model of trauma, appraisals precede emotional responses, indicating the emotional component of shame may be most proximal to the outcomes; this is one possible reason why shame was the strongest mechanism in this study, consistent with Bhuptani (2020). These results highlight shame may be the most important mechanism to target in reducing AISA-related negative emotional outcomes and increasing survivors' likelihood to seek subsequent support.

In addition to shame, self-coldness mediated the associations between AISA and GAD, but not depression, symptom frequency or PTSD symptom severity, partially supporting H3b. Self-coldness may link AISA and more frequent GAD symptoms, characterized by worry and fearing future negative experiences, through the self-coldness tendencies of rumination, worry, catastrophizing, and self-criticism (Rutter & Brown, 2017). Indeed, Raes (2010) showed, in separate models, worry and rumination, central components of GAD symptoms, mediated the association between low self-compassion and anxiety symptoms, while only rumination mediated the link between low self-compassion and depression symptoms. In contrast to Raes's (2010) finding and H3b, after accounting for competing mechanisms and the association between outcomes, self-coldness (which has a ruminative aspect) did not significantly mediate the link between AISA and depression symptom frequency in the present study, suggesting other mechanisms may be more important than self-coldness in the AISA-depression link. Additionally, self-coldness did not mediate the link between AISA and PTSD symptom severity in this study, indicating the AISA-PTSD symptom severity link may be explained via avoidance-processes (e.g., shame; Ehlers & Clark, 2000; La Bash, & Papa, 2014), rather than worry/ruminative self-coldness components.

Contrary to predictions (H2c and H3c), self-caring was unrelated to AISA and did not significantly mediate any associations. Strickland et al. (2019) showed self-caring counteracted the effects of AISA on anxiety and depression symptoms, suggesting self-caring may function instead as a compensatory resilience factor. Additionally, one possible explanation for the non-significant self-caring effects is the safety/self-soothing processing systems involved in and necessary for self-caring to occur may be precluded

by the opposing threat/defense processing systems, which may be activated by the other mechanisms, including self-coldness, shame, FOSC, and CSB (Gilbert, 2010, 2011, Naismith et al., 2019), all of which were included in the models in the present study.

FOSC mediated the effect between AISA and PTSD symptom severity, but not GAD or depression symptom frequency, partially consistent with H3d. Given their importance in PTSD, the fear-based (e.g., expecting bad things to happen if self-compassionate) and emotional avoidance processes (e.g., avoiding strong emotions arising from self-compassion; Geller et al., 2019) elements of FOSC may link AISA particularly to PTSD symptom severity (Ehlers & Clark, 2000). While shame was a stronger mediator than FOSC for AISA-related PTSD symptom severity, shame and FOSC were highly associated; future longitudinal studies should identify their temporal sequencing. The cognitive elements of FOSC and shame (e.g., perceiving oneself as undeserving of compassion or social acceptance) may occur simultaneously, though the emotional component of shame may occur later in the mediational chain than FOSC.

In addition to shame, CSB fully mediated the association between AISA and depression symptom frequency, but not PTSD symptom severity or GAD symptom frequency, partially consistent with H3e. Contrary to H3f, BSB did not significantly mediate any associations. This pattern supports the cognitive model of trauma and previous studies showing CSB is more important than BSB in predicting negative outcomes following AISA, as CSB appraisals that relatively fixed character traits caused the trauma may not provide perceived opportunity for change and possible avoidance of future trauma (Janoff-Bulman, 1979; Peter-Hagene & Ullman, 2018). In contrast, CSB did not mediate the association between AISA and GAD symptom frequency, suggesting

that after accounting for depression symptom frequency, other mechanisms such as the ruminative, worry, and catastrophizing processes involved in self-coldness may explain this link (Raes, 2010). Similarly, Garnefski and Kraaij (2018) found self-blame, rumination, and catastrophizing were associated with both GAD and depression symptoms when not accounting for their comorbidity, though after controlling for such, only catastrophizing was related to GAD, and only self-blame was related to depression symptoms. Finally, CSB did not significantly mediate the link between AISA and PTSD symptom severity, contrary to hypotheses and previous findings (Peter-Hagene & Ullman, 2018). In a model with both CSB and avoidance-based processes, such as FOOSC, the later may be more important for more severe PTSD symptoms. This consistent with Ullman et al.'s (2007) findings that when tested simultaneously, avoidance coping, but not CSB or BSB, predicted PTSD symptoms among sexual assault survivors. Together, these results suggest that over and above the competing mediators, CSB and shame may be key mechanisms to address regarding AISA-related depression symptom frequency.

Strengths, Limitations, and Future Directions

Current study strengths include examining the *relative* mediating roles of shame, self-coldness, low self-caring, FOOSC, CSB, and BSB on the links between AISA and negative emotional outcomes, controlling for gender and outcome overlap. Though predominantly White, the gender-balanced, community sample of Canadians enhances generalizability. However, the cross-sectional design precludes causal conclusions. The single-item AISA measure also warrants cautious comparison to studies measuring AISA behaviourally and more comprehensively (e.g., Peter-Hagene & Ullman, 2018); however, the broad AISA item may have countered the tendency for AISA survivors not to label

their experience as sexual assault (Schwarz et al., 2017). All participants completed the PTSD scale regardless of trauma exposure to compare AISA survivor responses to those without this history (similar to Barlow et al. 2017). This approach was utilized in order to balance the study aim of comparing results between those who reported AISA and those who did not. While we succeeded in this regard, the loss of specificity is one admitted drawback. It is possible that other trauma experiences contributed to PTSD symptoms among those who reported AISA, which is a limitation of the current study. Nonetheless, AISA may be associated with PTSD symptoms even when they are non-AISA-specific, given the nature of symptoms may not be so variable between different traumas that they would no longer be relevant. Indeed, the PCL-5 version used in the current study was designed as a broad screener that may capture PTSD symptoms across multiple types of traumas (Weathers et al., 2013). Therefore, although it cannot be determined with certainty that the PTSD symptoms assessed correspond to AISA alone, it is unlikely that the reported PTSD symptoms are completely non-specific to AISA. This is further supported by the significant moderate association ($r = .44$) between AISA and PTSD symptoms found in the current study. Additionally, it is possible that experiencing AISA may have worsened PTSD symptoms corresponding to prior trauma, among those who experienced trauma prior to AISA. Future studies might explore whether results are replicated when participants who report AISA complete the PCL-5 in relation to their AISA as the index trauma as compared to those who did not report AISA completing the broad, non-specific version of the PCL-5.

Additionally, the shame, CSB, and BSB measures used in the present study were not AISA specific, in contrast to The Trauma-Related Shame Inventory (Øktedalen et al.

2014) and the non-CSB/BSB differentiated Rape Attribution Questionnaire (Frazier, 2003). Given no CSB/BSB measures feasible for an online survey were available to my knowledge, I modified the ABQ for use with adults, potentially introducing error variance as the psychometric properties are currently unknown. Additionally, while there was sufficient power to detect small-to-medium effects, the study was likely underpowered to detect small effects. Finally, while the mediation model showed adequate fit indices, model fit might be improved in future studies by using a larger sample, a more comprehensive measure of AISA, and modifying measures that, despite evidencing passable psychometric properties and factor structures, show potential for improvement (e.g., the SCS; Strickland et al., 2021; Brenner et al., 2017). Future longitudinal studies should explore the potential sequence of the mediators in larger and more racially, age, and gender diverse samples, using a more comprehensive measure of AISA, and AISA-specific measures of PTSD severity, shame, and CSB and BSB. Other possible models may also be explored (e.g., a moderated mediation model with CSB mediating the link between AISA and negative outcomes, and the AISA to CSB link moderated/buffered by self-caring). The models for GAD and PTSD outcomes showed partial mediation, suggesting additional mechanisms, such as psychological inflexibility and a direct assessment of internalized stigma may be important (Boykin et al., 2018; Littleton et al., 2009).

In conclusion, I examined the relative mediating effects of shame, self-coldness, low self-caring, FOSS, CSB, and BSB on the associations between AISA and PTSD symptom severity, and GAD and depression symptom frequency, controlling for gender and outcome inter-associations. Supporting the cognitive model of trauma (Ehlers &

Clark, 2000) and the heightened risk of internalizing AISA-specific stigma (Brown et al., 2018), shame emerged as the strongest and most comprehensive mediator. Along with shame: FOSC partially explained the association between AISA and PTSD symptom severity, potentially via avoidance-based processes; self-coldness partially explained the association between AISA and GAD symptom frequency, potentially via worry-based cognitions; and CSB fully explained the association between AISA and depression symptom frequency, potentially via negative self-evaluative cognitions. In line with findings that PTSD, GAD, and depression symptoms have commonalities but are distinct outcomes (Grant et al., 2008; Price & van Stolck-Cooke, 2015), shame appears to be a transdiagnostic process for each outcome, while FOSC, self-coldness, and CSB may be unique processes important for PTSD, GAD, and depression symptoms respectively. These distinct mechanisms may be important to address in treatment following AISA via trauma-focused cognitive behavioural treatments, particularly for those with PTSD, GAD, and/or depression symptoms (Mavranouzouli et al., 2020).

Table 3.1.*Sample Sociodemographics (N = 409).*

Characteristic	Frequency (n)	Percentage (%)
Racial Background (N = 406)		
White	250	61.6%
Asian	94	23.2%
Middle Eastern/North African	14	3.4%
Hispanic/Latinx/Spanish	9	2.2%
Black/African	9	2.2%
Multiracial	9	2.2%
Indigenous	7	1.7%
Pacific Islander	4	1.0%
Other	10	2.4%
Province of Residence (N = 409)		
Ontario	206	50.4%
British Columbia	65	15.9%
Alberta	46	11.2%
Quebec	45	11.0%
Atlantic provinces	28	6.8%
Prairie provinces	19	4.6%
Education (N = 405)		
University or college degree	224	55.3%
Secondary school or lower	92	22.7%
Graduate degree	51	12.6%
Trade or professional certificate	30	7.4%
Professional degree	8	2.0%
Employment Status (N = 407)		
Employed full- or part-time	307	75.5%
Full- or part-time student	43	10.6%
Employed student	10	2.5%
Unemployed	41	10.1%
Other	6	1.5%

Table 3.2.*Bivariate Correlations Between all Study Variables (N = 409).*

	M (SD)	1	2	3	4	5	6	7	8	9	10
1. AISA	--	--									
2. Shame	58.84 (21.00)	.40*	--								
3. FOCS	37.74 (14.74)	.30*	.64*	--							
4. Self-Coldness	44.27 (10.51)	.28*	.66*	.58*	--						
5. Self-Caring	41.48 (9.37)	-.03	-.16*	-.07	-.20*	--					
6. CSB	52.43 (18.82)	.28*	.50*	.59*	.48*	-.03	--				
7. BSB	62.58 (15.67)	.28*	.53*	.45*	.49*	.04	.73*	--			
8. PTSD	48.22 (19.12)	.44*	.78*	.68*	.59*	-.01	.54*	.50*	--		
9. GAD	15.34 (6.30)	.40*	.73*	.46*	.60*	-.21*	.47*	.48*	.74*	--	
10. Depression	18.80 (7.31)	.37*	.74*	.54*	.58*	-.17*	.51*	.46*	.75*	.86*	--
11. Gender	--	-.15*	-.01	.23*	-.10*	.09	.03	-.06	.04	-.16*	-.04

Notes. * $p < .01$. AISA: alcohol-involved sexual assault, binary coded for those who reported they have (.5) and have not experienced (-.5) AISA. Self-coldness is not reverse scored. FOCS: fear of self-compassion, CSB: characterological self-blame, BSB: behavioural self-blame, PTSD: posttraumatic stress disorder symptoms, and GAD: generalized anxiety disorder symptoms. Gender (1 = women, 2 = men).

Table 3.3.

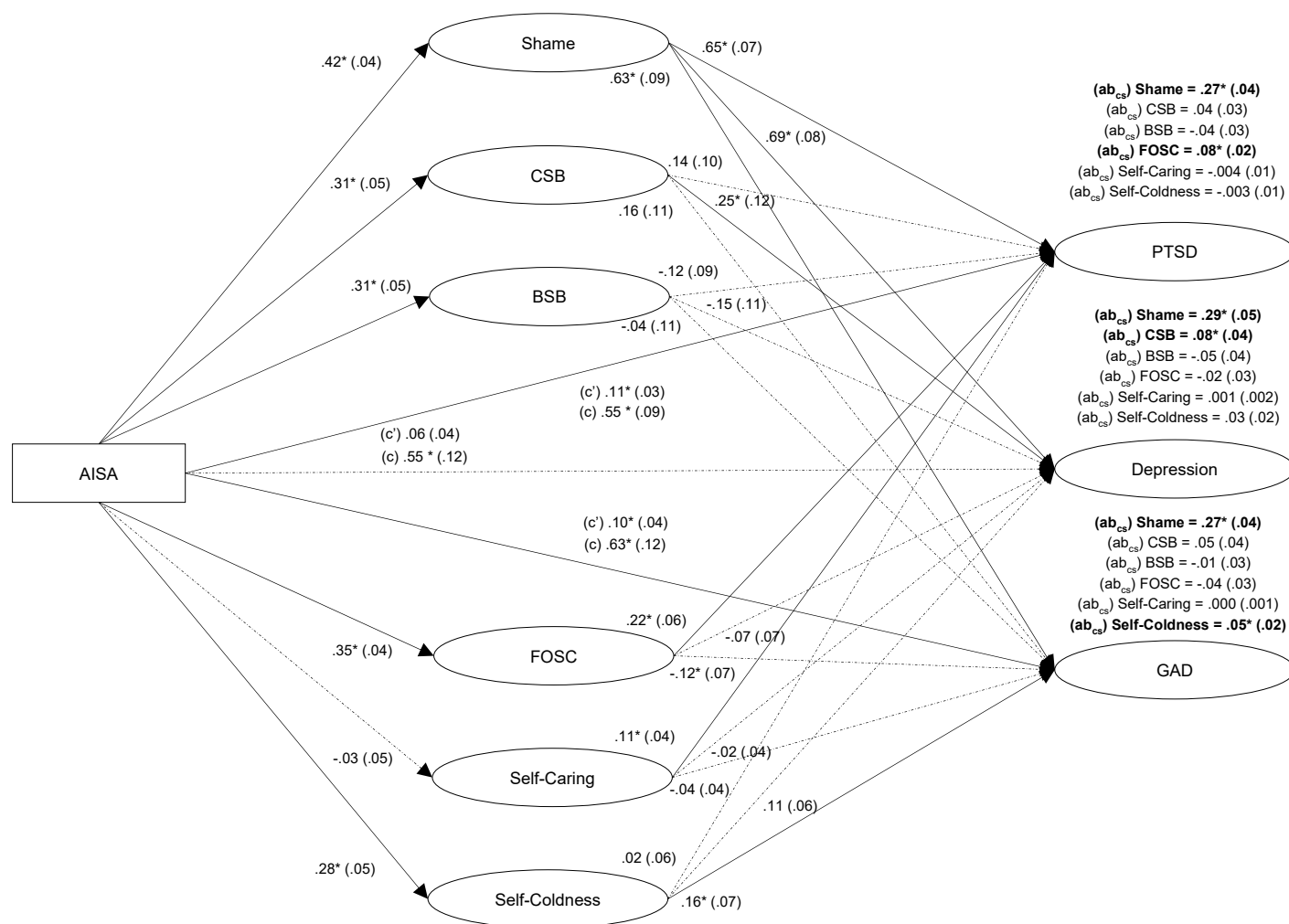
Woman and Men's Means and Standard Deviations (SD) for Study Variables (N = 409).

	<u>Women</u>			<u>Men</u>		
	<i>N</i>	Mean	<i>SD</i>	<i>N</i>	Mean	<i>SD</i>
Shame	208	59.06	20.70	196	58.60	21.21
FOSC	210	34.44	13.61	199	41.23	15.12
Self-Coldness	210	45.27	10.22	199	43.21	10.74
Self-Caring	210	40.70	9.07	198	42.31	9.60
CSB	185	51.78	18.30	185	53.07	19.37
BSB	185	63.51	14.99	186	61.66	16.32
PTSD	210	47.54	18.52	199	48.95	19.76
GAD	185	16.34	6.45	186	14.34	6.01
Depression	185	19.07	7.24	186	18.52	7.39

Notes. Self-coldness is not reverse scored. FOSC: fear of self-compassion, CSB: characterological self-blame, BSB: behavioural self-blame, PTSD: posttraumatic stress disorder symptoms, and GAD: generalized anxiety disorder symptoms.

Figure 3

Mediation Model with Mechanisms Simultaneously Explaining the Association Between Alcohol-Involved Sexual Assault (AISA) and Post-Traumatic Stress Disorder (PTSD), Generalized Anxiety Disorder (GAD), and Depression Symptoms (N = 409).



Note. Rectangles: observed variables; ovals: latent variables. Mediators were allowed to covary (see Table 3.3) and gender was controlled, but not shown for simplicity. Effects: β (SE), direct: (c'), total: (c), completely standardized indirect effect: (ab_{cs}) above each outcome. CSB: characterological self-blame, BSB: behavioural self-blame, and FOSC: fear of self-compassion. Bolded effects, solid lines: significant ($*p < .05$).

Table 3.4.

Standardized Covariances (i.e., Correlations) Between Mediator Variables in Mediation Model.

	1	2	3	4	5	6
1. Shame	--					
2. CSB	.48*	--				
3. BSB	.53*	.84*	--			
4. FOSC	.66*	.62*	.51*	--		
5. Self-Caring	-.17*	.01	.10	-.11	--	
6. Self-Coldness	.70*	.48*	.50*	.63*	-.21*	--

Notes. * $p < .05$. FOSC: fear of self-compassion, CSB: characterological self-blame, BSB: behavioural self-blame.

CHAPTER 7. TRANSITION FROM STUDY 3 TO STUDY 4

In Study 1 I found self-compassion functioned as a compensatory resilience factor, and in Study 2, I supported the hierarchical two factor structure of the SCS, informing the scoring approach used in Study 3. In Study 3, I examined the relative mediating effects of shame, the self-coldness and low self-caring self-compassion components, FOSC, and CSB and BSB on the associations between AISA and PTSD, GAD, and depression symptoms, respectively, controlling for gender. Results showed shame was the strongest mediator linking AISA with all outcomes. The self-coldness component of self-compassion also partially mediated the AISA-GAD symptom frequency association, FOSC partially mediated the AISA-PTSD symptom severity association, and CSB fully mediated the AISA-depression symptom frequency association. Altogether, avoidance-based processes, ruminative-/worry-based cognitions, and negative self-evaluative cognitions may be distinctly relevant for AISA-related PTSD, GAD, and depressive symptoms, respectively, after accounting for the overarching mediation through shame.

The results of Study 3 support the interpretations in Study 1 that ruminative-/worry-based cognitions may underpin AISA related GAD symptoms, negative self-evaluative cognitions may underpin AISA related depression symptoms and extend Study 1 by showing that avoidance-based processes may underpin AISA related PTSD symptoms, and that shame may be a transdiagnostic target to address during treatment to interrupt the association between AISA and negative emotional outcomes. Together, Study 3 findings highlighted the distinct mechanisms that may contribute to each

negative emotional outcome in relation to AISA, after accounting for the potential influence of other related mediators and associations among outcomes.

Following Studies 1, 2, and 3, one important remaining gap was capturing the experience of AISA as it occurs within the socio-cultural context. Within the social-ecological framework (Ungar, 2013), resilience is the process of coping adaptively with trauma, affected by both socio-cultural (e.g., AISA victim-blaming media messaging) and individual (e.g., perfectionism, trait shame, self-criticism) risk and protective factors. Societal stigma reflecting rape myths and victim-blaming beliefs (i.e., redirecting blame from the perpetrator to the survivor) is particularly targeted towards AISA due to the perceived influence of survivors' intoxication at the time of the sexual assault (Brown et al., 2018), and may be one significant socio-cultural risk factor that impedes resilience among AISA survivors.

Exploring the social-ecological framework of resilience (Ungar, 2013) using mixed quantitative and qualitative methods may facilitate a comprehensive understanding of the topic. Quantitative methods such as those used in Studies 1 and 3 allow for testing preconceived theories and hypotheses. Such methods also allow for identifying general patterns potentially applicable to many people (e.g., the protective vs compensatory models of resilience and the cognitive model of trauma; Ehlers & Clark, 2000; Fergus & Zimmerman, 2005; Gelo et al., 2008). Qualitative methods, on the other hand, allow for nuanced, person-centered exploration of unique lived experiences as they are integrated within the cultural context, and may provide a rich understanding of resilience among AISA survivors, contextualizing existing theory and the general patterns found using quantitative methods (Gelo et al., 2008).

Additionally, the positive psychology, resilience-, and strength-based approaches overarching my dissertation studies support the value and utility of preserving AISA survivors' perspectives and providing a platform for their voices to be represented (Luthar et al., 2014). As such, complimenting and building on Studies 1 and 3, the objective of Study 4 was to use qualitative interviews and thematic analysis to explore AISA survivors' lived experiences regarding socio-cultural AISA-specific stigma, self-blame, self-compassion, and FOSC as interrelated risk and resilience factors. The results of this study serve to enrich the findings from my previous dissertation studies by connecting them to real-world, nuanced, person-centered accounts of surviving AISA, embedded within the sociocultural context.

CHAPTER 8. STUDY 4. FOSTERING RESILIENCE AND COUNTERING STIGMA:
A QUALITATIVE EXPLORATION OF RISK AND RESILIENCE FACTORS FOR
NEGATIVE EMOTIONAL CONSEQUENCES AMONG ALCOHOL-INVOLVED
SEXUAL ASSAULT SURVIVORS

The manuscript based on this study is presented below. Noelle Strickland, under the supervision of Dr. Sherry Stewart, was responsible for developing the research question, methodology, data collection, and analytic approach, and obtaining ethical approval. The project was funded through a CIHR Team Grant on promoting resilience in survivors of sexual violence (PI: Dr. Christine Wekerle; Dalhousie site PI: Dr. Sherry Stewart). Noelle Strickland was the lead on data analysis and interpretation, with the support of her co-authors and volunteers, and she wrote the initial draft of the manuscript. Prior to submission, she received and incorporated feedback from the study's co-authors. The manuscript was submitted for publication in *Psychological Trauma: Theory, Research, Practice, and Policy* in September, 2021, and received an invitation to revise and resubmit in December, 2021. The full reference for this manuscript is:

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Abstract

The social-ecological resilience framework posits that the development of negative emotional outcomes following alcohol-involved sexual assault (AISA) is influenced by the interaction of socio-cultural and individual risk and resilience factors. AISA survivors may be particularly vulnerable to AISA-specific stigma (e.g., victim-blaming rape myths), a socio-cultural risk factor which, if internalized, may increase individual risk factors such as self-blame, low-self-compassion, and fear of self-compassion (FOSC), in turn contributing to negative emotional outcomes following AISA. **Objective:** This qualitative study explored AISA survivors' lived experiences regarding AISA-specific stigma, self-blame, self-compassion, and FOSC as interrelated risk and resilience factors in fostering or impeding resilience. **Method:** Eight women ($M = 25.8$ years old) who survived AISA completed individual qualitative interviews that were later coded using thematic analysis. **Results:** Analyses produced three interrelated main themes, where AISA survivors described experiencing: 1) various subsequent negative psychological outcomes corresponding to PTSD, anxiety, and depression symptoms; 2) risk factors that undermined resilience, including internalized self-blame secondary to socio-cultural AISA-specific stigma, low self-compassion, FOSC, and pre-existing maladaptive tendencies; and 3) resilience factors contributing to healing, including resisting self-blame and facilitating self-compassion by living according to one's values and challenging FOSC. **Conclusions:** Consistent with the social-ecological framework, AISA survivors' resilience towards negative psychological outcomes were undermined by the inter-related constructs of AISA-specific stigma, internalized self-blame, and low self-compassion. In contrast, survivors' values, including being empathic and committed to

feminism, fueled motivation to resist victim-blaming stigma and internalized self-blame and to practice self-compassion, ultimately countering the negative psychological effects of AISA.

Clinical Impact Statement: AISA survivors may benefit from a multifaceted intervention approach targeting individual factors, namely internalized self-blame and barriers to self-compassion, and acknowledging socio-cultural factors, particularly AISA-specific stigma.

Fostering resilience and countering stigma: A qualitative exploration of risk and resilience factors for negative psychological consequences among alcohol-involved sexual assault survivors

About half of sexual assaults (SA), defined as non-consensual sexual contact, involve survivor and/or perpetrator alcohol use (Ullman & Najdowski, 2010). These types of alcohol-involved SAs (AISA) are associated with negative emotional/psychological outcomes, including post-traumatic stress-disorder (PTSD), anxiety, and depression symptoms (Gong et al., 2019; Strickland et al., 2019). Moreover, survivors who were intoxicated during the assault (referred to henceforth as AISA) may be subject to socio-cultural stigma; namely, rape myths that redirect blame from the perpetrator to the survivor (i.e., victim-blaming; Brown et al., 2018). Internalizing such stigma may increase individual risk factors for negative psychological outcomes, particularly self-blame, low-self-compassion, and fear of self-compassion (FOSC), especially among AISA survivors with pre-existing maladaptive tendencies (e.g., trait shame, self-criticism, perfectionism; Erb, 2016; Egan et al., 2014; Peter-Hagene & Ullman, 2018). Capturing the nuances of AISA survivors' lived experiences within the broader socio-cultural context is best accomplished through in-depth methods that incorporate survivors' voices. Thus, this study's aim was to explore AISA specific stigma, self-blame, self-compassion, and FOSC as interrelated risk and resilience factors among AISA survivors, using qualitative interviews.

The Social-Ecological Framework of Resilience

Within the social-ecological framework (Ungar, 2013), resilience is the process of coping adaptively with trauma, affected by both socio-cultural (e.g., AISA victim-

blaming media messaging) and individual (e.g., perfectionism, trait shame, self-criticism) risk and resilience factors. AISA-specific stigma may be one important socio-cultural risk factor that impedes resilience among AISA survivors, as formal (i.e., police, medical professionals) and informal (i.e., friends, family) supports are more likely to accept AISA victim-blaming rape myths, compared to general SA where the survivor was not drinking (Garza et al., 2021). Moreover, fear of receiving victim-blaming responses is a barrier to disclosing AISA, which may limit opportunities for support (Schwarz et al., 2017). Suggesting such fear may be justified, compared to general SA survivors, AISA survivors are more likely to receive victim-blaming, negative responses to disclosure (Relyea & Ullman, 2015), which are associated with worsened PTSD, depression, and anxiety symptoms (Orchowski et al., 2013). AISA-specific stigma may therefore silence and isolate survivors, and deter support seeking, potentially heightening the risk of developing subsequent negative psychological outcomes.

AISA and Self-Blame

While victim-blaming is a societal issue, stigmatizing messaging may then become an individual risk factor if internalized by the survivor, for example through self-blame. AISA survivors tend to blame themselves more than general SA survivors, particularly if they are predisposed to maladaptive, negative self-relating tendencies such as self-criticism and shame (Erb, 2016; Egan et al., 2014; Littleton et al., 2009). Self-blaming interpretations that stable character traits caused the trauma (i.e., characterological self-blame; CSB) are related to more negative psychological outcomes than interpretations blaming specific actions (i.e., behavioural self-blame; BSB; Janoff-Bulman, 1979). This is potentially due to the opportunity for change inherent in BSB, and

thus perceived avoidance of future trauma (Janoff-Bulman, 1979). For example, Peter-Hagene and Ullman (2018) showed CSB, but not BSB, explained the association between AISA and PTSD symptoms over time. Suggesting internalized AISA-specific stigma, Testa and Livingston's (1999) qualitative study showed that while AISA survivors believed the perpetrator was responsible for the AISA, they simultaneously blamed themselves, citing their own alcohol use made them vulnerable, or the perpetrator was expecting and therefore entitled to sex because they were at a party. Interestingly, Testa and Livingston's (1999) results appear to reflect BSB, the relatively less-harmful subtype (Peter-Hagene & Ullman, 2018); however, the meaning of BSB interpretations for AISA survivors' self-concept in the context of socio-cultural AISA-specific stigma was not explored. Given rape myth messages labelling AISA survivors as promiscuous, irresponsible, and less worthy of support, BSB interpretations that the survivors "allowed" AISA to happen due to their drinking may then have perceived negative connotations regarding their character, reflecting CSB elements (Brown et al., 2018; Ungar, 2013). As such, both BSB and CSB (hereafter referred to simply as self-blame) may be risk factors to AISA recovery, and important to explore within the social-ecological resilience framework.

AISA and Self-Compassion

High levels of self-blame among AISA survivors indicate self-compassion (i.e., relating to the self and one's emotional experiences with non-judgmental acceptance) may be particularly relevant (Neff, 2003). Self-compassion in its presence may be a resilience factor, and in its absence a risk factor, for negative psychological outcomes. In fact, higher self-compassion counteracted the negative effect of AISA on anxiety and

depression symptoms (Strickland et al., 2019), and was associated with lower PTSD symptoms among trauma survivors (Winders et al., 2020). Moreover, lower self-blame explained the link between higher self-compassion and both PTSD and depression symptoms among SA survivors (Hamrick & Owens, 2019). Self-compassion may therefore counteract the risk of internalizing victim-blaming stigma and subsequent self-blame among AISA survivors. However, like childhood maltreatment and SA survivors (Miron et al., 2016; Williamson, 2019), AISA survivors are less likely to be self-compassionate than those who have not experienced AISA (Strickland et al., 2019). Lower self-compassion may increase risk of developing negative psychological outcomes through self-blame. Indeed, childhood abuse predicted low self-compassion and shameful, self-blaming interpretations, which in turn predicted PTSD symptoms (Barlow et al., 2017). Further, intimate partner violence survivors with higher self-criticism and shame-proneness reported lower self-compassion, suggesting such trait tendencies may impede AISA survivors' ability to practice self-compassion (Erb, 2016). The negative associations between self-compassion and both self-blame and negative psychological outcomes suggest exploring mechanisms that influence self-compassion following AISA may be important.

AISA and FOSC

Another possible risk factor for negative psychological outcomes among AISA survivors is FOSC, the tendency to avoid or resist self-compassion for fear of adverse consequences (e.g., becoming emotionally overwhelmed), or due to low-self-worth (e.g., feeling underserving of self-compassion; Gilbert et al., 2011). Though addressing FOSC may be useful in increasing self-compassion, they are conceptually separate processes in

that one can practice self-compassion despite fearing it (Gilbert et al., 2011; Miron et al., 2016). FOSC may be especially relevant following highly stigmatized, relationally disruptive traumas, such as AISA. Supporting this, surviving childhood sexual abuse (CSA) was related to higher FOSC compared to childhood physical abuse (CPA), and FOSC explained the links between CSA and depression and PTSD symptoms, but not the links between CPA and these outcomes (Miron et al., 2016). Additionally, a qualitative study with CSA survivors showed themes consistent with FOSC, including fear of negative consequences, negative self-perceptions, being unsure how to be self-compassionate, and internalizing uncompassionate socio-cultural messaging such as self-blame, and predispositions to self-criticism (McLean et al., 2018). Survivors conversely expressed that being supported by others, mindfully accepting painful emotions, motivation to be present and empathic towards loved ones, and being patient with themselves, facilitated self-compassion (McLean et al., 2018). Similar to McLean et al. (2018), qualitative methods may be useful in understanding the interrelations between constructs such as self-blame, self-compassion, FOSC, and negative psychological outcomes. Creating a qualitative space for AISA survivors to share their lived experiences in depth may help bridge the gap in the understanding of resilience following AISA, particularly as such experiences occur within the socio-cultural context – a component that has not yet been thoroughly explored.

The Current Study

Consistent with the social-ecological framework of resilience (Ungar, 2013), AISA survivors may have unique, interrelated socio-cultural and individual risk and resilience factors. Specifically, the socio-cultural level risk factor of AISA-specific

stigma, and the individual level risk factors of self-blame, low self-compassion, and FOSC may collectively contribute to negative psychological outcomes following AISA, particularly if survivors are already self-critical and shame-prone (Egan et al., 2014; McLean et al., 2018). In contrast, counteracting societal AISA-specific stigma, reducing individual self-blame and FOSC, and increasing self-compassion may be resilience factors, suggesting the importance of exploring these processes among AISA survivors from a positive psychology perspective (Strickland et al., 2019). Qualitative interviews may capture AISA survivors' interpretations and lived experiences using their own voices, incorporated within the socio-cultural context (Ungar, 2013). Thus, I explored the above-mentioned individual and socio-cultural resilience and risk factors for negative psychological consequences following AISA.

Method

Participants

Participants were $N = 8$ community-dwelling, Canadian women, recruited through online and social media advertisements. All participants were women or genderfluid as reported in interview. Results from a sociodemographic survey (completed by $n = 5$ participants; $M = 25.8$ years old) showed two participants reported being heterosexual and three bisexual/queer; three reported being employed full-time and two full-time students; three were in relationships/married/common-law and two were single/separated; all five had a university degree or trade certificate; and four participants reported being White. Eligibility criteria were having experienced AISA as an adult or adolescent, being at least 19 years old, and never having completed a self-compassion focused intervention. Although study inclusion was not limited to women, no men volunteered. Participants

were compensated with a \$15 gift card. The final three interviews contributed similar themes to the first five; given no new themes emerged, saturation was determined to have been reached at eight participants (Saunders et al., 2018).

Procedure

Interested participants contacted the researcher, were provided the consent form, and invited to complete the audio-recorded, individual, hour-long interview held virtually through secure video-conference software due to COVID-19 and led by the primary coder/first author.⁴ Individual interviews (vs. focus groups) were used to increase participant comfort in discussing their AISA experiences. To avoid influencing the interview direction, participants were initially informed the interview was about common responses to and resilience factors following AISA. The additional focus on the self-blame, self-compassion, and FOSC risk and resilience factors was disclosed after the interview. Given the sensitive interview topic, interviewees were invited to participate in a brief grounding exercise at the end of the interview and were provided trauma-specific clinical resources. This study received institutional ethics approval.

Measures

The interviews were unstructured and participant-driven, though there were a small number of open-ended prompts if the participant did not organically discuss a given topic (see Appendix D). Participants were not asked to describe details of AISA, although some participants volunteered information about their experiences.

⁴ Primary coder has been clinically trained in non-directive interviewing and has research expertise in AISA, self-compassion, and trauma responses. Throughout the interview and coding process, they consulted with an experienced qualitative Doctoral-level researcher.

Analyses

Analyses were broadly informed by a contextualist perspective where individuals' interpretations were captured within the broader societal context (Braun & Clarke, 2006; Ungar, 2013). Interview audio recordings were transcribed verbatim by a team of volunteers, and transcripts were then checked for accuracy by the primary coder. Transcripts were then coded using thematic analysis, capturing elements of both the coding reliability and codebook approaches outlined by Braun and Clarke (2020). Using Nvivo 12, the primary coder actively reviewed the transcripts for familiarity. Then initial codes were systematically generated and organized into potential themes. The initial coding tree reflected various possible themes and initial ideas about patterns that may capture the data. Through the primary coder's reflection, discussion with the secondary coder, and consult with an experienced qualitative Doctoral-level researcher, themes became increasingly refined and were grouped according to the perceived overarching themes.

Reflecting the coding reliability thematic analysis approach (Braun & Clarke, 2020), themes were interpreted and informed deductively, in that they were perceived through the lens of the author's existing knowledge of relevant previous theory and research (e.g., the cognitive model of trauma, the socio-ecological model of resilience; Ehlers & Clark, 2000; Ungar, 2013). Reflecting the codebook thematic analysis approach (Braun & Clarke, 2020), additional codes were also organized and generated inductively, in that new themes were developed throughout the process of engagement with the data and analytic procedure, for example, reflecting patterns that participants organically introduced during the interview process (i.e., were not specifically prompted by the

interviewer; Braun & Clarke, 2006, 2020). Codes and themes were continuously checked for relevance and accuracy and iteratively refined and sorted into multiple categories when appropriate, reflecting theme interrelatedness (Braun & Clarke, 2006, 2020). A second coder⁵ then independently sorted codes into the themes and the two coders met to discuss discrepancies (e.g., significant overlap between or difficulty distinguishing themes, insufficient codes within themes), with the final Kappa = .93, showing “almost perfect” agreement (McHugh, 2012, p. 279). Our use of an inter-rater reliability index is consistent with the coding reliability thematic analysis approach, providing an indication of consistency of interpretation, while the openness and efforts to incorporate inductively developed themes is consistent with the aim to enrich existing theory by not limiting the analyses to including only preconceived, theoretically consistent patterns (Braun & Clarke, 2020). The few remaining discrepancies reflected minor interpretive differences that did not alter the meaning of a theme and were coded to match both interpretations. Rather than striving to attain perfect agreement, the contextualist approach acknowledges minor inconsistency is inevitable given each coder’s unique lived experiences (McHugh, 2012). Throughout the interviews and analysis, the influence of the interviewers’ and coders’ personal demographics (e.g., race, gender), biases, and assumptions on interpretations was considered (Braun & Clarke, 2006); for example, the interviewer was clinically trained in self-compassion focused interventions. While this may have potentially led to unintentional reinforcement of subtle self-compassion statements, it may have also allowed for more in-depth exploration in the context of AISA. Similarly,

⁵ The second coder has experience in conducting qualitative research and was instructed by the primary coder to sort codes into multiple themes as appropriate, and encouraged to express their own ideas and conceptualizations of the codes/themes during the meetings.

the coders' demographics may have influenced coding interpretations, an effect possibly mitigated by double coding (Braun & Clarke, 2006).

Results

Three interrelated main themes captured the data: 1) negative psychological outcomes of AISA consistent with PTSD, anxiety, and/or depression symptoms, 2) risk factors contributing to negative psychological outcomes, and 3) resilience factors reducing negative psychological outcomes following AISA. Following the description of the nature of the AISAs disclosed by participants, themes are described further using pseudonyms to protect participants' confidentiality (see concept map in Figure 4).

Summary of AISA Descriptions

Participants who volunteered information about their AISA experiences collectively reported instances that occurred in public, for example, at a bar or a beach, and private settings, for example, a house. Survivors reported instances involving perpetrators who were known to them and instances where the perpetrators were strangers. Some participants reported being sexually assaulted multiple times by the same and/or different perpetrators. Additionally, some survivors reported AISAs involving more than one perpetrator during a single instance, and some described they experienced physical violence and/or psychological coercion. Participants reported different levels of survivor alcohol intoxication, with some survivors describing being intoxicated but not incapacitated, some reporting being completely incapacitated as a result of alcohol use (e.g., they were unconscious or unable to move), and some reporting suspicion of having been non-consensually drugged in addition to their alcohol intoxication.

Negative Psychological Outcomes of AISA

Anxious Arousal and Avoidant Coping

Most participants described emotional hyper- and/or hypo-arousal, with hyper-arousal typically reflecting anxiety following AISA reminders, for example, “any time I would see someone that looked like that person I would just like, be sweating bullets” (Zoe). Less commonly, participants described hypervigilance, such as continuously assessing situations (e.g., bars) for potential danger, and heightened mistrust of social contacts. Hypo-arousal involved dissociation during and/or after AISA, described as feeling “numb,” “detached,” or that participants “just didn’t feel anything.” Given the discomfort of either hyper-or hypo-arousal, many participants also avoided physical, emotional, and/or cognitive AISA reminders (e.g., parties). Some participants also displayed reluctance to acknowledge that what they experienced was AISA, demonstrating potentially more subtle avoidance. Some AISA survivors also shared behaving recklessly in attempts to cope with anxious arousal, often through heavy drinking, which simultaneously served as an avoidance coping strategy.

Negative Affect

All participants reported negative emotions following AISA including anger, sadness, guilt, despondency, and feeling “deflated,” with many articulating they overlapped: “the pain and anger is probably intertwined, like I couldn’t separate the two” (Ivy). Surprisingly, participants infrequently explicitly reported shame, though they did allude to it through descriptions of feeling “embarrassed,” “dirty,” “violated,” and “whore-ish,” and hiding that they had experienced AISA from others.

Negative Cognitions

Participants shared that AISA negatively influenced their self-concept. For example, Amy noted that AISA “was a huge hiccup in my, like, identity ... I really, um, didn’t know what to do and what to think of myself.” This was echoed by Lee’s experience that AISA made her already low self-esteem even worse. Participants also expressed interpretations that the world is unsafe, people are generally “selfish” and untrustworthy, and perpetrators always get away with AISA.

Impairment

Participants identified that AISA “hindered” their functioning in relationships, work and/or school, and personally. For example, Eva explained “I just didn’t feel like I could live the life I’ve been living or do the things I wanted to do” and that experiencing AISA had “brought everything to a standstill.”

Risk Factors for Negative Psychological Outcomes

Self-Blame

All participants described blaming themselves, at least initially, following AISA, through general statements such as “I blamed myself a lot when it happened” (Ana). Participants also reported BSB, believing that if only they “did the right thing,” were not “wearing that outfit ... had that many drinks ... gone out,” or had “done something differently,” they may have avoided AISA. Participants shared they should have “known better” and were “smatter than that,” for which they reported feeling “foolish” and “naïve,” indicating self-judgements that they were less intelligent or otherwise flawed for not having foretold AISA, potentially capturing CSB.

Role of Alcohol. All participants agreed alcohol played an important role during and after AISA, and in the development of self-blame. Participants noted perpetrators' alcohol use may have exacerbated their inclinations towards perpetrating AISA. Many participants also believed AISA may have been prevented had they (the survivor) not been intoxicated, and that they "let [AISA] happen" because they "allowed" themselves to become "vulnerable" through drinking, and as such they were to blame. By the same token, ensuring the participants' impairment via alcohol consumption was also identified as a strategy that perpetrators used to commit AISA. Interestingly, the blame for AISA was not then shifted to perpetrators for choosing to sexually assault an impaired person:

We were all doing shots and I was under the impression that everybody was doing them, but they were like chucking them out. So, I was getting like super drunk, like beyond drunk, and they were pretending to drink. And so, yeah, I was under the impression we were all getting like, ridiculous. And if that didn't happen ... [AISA] would've never happened had, um, number one, alcohol not been involved. (Gia)

Sociocultural AISA-Specific Stigma and Internalized Self-Blame. Participants explained internalizing self-blame from "victim blaming, um, mindsets that we learn from the media" (Zoe). Intertwined with media, participants disclosed self-blame was reinforced through messaging from family and friends, with Zoe stating she blamed herself because of her "parents, or like just in general, those voices that are like 'you should have known, you should have done the right thing, um this has happened to you before, why are you letting it happen to you again?'" Ana reiterated her experiences, sharing her "mom is the kind of person that, like, victim shames" and "I was watching

dateline and it was about ... a teacher, and he was you know, assaulting his students, and my mom was like, you know they wanted it.” Although participants reported disagreeing with victim-blaming messages, they were difficult to resist and internalized nonetheless, highlighting the process of how societal risk factors may transition to individual risk factors, particularly through increased self-blame. Amy described that although she did not “believe in, um, you know, blaming the victim ... those thoughts just easily kind of slip into your own mind when it is involving you and your own experiences.” Similarly, despite Zoe’s strong convictions against victim blaming, she shared “for some reason I do it to myself,” and would “still fall into those moments where I will believe the things that other people tell me.”

Feeling Isolated, Unsupported, and Silenced. Participants shared surviving AISA was an isolating, “lonely” experience, with few “safe spaces” or people to talk to. Moreover, fear of victim-blaming responses prevented or delayed disclosing AISA or seeking support: “I don’t tell people [about AISA] because, um, yeah, I’m scared of being blamed” (Zoe), and Eva “never wanted anyone to know about it.” Similarly, Amy was reluctant to disclose AISA because she believed she “was almost just another statistic of, like, girls who drink and, you know, get assaulted.” Participants also disclosed not knowing about and/or hesitating to seek support services: “maybe back then there were those support systems, and I just wasn’t connected to it, and I didn’t trust enough to go and look” (Eva). Some participants doubted that reporting to the police and navigating the justice system would be an effective or a tolerable process: “I thought, ‘No, I’m not ... reporting this, I’m not, because it’s just being tortured more’” (Eva), reinforced by media examples of perpetrators not being held accountable:

I always think back at that and other cases that I've heard of and I'm always thinking like I don't want, like, my scenario to be like that, but I know that it probably would, um, and that there would be so many people that, um, wouldn't be supporting me ... I think that the media plays a lot of influence. (Zoe)

Negative Victim-Blaming Responses to Disclosure. Participants recalled victim blaming, cold, unsupportive, dismissive responses to AISA disclosure from informal and formal sources, which increased self-blame. Lee described the “counselors weren't ... empathetic at all, they were like really cold about it ... it almost felt like I was like being brushed off in a way, like it wasn't serious” and Ivy shared “the reaction from some people, I felt like I was being blamed, and I was kind of like ... well maybe I had a lot of participating factors for why it happened.”

Barriers to Self-Compassion

Negative Thoughts and Emotions. Participants reported cognitive self-compassion obstacles that aligned with some components of FOOSC, including thoughts that they “don't deserve” or are unworthy of self-compassion, and self-criticism, self-judgement, and perfectionism: “When I don't do well at something, especially the first time, I'm very hard on myself” (Ana). Self-blame was another frequently identified barrier; for example, Zoe noted that being self-compassionate “doesn't last very long because I still have those thoughts, um, those voices, that are telling me that it was my fault.” Similarly, Amy shared that self-blame became “so intertwined with that event [AISA] ... that it was like, I don't want to let that go, but I can't start treating myself better until I let it go.” Participants also described negative emotions, such as shame, guilt, anger, and anxiety prevented self-compassion, and they avoided self-compassion

because it felt “uncomfortable,” “unfamiliar,” and resulted in “overwhelming” painful emotions.

Fear of Negative Consequences. Participants expressed fear that self-compassion would lead to negative consequences, such as less productivity: for Ella, being self-compassionate “means that I lose something that would make me more productive ... even though I know that being compassionate to myself will make my work in anything else I do richer.” Some participants worried others would judge them as “lazy,” “making excuses,” or “not facing the real problem” (Zoe), or as “selfish or arrogant” (Amy). Moreover, some participants described fears of letting their guard down; if they were to “let go and stop dwelling on it [via self-compassion], [AISA] would happen again” (Amy).

Uncompassionate Socialization. Participants recognized self-compassion was undermined by uncompassionate socialization from parents (most common), media, and friends. For example, Zoe expressed she “grew up learning from my parents that if something is bothering you, if something is making you feel, like, in a negative mood, then, um, just don’t think about it” and “we just live in a really emotion-phobic society where we don’t learn how to deal with our emotions or traumas.” Participants described being unsure how to be self-compassionate because “no one taught me about self-care” (Ana), and that they “don't know where to start” (Ana). Participants noted this messaging first needed to be “unlearned” before they could be self-compassionate, which was a “slow process” that is “hard to implement, to make it a habit” (Ana), and it is something they are “definitely still working on” (Ella).

Pre-Existing Maladaptive Tendencies

Participants all identified maladaptive tendencies or traits present prior to AISA that they believed made them vulnerable to AISA and/or exacerbated the subsequent negative psychological effects. Ana perceived that her pre-AISA low self-worth may have made her vulnerable to AISA: “I didn't have self-love ... that's why I just accepted anything, because I could talk to [the perpetrator] a little bit freely, more than I could talk to my mom, and I didn't have anyone else.” Additionally, Lee described self-blame following AISA was increased because “it's habit almost to just blame myself for everything.” Multiple participants shared longstanding tendencies to be hard on themselves, self-critical, and perfectionistic, and/or struggles with anxiety, depression, eating disorders, and/or heavy drinking before experiencing AISA, which prolonged or hindered recovery.

Resilience Factors for Negative Psychological Outcomes

Countering Internalized Self-Blame: Recognizing Victims are Not to Blame

While all participants blamed themselves, they simultaneously believed they or other survivors were not to blame for AISA. Zoe stated “the fact that I was drinking, when I look back at that I see that as, um, well now I see it wasn't my fault” capturing the process of, over time, being able to recognize and resist internalized self-blame.

Using the Media. Participants identified the media as a platform to reduce internalized self-blame, through more education about consent and as an opportunity for more accurate and empathetic dialogue about AISA survivors:

If the discourse surrounding ... [AISA], um, if that were different in the media, like, if it were talked about more like in a compassionate light towards the

victims, then that would be more helpful, because than that would encourage ... myself to speak up more and be more confident in standing up for myself. (Zoe).

Participants recognized that the media may also counteract victim-blaming messaging by shifting the focus away from victims to perpetrators, which in this study were all men: “The messaging should also be, like, especially for boys, because they grew up [with] ...toxic masculinity, that you should not be assaulting people ... more responsibility should be on the offender than the victim” (Ana). Moreover, due to media messaging counteracting victim-blaming, some participants described rejecting the interpretation that they were at fault for AISA due to consuming alcohol, with Amy describing seeing non-victim-blaming social media posts and realizing “you know what, it wasn't my fault, thanks cartoon.” Participants reported gradually learning AISA was “100% the perpetrators’ fault” (Amy) because “someone makes a choice to do wrong to another person” (Eva) regardless of how vulnerable that person was.

Receiving Positive Responses to Disclosure and Support. Participants explained that supportive and explicitly non-victim blaming responses to disclosure, for example having “someone to actually say: it's not your fault, stop blaming yourself, those guys shouldn't have been doing that” (Lee), were important for reducing self-blame. Relatedly, participants identified that having “safe spaces,” particularly with mental health professionals, friends, and family to talk about AISA was, or would be, helpful in reducing subsequent negative psychological outcomes.

Facilitating Self-Compassion

Recognizing Benefits of Self-Compassion. Participants shared the emotional, behavioural, and or other positive effects of self-compassion motivated them to continue

practicing the skill. Self-compassion was also viewed as helpful for reducing self-criticism and self-blame and increasing acceptance and tolerance of emotions “as they are, and really not trying to change it, just sitting in it” (Ivy). Participants noticed that self-compassion positively affected relationships; for example, Amy noted maintaining “healthy boundaries” was part of her self-compassion practice.

Challenging FOSC and Negative Thoughts. Participants disclosed that challenging negative thoughts such as self-criticism, self-doubt, and self-blame facilitated self-compassion. Ella stated: “how I’ve learned to be kinder to myself even is, um, trying to defeat those doubtful thoughts” and Gia described reminding herself that “I deserve respect ... to be treated well” counteracted self-blame and self-criticism and increased self-compassion.

Compassionate Socialization. Exposure to others valuing self-compassion created a safe space and served as models for participants. Zoe reported “I have friends who go to therapy” and are subsequently more self-compassionate, and “so when I talk to them, um, it’s helpful.” Ivy similarly disclosed that “supportive people who I told really helped me treat myself with compassion because it was affirming how I felt, like, it felt good to hear those things.”

Living According to Values. Participants cited self-compassion enabled them to continue living according to their values, for example, connecting with family and friends, being empathic, travelling, and contributing to social justice causes (e.g., feminism). Eva described that self-compassion allowed her to heal following AISA, which in turn allowed her to emotionally support her children by being “someone that my daughters will be comfortable enough to talk to,” which was important to her. Some

participants perceived self-compassion allowed them to better support their friends because “you kind of have to have something poured in your cup before you can pour it into their cup” (Amy). Most participants valued being empathic, and learning to turn their empathy inwards facilitated self-compassion: “I am really hard on myself, and so, I've been trying to ... think of, if it was my daughter, my sister in that situation, and I just notice such a difference, how my heart opens up” (Eva), and “I'm like a mama bear, like, no way would I let someone treat my sisters like that. But if it's me, it was like, it's acceptable. So, then I use them as, like, they're almost, like, protecting me” (Gia). Self-compassion appeared to counteract the reported negative effects of AISA on participants' ability to live according to their values, with Amy describing how she practiced self-compassion so she could continue to “have fun, or, like, travel, because I love traveling, and I wasn't going to let [AISA] stop me.” Zoe explained that self-compassion aligned with her values of supporting feminism and resisting oppressive systems: “you learn about how, like, all these systems like capitalism and all these suppressive systems, they profit ... off of people who don't practice self-love, so I was like I'm going to be so radical and practice self-love.” Participants' values fueled their motivation to practice self-compassion even in the face of various obstacles, which ultimately bolstered resilience.

Discussion

The current study qualitatively explored AISA specific stigma, self-blame, self-compassion, and FOSC in fostering or hindering resilience from negative psychological outcomes among AISA survivors. Thematic analyses resulted in three main interrelated themes capturing 1) AISA related negative psychological outcomes, 2) risks factors

contributing to negative psychological outcomes, and 3) resilience factors reducing negative psychological outcomes following AISA. Risk factors included the presence of AISA specific stigma, self-blame, low self-compassion, and FOOSC, which were resilience factors in their absence. Further, supporting the social-ecological framework of resilience (Ungar, 2013), participants described experiencing dialectical tension through the simultaneous presence of risk and resilience factors for developing negative psychological outcomes following AISA. Survivors highlighted healing as a continual process of recognizing the ever-evolving interplay between risk and resilience factors, both individual and societal, and critically examining how they fit (or do not fit) with their sense of self.

Negative Psychological Outcomes of AISA

All survivors reported negative effects following AISA organically corresponding to symptoms of PTSD (most common), anxiety, and depression, consistent with previous studies (Gong et al., 2019; Strickland et al., 2019). Specifically, participants reported anxious arousal reflecting intrusive symptoms, citing anxiety and fear when they encountered AISA reminders (e.g., seeing the perpetrator), dissociation via feeling numb or detached, and avoidance (e.g., situations where people, particularly men, might be drinking). Participants also described negative alterations in cognitions, explaining AISA reduced their self-worth and trust in others and the safety of the world. Though survivors reported negative affect in that they felt angry, sad, and guilty, shame was surprisingly rarely explicitly identified, contrary to emerging evidence showing shame may link interpersonal trauma and PTSD symptoms (La Bash & Papa, 2014). This finding may reflect a limited shame lexicon in Western culture, as participants shared feeling “dirty,”

“violated,” and “whore-ish,” and hiding AISA/social withdrawal, potentially indirectly indicating shame (Zhu et al., 2020). Further, AISA impaired participants’ school/work, relationships, personal functioning, and their perceived ability to live according to values (e.g., connecting with others, being empathic, and travelling).

Risk Factors

Self-Blame, Barriers to Self-Compassion, and Pre-existing Maladaptive Tendencies

Strikingly, every participant disclosed experiencing self-blame, BSB, and/or CSB at some point following AISA, which collectively contributed to negative psychological outcomes. Although participants expressed BSB more frequently, CSB was also represented through referring to themselves as “stupid” and “foolish” for not foreseeing AISA, suggesting they were attributing the cause of the AISA to their personal characteristics. Participants’ spontaneous acknowledgement that pre-existing negative tendencies made them “vulnerable” to, or prevented them from sufficiently protecting themselves from AISA, may also capture CSB. Contrary to previous quantitative studies (e.g., Peter-Hagene & Ullman, 2018), participants did not appear to readily distinguish between the impacts of BSB and CSB on healing following AISA. Notably, all participants directly expressed BSB, while CSB was often communicated subtly through statements alluding to negative self-concept, such as feeling “naïve,” or self-judgement about being the “type of person” who “hooks up” with people when intoxicated. As such, BSB may have negative implications for some AISA survivors’ self-concepts, which would then capture CSB, though survivors may not explicitly delineate the two in a qualitative interview. While CSB may be related to worse outcomes than BSB, the negative meaning attached to BSB in the socio-cultural context suggests BSB is

intertwined with CSB among these AISA survivors. CSB/BSB may thus be best captured using direct assessments to explore their relative effects, as done in Peter-Hagene and Ullman's (2018) study.

Supporting the social-ecological framework of resilience (Ungar, 2013), survivors perceived that self-blame, an individual risk factor, was at least partially developed through internalizing AISA-specific stigma, a societal risk factor (Brown et al., 2018). An unprompted connection, this finding is consistent with previous studies showing survivors' alcohol use during AISA plays an important role following AISA because of the attached sociocultural stigma (Garza et al., 2021). Despite disagreeing with AISA-specific stigma, survivors reported nonetheless internalizing victim-blaming messaging, for example, that their own vulnerability due to intoxication, rather than the perpetrator choosing to sexually assault an impaired person, caused the AISA. Interestingly, these perceptions were common even among participants who may have self-selected because they viewed themselves as resilient, given the study was advertised as exploring resilience following trauma, suggesting the risk of internalizing socio-cultural stigma may be powerful.

Participants expressed reluctance to disclose AISA for fear of receiving victim-blaming responses, exacerbated by AISA-specific stigma and self-blame. Along with silencing survivors, this reduced opportunities for support and contributed to participants' perceived isolation following AISA, a finding supported by Schwarz et al.'s (2017) results. Further, participants explained that negative, victim-blaming responses from various sources, including friends, family, and mental health professionals reinforced internalized self-blame. Again, this finding is a trend that has been previously reported

and underlines the impact of negative responses to AISA disclosure on subsequent negative psychological outcomes (Relyea & Ullman, 2015).

Participants identified barriers that made practicing self-compassion difficult, an additional risk factor related to negative psychological outcomes. This finding is consistent with Strickland et al.'s (2019) results showing AISA survivors were less likely to be self-compassionate than those who had not experienced AISA. Participants identified barriers to self-compassion organically corresponding to components of FOSC (Gilbert et al., 2011). Echoing McLean et al.'s (2018) findings, the FOSC elements that participants described included negative cognitions such as low self-worth, self-criticism, and self-blame. Additionally, painful emotions such as anger, guilt, and shame prevented self-compassion, and were also identified as the result of being self-compassionate, motivating avoidance (Gilbert et al., 2011). Survivors feared potential negative consequences of self-compassion, including lowered productivity, judgement from others, and that if they "let their guard down" by being self-compassionate, AISA would reoccur. These findings support Miron et al.'s (2016) results that FOSC mediated the links between CSA and depression and PTSD symptoms, suggesting that FOSC may contribute to the development of negative psychological outcomes, specifically through, for example, negative self-appraisals including self-criticism and self-blame, emotional avoidance, and increased hypervigilance (Ehlers & Clark, 2000).

Survivors also identified uncompassionate socialization as a societal level barrier to self-compassion, consistent with McLean et al.'s (2018) findings. Namely, participants described that self-critical, perfectionistic, emotionally avoidant modelling and acceptance of victim-blaming rape myths among media, parents, and friends first needed

to be unlearned prior to being able to be self-compassionate. In addition to the presence of uncompassionate socialization, participants noted the absence of self-compassionate models resulted in uncertainty about how to practice the skill. Being unsure how to practice self-compassion is also a FOSC component, and these results indicate the nuanced connection between societal and individual risk factors among these AISA survivors.

Participants recognized how pre-existing maladaptive tendencies increased their risk of developing negative psychological outcomes following AISA, though this was not prompted. Specifically, self-criticism, perfectionism, self-blaming and shame-proneness, and heavy drinking, anxiety, depression, and/or eating disorders reportedly undermined participants' resilience to negative psychological outcomes, in line with previous studies (Erb, 2016; Egan et al., 2014). Pre-existing maladaptive tendencies also reduced participants' resilience towards internalizing negative socio-cultural influences (e.g., AISA-specific stigma). Interpreted within a contextualist approach, while the pre-existing maladaptive tendencies are individual level risk factors, socialization aimed particularly at women may have also contributed to the development of such risks prior to AISA. For example, trait shame, which tends to be higher among women, may be facilitated through gendered stereotypes valuing sexual modesty among women while simultaneously sexualizing their bodies (Erb, 2016).

Resilience Factors

Countering Self-Blame and Facilitating Self-Compassion

Participants reported resisting victim-blaming messaging and, over time, recognizing survivors are not to blame. While participants acknowledged the role of the

media, particularly social media, in perpetuating AISA-specific stigma, it was also identified as an influential platform to counteract rape myths and internalized self-blame. Along with educational media messaging about consent, what constitutes AISA, and direct corrections of victim-blaming rape myths, participants in this study acknowledged that social media movements (e.g., #MeToo) facilitated reduced internalized self-blame. Alaggia and Wang's (2020) qualitative analysis of survivors' social media posts disclosing sexual trauma, as part of movements including #MeToo, showed markedly similar themes to this study in that survivors blamed themselves especially if they had been intoxicated at the time of the assault, which was exacerbated by societal AISA-specific stigma. However, these survivors used social media to collectively resist the silencing effects of stigma, which ultimately created a safe space for other survivors to disclose their own sexual trauma and begin counteracting internalized self-blame (Alaggia & Wang, 2020). Potentially pivotal in challenging AISA-specific stigma and internalized self-blame, social media movements may be an important avenue for AISA survivors to reclaim their voices and agency.

Survivors also shared that receiving positive, explicitly non-victim blaming responses to AISA disclosure did, or would, reduce self-blame. This finding is consistent with previous studies showing the protective effects of positive, supportive responses to disclosure are associated with more support seeking (Orchowski et al., 2013) and may protect against subsequent low self-worth, self-blame, and PTSD symptoms (Littleton, 2010). Moreover, this theme underscores that AISA is a relational trauma interwoven within a social context rather than an isolated individual experience. While the fear of victim-blaming responses alienated survivors due to a perceived threat of rejection,

experiencing reassurance of social acceptability via non-victim-blaming responses may be an antidote to AISA-specific stigma, self-blame, and shame, in turn strengthening survivors' resilience.

Participants acknowledged the benefits of self-compassion, a finding supported a meta-analysis showing self-compassion was moderately ($r = .47$) positively associated with psychological wellbeing (Zessin et al., 2015). Participants explained their self-compassion practice was facilitated by challenging negative cognitions, such as self-blame, self-criticism, and low self-worth, consistent with the role of cognitive appraisals in the development emotional disorders (Ehlers & Clark, 2000). The association between self-compassion and negative cognitions appeared to be bidirectional, such that increasing self-compassion also contributed to reduced negative cognitions, including self-blame. Building on Hamrick and Owens's (2019) cross-sectional finding that the link between higher self-compassion and PTSD and depression symptoms was explained by lower self-blame among SA survivors, self-blame and low self-compassion may be simultaneous, interrelated mechanisms linking sexual trauma to negative psychological outcomes. Both low self-compassion and negative cognitive appraisals about the self, including self-blame, self-criticism, and low self-worth, may thus be important treatment targets among AISA survivors.

Exposure to compassionate socialization through self-compassionate modelling in the media and among friends and family facilitated participants' own self-compassion. Similar to the influence of social media movements on countering internalized self-blame, seeing others practice self-compassion provided examples of *how* to be self-compassionate when participants were unsure themselves, and also communicated it was

socially acceptable. Although no studies to my knowledge have examined the influence of self-compassionate messaging through social networks or the media, Ingstrup et al. (2017) showed female athletes also reported learning self-compassion from others setting the example in their social network. Therefore, self-compassion following AISA may be increased by providing information about how to be self-compassionate and normalizing the skill through modelling.

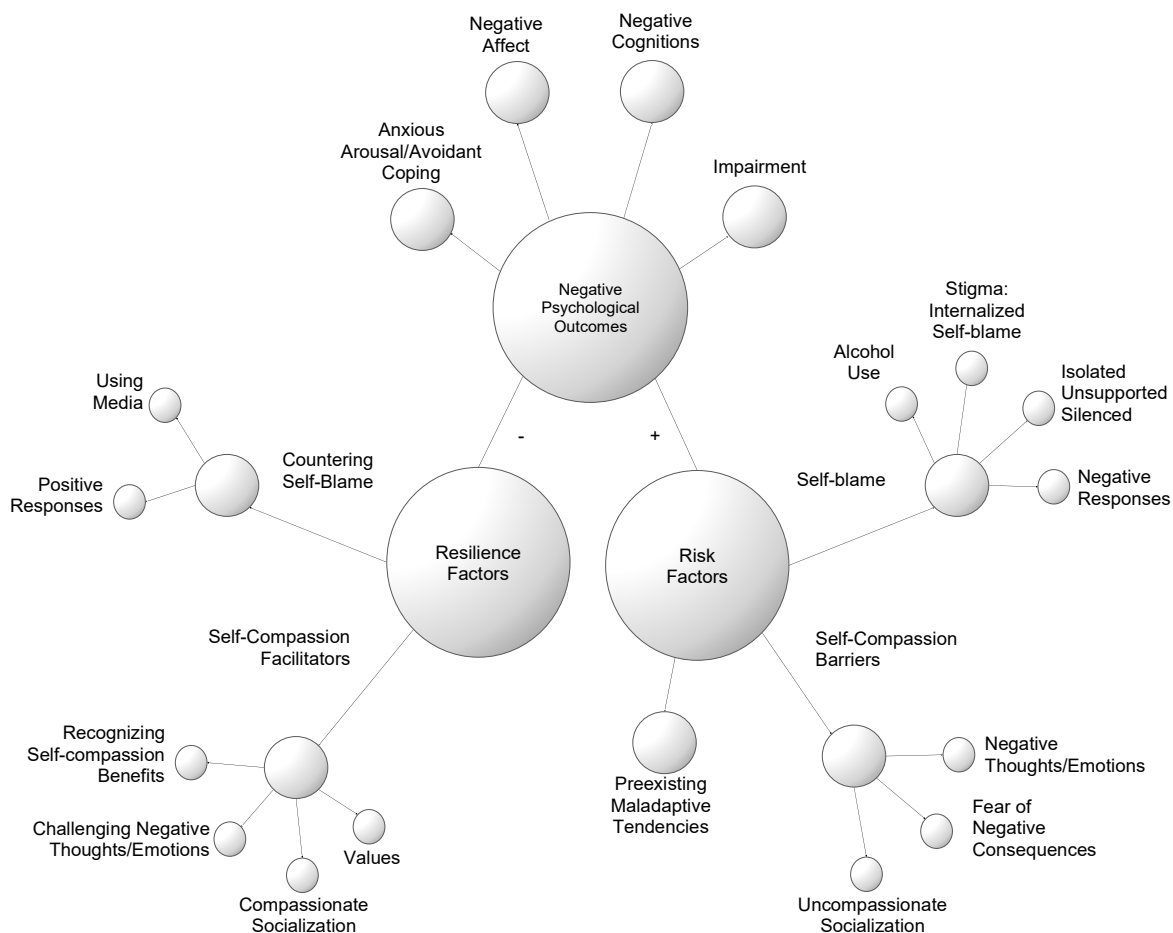
Despite the barriers to self-compassion, participants expressed that being self-compassionate allowed them to feel like their authentic selves and live a life consistent with their values, counteracting the negative effects of AISA on their ability to do so. Participants shared being motivated to be more self-compassionate because it allowed them to connect with family and friends, be empathic, travel, and contribute to social justice causes, values which were cited as part of their self-concept and identities. Empathy appeared to be a central value among survivors, in that they wished to set the example as a self-compassionate survivor in hopes of facilitating other survivors' healing. Likewise, the importance participants placed on being empathic towards other survivors facilitated their ability to challenge internalized self-blame, through the recognition that they are equally not to blame. This theme parallels McLean et al.'s (2018) results showing CSA survivors' self-compassion allowed them to be present and empathic towards loved ones and patient with themselves (McLean et al., 2018). Despite the destabilizing effects of AISA, cultivating self-compassion appeared to help survivors rebuild their sense-of-self. Our findings should be interpreted considering study strengths and limitations. The consideration of socio-cultural influences is an often-overlooked area. The present study's consideration of socio-cultural influences is a strength. Indeed, the community

sample of AISA survivors of diverse sexual orientations increases the relevance of results to similar populations, which is important representation given the oppression people of non-heterosexual orientations may face (Suen et al., 2020). In contrast, the younger, predominantly able-bodied, White, largely single-gender, and higher socio-economic status sample may constrain the relevance of results to a more narrow, privileged population (Watson-Singleton et al., 2021). While saturation was indicated, the sample size was relatively small which may have influenced the patterns that I interpreted as being especially salient. Although the overarching patterns may have been similar with the addition of participants, the themes that appeared to be emphasized by many survivors may look different with more participants. Further, AISA survivors who perceived themselves as resilient may have self-selected based on the recruitment materials' focus on resilience factors. This supports the importance of addressing the identified risk factors, apparent even in a potentially more resilient sample, though these findings may not reflect other AISA survivors' experiences.

Additionally, while I intentionally approached data interpretation with openness to identifying and incorporating new and/or organic themes (i.e., consistent with the codebook approach; Braun & Clarke, 2020), it should be acknowledged that my prior knowledge of and research on resilience theories (e.g., Ungar, 2013) also guided how I interpreted the data and decided on the theme structure (consistent with the coding reliability approach; Braun & Clarke, 2020), although I did not rigidly adhere to such to the point of dismissing other possibilities. For example, I interpreted two interrelated subthemes capturing risk and protective factors for negative psychological outcomes which is aligned with theories of resilience (e.g., Ungar, 2013). However, another

possible theme structure could have reflected self-compassion and self-blame as their own overarching themes, with the tension involved in experiencing simultaneous barriers and facilitators incorporated within each theme.

In conclusion, participants described multiple symptoms organically corresponding to PTSD, anxiety, and depression symptoms following AISA. Negative psychological outcomes following AISA appeared to be hindered by the interrelated societal risk factor of AISA-specific stigma, and individual risk factors of self-blame and barriers to self-compassion. Self-blame was strikingly common among AISA survivors, often described as being internalized from societal AISA-specific stigma, supporting the social-ecological framework of resilience (Ungar, 2013). Conversely, survivors' resilience was bolstered by resisting societal AISA specific stigma and, relatedly, individual internalized self-blame, and by increasing self-compassion. Survivors' strong conviction in their values motivated their persistence in resisting internalized self-blame and practicing self-compassion, facilitating healing. AISA survivors may benefit from a multifaceted intervention approach targeting individual factors, namely self-blame and barriers to self-compassion, as well as acknowledging and targeting socio-cultural factors such as AISA-specific stigma.

Figure 4*Concept Map of Themes*

Note. Concepts may be bidirectionally interrelated, though arrows are unidirectional for simplicity and where there was more emphasis on one direction vs the other.

CHAPTER 9. GENERAL DISCUSSION

I examined risk and resilience factors, particularly the role of self-compassion, regarding the associations between AISA and negative emotional/psychological outcomes. An overarching positive psychology, strengths-based approach and the cognitive model of trauma informed the four studies comprising my dissertation. In the following sections, I summarize and synthesize my findings across the four studies and within the extant literature and relevant theories, and discuss their clinical implications, strengths, and limitations. I also suggest directions for future research to further advance my results.

Summary

In Study 1, I demonstrated self-compassion (i.e., high self-caring, low self-coldness) may function as a compensatory resilience factor, counteracting the associations between AISA and anxiety and depression. In Study 2, I compared six nested confirmatory factor analysis models of the SCS (Neff, 2003b), showing a two-factor hierarchical model was the relatively best fitting model. Rather than single total scores, self-caring and self-coldness should be estimated as latent variables using SEM. Extending results of Study 1 showing lower self-coldness and higher self-caring function as compensatory resilience factors, in Study 3 I explored self-coldness and self-caring as mechanisms explaining the link between AISA and negative emotional outcomes, accounting for the effects of other potentially important mechanisms. Informed by the measurement recommendations emerging from Study 2, I tested a SEM, latent variable mediation model exploring the relative mediating effects of self-coldness, self-caring, FOCS, shame, and CSB and BSB for the associations between AISA and PTSD, anxiety,

and depression symptoms, respectively, controlling for gender. Results showed shame emerged as the strongest mediator linking AISA with all outcomes. The self-coldness aspect of self-compassion also partially mediated the AISA-anxiety symptom frequency association, FOSC partially mediated the AISA-PTSD symptom severity association, and CSB fully mediated the AISA-depression symptom frequency association. Echoing the results and interpretations in Study 1, these findings indicate avoidance-based processes, ruminative-/worry-based cognitions, and negative self-evaluative cognitions may be distinctly relevant for AISA-related PTSD, anxiety, and depressive symptoms, respectively, after accounting for the overarching mediation through shame. In line with the overarching positive psychology approach to my dissertation and the social-ecological framework of resilience, in Study 4, I qualitatively explored eight AISA survivors' lived experiences regarding self-compassion, FOSC, AISA-specific stigma, and self-blame as interrelated risk and resilience factors. Resonating findings from Study 1 and 3, thematic analyses produced themes reflecting 1) negative emotional outcomes of AISA, 2) low self-compassion, FOSC, internalized self-blame, and pre-existing maladaptive tendencies as risk factors that undermined resilience, and 3) facilitating self-compassion and resisting self-blame by living according to one's values and challenging FOSC as resilience factors. Altogether, AISA survivors may benefit from interventions targeting low self-compassion, FOSC, shame, and self-blame – particularly CSB, and acknowledging the experience and role of socio-cultural AISA-specific stigma.

Synthesis with Relevant Theories, Extant Literature, and Across Studies

Prevalence of AISA

Sexual assault is reported by approximately 20% adults and is most likely to occur during emerging and young adulthood and among women compared to men (Black et al., 2011; Breiding et al., 2014; Mellins et al., 2017). Previous studies indicate AISA comprises about half of sexual assaults (O'Callaghan & Ullman, 2021), and may be more common among university students than those dwelling in the community (e.g., 8% of community-dwelling women vs. 14% of undergraduate women reported AISA; Black et al., 2011; O'Callaghan & Ullman). In Study 1, 6.1% of first- and second-year undergraduates who reported drinking in the past term (75.2% women) indicated they experienced AISA, compared to 31.1% of community-dwelling, emerging and young adults who reported drinking alcohol at least once per month in Study 3 (51.3% women). While the rate of AISA in Study 1 is surprisingly low, there have been previous studies with similar findings. For example, 6.6% of undergraduate women and 3.2% of undergraduate men reported sexual assault, including AISA, in Hines et al.'s study (2012). Additionally, the sample in Study 1 was relatively young ($M = 18.9$ years old), and this study measured AISA occurring in the past term. As such, previous AISA experiences may not have been captured, and given the majority of AISA experiences occur between the age of 18-34 (Breiding et al., 2014), the younger sample may have reflected the early stages of a period of higher risk for AISA. In contrast, the rates of AISA in Study 3 are somewhat higher than expected. This may be due to the recruitment materials focusing on self-compassion and common responses to sexual trauma, while Study 1 recruitment focused on alcohol and substance use. Additionally, the relatively

older sample ($M = 28.2$ years old) used in Study 3 and the measurement of AISA occurring since the age of 18 allowed for a much broader time-period for the AISA incident(s) to have occurred compared to Study 1. Moreover, while Study 1 participants were eligible if they reported drinking in the past term (approximately four months long), Study 3 participants were eligible if they reported drinking at least once per month. The increased drinking frequency of the participants in Study 3 vs. Study 1 may have led to increased exposure to the types of drinking situations where AISA may occur in the Study 3 sample.

Definitions and Measurement of AISA

Definitions of sexual assault vary in their stipulations regarding the three elements of sexual contact, tactics perpetrators used, and non-consent (Muehlenhard et al., 2016). Similarly, measures of sexual assault may differentially emphasize and define each component depending on the study's research aims (Cook et al., 2011). The working definition of sexual assault used in my dissertation was violations of sexual integrity through actual or threatened sexual violence or unwanted sexual contact (Testa et al., 2004). The item used to measure AISA was embedded within a larger questionnaire measuring various potential harms related to drinking, with the question stem "As a result of using alcohol," and the specific AISA item being "I was taken advantage of sexually" (Chinneck et al., 2018). The item used to measure AISA was perception based, though it did not use labels such as sexual assault or rape to avoid unintentionally excluding those who do not classify their experience as such when it nonetheless may have been, as recommended by Cook et al. (2011). Further, placing the tactic prior to the sexual contact has been demonstrated to identify more sexual assault survivors than the reverse phrasing

(i.e., sexual contact first), supporting our chosen format (Abbey et al., 2005; Cook et al., 2011). I used a subjective compared to behavioural measure because the objective of my dissertation was to explore potential clinical treatment targets in reducing negative emotional outcomes among AISA survivors, which may be most relevant to those with who have experienced perceived harm and may vary among those who experienced the same sexually assaultive behaviours (Ehlers & Clark, 2000).

Given my chosen working definition of sexual assault, one important consideration in interpreting and comparing the results of my dissertation to previous findings is the operationalization and measurement of AISA. Being “taken advantage of sexually” is a phrase that some could argue may not capture sexual assault. However, regarding the three components of sexual assault, the item specifies the presence of sexual contact via the word “sexually,” and the tactic used, in this case the survivors’ intoxication. Moreover, the tactic is specified regardless of whether the survivor perceived it as a tactic the perpetrator may have used to sexually assault them. This is an important consideration given the higher likelihood of minimizing sexual assault involving alcohol, particularly when it is willingly consumed by survivors (Schwarz et al., 2017). Finally, the phrase “taken advantage of” addresses non-consent, albeit indirectly, in that it communicates the perpetrator’s disregard of the survivor’s personal autonomy, and thus, sexual integrity. Supporting this, a large ($N = 365$) qualitative study among college men showed that one of the central themes in defining rape was being “taken advantage of,” the meaning of which, as described by the participants, was forcing someone *who is not willing* to engage in sexual acts (italics added; Siegel et al., 2021, p. 404). As such, despite the indirect wording, evaluating the AISA item in relation to the

three components used in defining sexual assault supports its validity as an assessment of violations of sexual integrity where alcohol was involved (i.e., AISA; Cook et al., 2011).

Although there is evidence for the validity of the AISA item, as with any measure of sexual assault there are also limitations that warrant acknowledgement and explanation. First, sexual assault severity was not assessed; however, my dissertation objectives were to explore perceived violation and therefore perceived harm, which may vary between AISA survivors even if they have experienced the same level of severity as it is commonly defined (e.g., physically violent sexual assault is frequently coded as more severe than psychologically coerced sexual assault; Cook et al., 2011; Koss et al., 1982). Another limitation of the AISA item is the potential for a participant to interpret, based on the wording, that the item was assessing whether the sexual assault occurred *because of* their drinking, rather than *while* they were drinking, with the latter being the intended meaning. In attempts to mitigate this possibility, the item was embedded within a larger questionnaire, and person-centered language was avoided (i.e., as a result of using alcohol vs. as a result of *your* use of alcohol). Rather than undermining the validity of the item, this concern was oriented towards protecting the participant from the risk of internalizing self-blame for AISA. Regardless of whether survivors blame their drinking, themselves, or the perpetrator, they will still have experienced sexual assault. Notwithstanding, there was a small possibility that some participants perceived the item was assessing sexual assault that was caused *only* by their drinking and therefore absolved the perpetrator of blame, and either did not perceive that to be true or felt it was victim-blaming and did not report AISA. Given findings that many if not most AISA survivors believe both that their drinking contributed to experiencing sexual assault and

that the perpetrator was still at fault (Schwarz et al., 2017), it is likely that few participants, if any, interpreted the item as blaming only their drinking and therefore (by default) not the perpetrator. This is especially true given no mention was made regarding the culpability of the perpetrator based on the survivor's drinking. This is also supported by the higher-than-expected prevalence of AISA found in Study 3. Nevertheless, although the above-mentioned interpretation may not be a likely or common occurrence, future research might still implement alternative wording to further reduce the possibility of misinterpretation (e.g., using the phrase "while drinking" vs. "as a result of").

Additionally, although the relatively straightforward and brief phrasing afforded by using a single AISA item circumvents the potential issues with unwieldy, multifaceted, and grammatically complex sentences as used in the SES-R (Cook et al., 2011; Koss et al., 1982), the use of a single item may have limited the predictive power of the models tested (Bergkvist & Rossiter, 2007; Diamantopoulos et al., 2012). Consistent with Bergkvist and Rossiter's (2007) recommendations regarding single vs. multiple item measures, sexual assault and AISA may be measured using single items of each component (i.e., sexual contact, tactic used, and consent), and separate items for each construct within each component (e.g., multiple tactics used), with the tactic presented first (Abbey et al., 2005), and that correspond to the research question (Cook et al., 2011). For example, legally oriented platforms might use behavioural instances of sexual contact, physical force tactics, and express non-consent (note, the SES-R includes all those components except clearly defining consent; Koss et al., 1982). Clinically oriented platforms might use instances of perceived sexual integrity violation irrespective

of actual physical sexual contact, tactics including physical force and psychological coercion, and absence of express verbal consent (Cook et al., 2011; Kazan, 2018; Muehlenhard et al., 2016).

Altogether, the AISA item used in Study 1 and Study 3 may have limited the predictive power of the models tested, and by not assessing severity and behavioural components of AISA, the exact nature of what was measured is potentially more ambiguous than other measures of AISA. This may have impacted the study findings in various ways. For example, the possible variability in item interpretations may make it difficult to determine what types of AISA the results may be generalizable to and whether there are differences based on AISA parameters (e.g., severity, specific assaultive behaviours of perpetrators). Moreover, the results are potentially less specific in that I was unable to explore differences in results based on particular AISA parameters (e.g., severity, level of intoxication). One other possible limitation includes that the AISA item is capturing a concept other than AISA (e.g., sexual harassment without sexual contact, consensual sexual experiences that were later regretted), which may introduce more variability than was intended. Replication attempts may need to incorporate the AISA item used along with other AISA measures to compare and contrast results, which may provide further clarification. Given the challenges in measuring and defining sexual assault, comparing and contrasting different operationalizations of sexual assault may be a worthwhile future research endeavor.

Negative Emotional Outcomes of AISA

Previous studies show that experiencing AISA is associated with negative emotional outcomes, including PTSD, GAD, and depression symptoms (Dworkin, 2020;

Gong et al., 2019). Similarly, results of Study 1 showed that while AISA was only associated with depression and not anxiety at the bivariate level, there were main effects of AISA on both anxiety and depression in the multivariate regression models. Study 3 replicated this and showed AISA was associated with symptoms of both anxiety and depression. Additionally, AISA was associated with PTSD symptoms in Study 3, extending the findings from Study 1 (where PTSD was not examined) and replicating previous findings (Gong et al., 2019). Moreover, Study 4 showed themes reflecting PTSD, anxiety, and depression symptoms following AISA when participants were describing the results of the AISA from their own perspectives.

My studies also demonstrate and support that while AISA-related PTSD, anxiety, and depression symptoms may be associated and share common features, they are distinct emotional responses (Grant et al., 2008; Price & van Stolck-Cooke, 2015). Specifically, in Study 1, although anxiety and depression were not tested in the same model, the self-compassion subcomponents showed different patterns regarding their associations to these outcomes. Namely, higher self-caring and lower self-criticism counteracted the adverse effects of AISA on both anxiety and depression, the subcomponents of higher self-kindness and lower over-identification counteracted the adverse effects of AISA on anxiety, and higher self-kindness and lower over-identification, self-judgement, and isolation counteracted the effect of AISA on depression. These results suggest separate (though related) processes may be relevant for each outcome. This was extended by the results of Study 3 depicting that AISA predicted PTSD, GAD, and depression symptoms, while accounting for their inter-associations. My results elucidated shame as a potential transdiagnostic factor relevant for PTSD, GAD, and depression symptoms, attesting to

the finding that these outcomes do share overlap rather than being fully orthogonal symptomatologies (Grant et al., 2008; Price & van Stolck-Cooke, 2015). My findings also support that there are distinct processes relevant for each over and above shame, demonstrating that while related, they may be unique reactions in association with AISA. This warrants exploration of each outcome separately rather than as a global negative emotional outcome construct. Namely, aligned with Study 1 findings, Study 3 showed shame and FOSC partially mediated the link between AISA and PTSD symptom severity, shame and self-coldness partially mediated the link between AISA and GA symptom frequency, and shame and CSB fully mediated the link between AISA and depression symptom frequency. Below, the results of my studies are incorporated and interpreted within the relevant theoretical models and previous findings underpinning my dissertation.

Theoretical Models

Theories of Resilience

Consistent with a positive psychology approach, my dissertation explored resilience factors, characterized by processes that function to reduce negative outcomes, along with risk factors, following AISA (Luthar et al., 2014). Resilience may reflect the protective or compensatory model, where a resilience factor attenuates or counteracts the association between the trauma and the negative outcome respectively, as explored in Study 1 (Fergus & Zimmerman, 2005; Rutter, 1985). The social-ecological framework of resilience extends the protective or compensatory models by positing that individual resilience and risk factors (e.g., personality traits) are interrelated with socio-cultural factors (e.g., media, community, family, social network; Ungar, 2013). This social-

ecological framework of resilience may be particularly relevant in understanding AISA survivors' experiences given that stigma about AISA survivors unfortunately prevails through interrelated societal levels, including macro (e.g., news and social media, laws), community (e.g., social and family networks), and individual (e.g., rape myth acceptance and internalized self-blame) contexts (Aroustamian, 2020; Edwards et al., 2011; Stubbs-Richardson et al., 2018). Although I did not assess these socio-cultural factors in Study 1 or 3, they did emerge in the qualitative interviews in Study 4.

The Cognitive Model of Trauma

The cognitive model of trauma suggests a mediational process where appraisals about the cause and consequences of potentially traumatic experiences like AISA function as mechanisms linking AISA to negative emotional outcomes (Ehlers & Clark, 2000). Therefore, AISA survivors' negative, internal, stable appraisals may contribute to the development of negative emotional outcomes, while positive, internal, and stable appraisals may prevent or reduce the severity of negative emotional outcomes (Ehlers & Clark, 2000), as explored in Study 3.

Integrating Theoretical Models

Despite capturing unique conceptual approaches, the compensatory model of resilience and the cognitive model of trauma may not be mutually exclusive. Specifically, the cognitive model assesses the processes underlying *how* resilience factors may compensate for the negative effects of trauma, and relatedly how risk factors may contribute to negative emotional outcomes. Additionally, within these models, appraisals may correspond to risk (if they are negative) or resilience (if they are positive) factors for negative emotional outcomes among AISA survivors.

Further, just as the social-ecological framework of resilience extends the compensatory model of resilience, it may also be integrated within the cognitive model of trauma. Sociocultural factors such as AISA-related stigma may have implications for the type of trauma appraisals that develop (Ehlers & Clark, 2000; Ungar, 2013). For example, AISA survivors may be less likely to develop appraisals reflecting self-caring and more likely to develop appraisals reflecting self-coldness and FOOSC, potentially due to the stigma they face. Sociocultural stigma, if internalized, may also facilitate appraisals reflecting CSB and shame. Despite that these models were explored separately in each dissertation study they may be complimentary, and their synthesis may contribute to a greater understanding of risk and resilience factors among AISA survivors (see Figure 5 for a conceptual figure of the integrated models). In the ensuing sections, I describe the results of my dissertation studies as they collectively pertain to self-compassion, FOOSC, BSB and CSB, and shame.

Self-Compassion

One potential resilience factor and mediator linking AISA to negative emotional outcomes may be self-compassion, reflected by high self-caring and low self-coldness (Brenner et al., 2017; Gilbert, 2010). Demonstrating the potential importance of this construct, self-compassion has been shown to be related to lower PTSD symptoms among trauma survivors (Winders et al., 2020). One previous study supported the protective model of self-compassion, showing that shame was related to more severe eating disorder symptoms only among those with low self-compassion (Ferreira et al., 2014). However, another previous study suggested self-compassion may work as a compensatory resilience factor, showing that higher self-compassion at baseline predicted

lower depressive, suicidal, panic, and PTSD symptoms at follow-up among traumatized adolescents (Zeller et al., 2015). Further, AISA may be associated with lower self-compassion (i.e., low self-caring and high self-coldness), which may then increase the risk of experiencing AISA-related negative emotional outcomes, suggesting a mediational process. Indeed, sexual assault survivors reported higher self-coldness than non-sexual trauma survivors (Williamson, 2019), and adult survivors of childhood maltreatment reported lower self-compassion than those not maltreated (Miron et al., 2016). As such, my dissertation studies examined higher self-caring and lower self-coldness as resilience factors, as mediators for the link between AISA and negative emotional outcomes, and more broadly, through qualitative exploration of the role of self-compassion within AISA survivors' lived experiences.

Self-Caring

Study 1 was the first to examine the self-caring component of self-compassion as a resilience factor in its presence, and risk in its absence, for negative emotional outcomes among AISA survivors. Results suggest self-caring functions as a compensatory resilience factor in that it counteracted the association between AISA and anxiety and depression. The analysis of the self-caring subcomponents showed high self-kindness counteracted the significant adverse effects of AISA on anxiety and depression, indicating self-caring may compensate for the effect of AISA on both depression and anxiety through self-soothing emotional regulation processes (Trompetter et al., 2017; Vettese et al., 2011). Study 1 results were also broadly echoed in Study 4, where themes emerging from AISA survivors' own narratives showed that self-compassion counteracted the negative effects of AISA, particularly by increasing kind, non-

judgmental self-relating, mindfulness, and connection with others. In contrast, Study 3 explored self-caring as a mediator and showed that in a model with other competing mechanisms and accounting for associations between outcomes, self-caring did not significantly mediate any associations. These results suggest that while self-caring may counteract the association between AISA and anxiety and depression, alternative processes may be more important in explaining *how* AISA and negative emotional outcomes are linked, such as the self-coldness component of self-compassion.

Self-Coldness

Study 1 showed in addition to self-caring, low self-coldness functions as a compensatory resilience factor by counteracting the association between AISA and anxiety and depression. Additionally, the analysis of the self-coldness subcomponents showed low over-identification counteracted the significant adverse effects of AISA on anxiety, and low over-identification, self-judgement, and isolation counteracted the significant adverse effects of AISA on depression. Supporting the compensatory effects of self-coldness on anxiety as demonstrated in Study 1, self-coldness (in addition to shame) mediated the association between AISA and anxiety, but not depression or PTSD symptoms in Study 3. Study 4 showed similar overall themes that self-coldness may link AISA to negative emotional outcomes, capturing each of the subcomponents. Similarly, Messman-Moore and Bhuptani (2020) showed that when tested together in a mediation model along with FOSC, subcomponents of self-coldness, but not self-caring, mediated the effects between different types of childhood maltreatment and anxiety and depression in a sample of undergraduate women. Specifically, the subcomponent of isolation mediated the association between childhood emotional abuse, emotional neglect, physical

abuse, and physical neglect severity and depression symptoms, and over-identification mediated the association between childhood emotional abuse, emotional neglect, physical abuse, and physical neglect severity and anxiety symptoms (along with FOSC for each; Messman-Moore & Bhuptani, 2020). Therefore, self-coldness may counteract the association between AISA and anxiety and depression, and self-coldness (perhaps particularly through the subcomponent over-identification) may be especially important in explaining *how* AISA and anxiety (but not depression or PTSD) symptoms are linked.

Self-coldness may compensate, in its absence, for the negative effects of AISA on anxiety symptoms through specific processes. Namely, self-coldness involves repetitive, negative thoughts about the self and future, and may be similar to worry and ruminative processes. The worry-based processes involved in overidentification may be particularly relevant for anxiety (Rutter & Brown, 2017), illustrated by previous studies showing worry is central to GAD symptoms (Clark & Beck, 2010; Newman & Llera, 2011). Indeed, Garnefski and Kraaij (2018) found that after controlling for the associations between catastrophizing (reflecting worry), rumination, self-blame, GAD, and depression symptoms, only catastrophizing was related to GAD. Previous studies and the pattern of results across Studies 1 and 3 indicate worry may be an important underlying process explaining how self-coldness may link AISA to GAD symptoms. Rather than self-coldness, other mechanisms (e.g., CSB) may be more relevant in explaining how AISA and depression symptoms may be linked.

FOSC

Given the Study 1 findings that self-caring and low self-coldness may function as compensatory resilience factors regarding the negative effects of AISA on anxiety and

depression, and self-coldness may be an important link explaining AISA and anxiety symptoms, exploring barriers to self-compassion may be warranted, such as FOSC.

Distinct from self-compassion but related (Gilbert et al., 2011), FOSC was explored as a mechanism explaining the association between AISA and PTSD, anxiety and depression symptoms in Study 3, and its role was qualitatively explored among AISA survivors in Study 4.

FOSC (and shame) emerged as a mechanism linking AISA to PTSD symptoms, after accounting for CSB, BSB, self-caring, and self-coldness, and the inter-associations between outcomes, and controlling for gender in Study 3. FOSC was also identified as an important barrier for healing from AISA in Study 4. The results of Study 3 are partially consistent with Miron et al. (2016) showing FOSC explained the associations between childhood sexual abuse (CSA) and both depression and PTSD symptoms, controlling for their inter-associations. Moreover, FOSC mediated the link between AISA and PTSD symptoms, but self-caring and self-coldness did not. Messman-Moore and Bhuptani (2020) showed that when tested together, both FOSC and the self-compassion subcomponent of self-coldness mediated the associations between physical and emotional childhood maltreatment and anxiety and depression, while only FOSC mediated the link between CSA and anxiety and depression. Although PTSD was not examined, the results of Messman-Moore and Bhuptani's (2020) study indicate that FOSC may be more relevant regarding more highly stigmatized traumas, including AISA. In Study 3, I extended their findings by showing that, in a model including PTSD, anxiety, and depression, FOSC partially explained the link between AISA and PTSD. In contrast to Messman-Moore and Bhuptani's (2020) findings, however, rather than FOSC, self-

coldness (and shame) explained the link between AISA and anxiety, indicating that FOSC is a more important mechanism connecting PTSD rather than anxiety, when tested together.

From a resilience perspective, one possible explanation for the finding that FOSC linked AISA and PTSD rather than the resilience factors of higher self-caring and lower self-coldness is that FOSC may be a barrier to such. This was expressed in Study 4 and denotes FOSC may first need to be reduced for self-caring to increase and self-coldness to decrease prior to functioning as compensatory resilience factors. Furthermore, interpreting these results using the cognitive model of trauma, FOSC may explain the association between AISA and PTSD symptoms given the negative, internal, stable cognitive appraisals involved in FOSC (e.g., perceiving oneself as undeserving of compassion or social acceptance; Geller et al., 2019). Additionally, FOSC involves fear-based processes (e.g., expecting bad things to happen if self-compassionate), and emotional avoidance (e.g., avoiding strong emotions arising from self-compassion; Geller et al., 2019). FOSC may contribute to negative emotional outcomes following AISA through such processes, and collectively these results inform potential treatment targets to address in reducing PTSD symptoms among AISA survivors. Perhaps by removing a barrier to developing self-compassionate resilience factors, reducing FOSC may indirectly facilitate resilience. Together, the pathway from AISA to PTSD symptoms may be explained, in part, by FOSC, despite controlling for other potential mechanisms, and FOSC was identified as a risk factor contributing to negative emotional outcomes through AISA survivors lived experiences in Study 4. Therefore, there is possible utility in addressing FOSC among survivors to circumvent or lessen PTSD symptoms.

CSB

In addition to low self-compassion and FOOSC, AISA survivors may be at risk of internalizing CSB (Ehlers & Clark, 2000; Littleton et al., 2009). Interestingly, neither CSB nor BSB mediated the link between AISA and PTSD or anxiety symptoms in Study 3, contradicting my predictions and Peter-Hagene and Ullman's (2018) results that CSB mediated the association between AISA and PTSD symptoms. Rather, as discussed above, shame and FOOSC may be more important processes. Nonetheless, fitting with the social-ecological framework of resilience and the cognitive model of trauma, CSB (and shame) mediated the association between AISA and depression in Study 3, and self-blame, including elements of CSB, emerged as an overarching, pervasive theme in Study 4. Notably, every AISA survivor in Study 4 expressed internalizing self-blame at some point following AISA, which at times appeared to capture CSB components (e.g., perceiving they are too naïve or stupid for not having predicted and thus prevented AISA). This underscores the influence of internalized AISA-related stigma, which although not directly assessed in Study 1 or 3, was organically identified by AISA survivors in Study 4 as a significant factor contributing to general distress.

Moreover, while self-caring and self-coldness compensated for the negative effect of AISA on depression in Study 1, Study 3 showed rather than self-compassion components, CSB may be the underlying mechanism connecting AISA with depression symptoms. This finding supports the cognitive model of trauma in stipulating that negative, internal, and stable appraisals are particularly important, and replicates other previous findings that appraisals corresponding to CSB were associated with depression symptoms (Hu et al., 2015; Tilghman-Osborne et al., 2008; Zahn et al., 2015).

Additionally, the result that self-coldness was no longer significantly associated with depression when CSB was included in the model in Study 3 supports the inference in Study 1 that the ruminative processes may be most relevant to depression, particularly because such processes may be captured in elements of CSB. Evidencing this, Raes (2010) found that worry and rumination both mediated the association between low self-compassion and anxiety symptoms, while only rumination mediated the link between low self-compassion and depression symptoms.). As such, the results of my studies demonstrate that after controlling for associations among outcomes, ruminative processes, especially CSB, may be relevant for AISA-related depression symptoms, while worry may be central to AISA-related anxiety symptoms.

Shame

Shame emerged as the strongest mechanism linking AISA to PTSD, anxiety, and depression symptoms in Study 3, indicating it may be a transdiagnostic factor linking AISA to negative emotional outcomes. This finding occurred after accounting for the other mediators, the inter-associations between outcomes, and controlling for gender. These results replicate previous studies showing shame is associated with PTSD symptoms, particularly following stigmatized traumas, and with generalized anxiety and depression symptoms (Carey et al., 2018; López-Castro et al., 2019; Tilghman-Osborne et al., 2008). Further, Study 3 results mirror previous findings that shame mediated the association between interpersonal trauma, including sexual assault, and PTSD symptoms (La Bash & Papa, 2014), and that shame-related appraisals of being separate and alienated from others predicted depression symptoms in a sample of interpersonal trauma survivors (DePrince et al., 2011).

The strong shame effects are in line with the cognitive model of trauma positing appraisals involving self-perceived violations of social norms and expectations may give rise to shame (Budden, 2009). Similarly, shame was associated with PTSD symptoms through negative self-appraisals in Badour et al.'s (2020) study. Negative, shame-related appraisals about the social self may contribute to PTSD, GAD, and depression symptoms in multifaceted ways, including by influencing negative alterations in cognitions and mood (e.g., low self-worth, alienation from others, sadness; Budden, 2009). Shame may also facilitate avoidance by evading reminders of the trauma, which may reduce opportunities to challenge negative social and self-concept appraisals, and for anxiety to habituate. Negative self-appraisals and emotional avoidance may additionally prevent memory processing and integration into a cohesive self-concept, in turn contributing to intrusive symptoms and a current sense of threat (Budden, 2009; Ehlers & Clark, 2000). Further preventing memory and emotional processing, Bhuptani (2017) found that the association between sexual assault-related shame and depression symptoms was mediated by rape-related rumination, which was exacerbated by experiential avoidance, among sexually assaulted adults. Moreover, although my studies did not assess this, one possible explanation for how the link between shame and GAD may develop is through intolerance of shameful emotions. Shame may arise following a feared negative experience, especially an unexpected one, and may result in an abrupt shift from a happy/neutral state to a shameful one (i.e., a negative emotional contrast; Newman & Llera, 2011; Schoenleber et al., 2014). If shame and/or a shame-related negative emotional contrast is perceived as intolerable, such experiences may be avoided by using worry, which offers the perceived opportunity to prepare for and therefore potentially

reduce the magnitude of the response of shame (Cândeia & Szentagotai-Tătar, 2018; Newman & Llera, 2011; Schoenleber et al., 2014). This may be an area to explore in future studies.

Despite the robust findings regarding shame in Study 3, AISA survivors in Study 4 surprisingly did not frequently explicitly identify shame. It was, however, alluded to through every AISA survivors' reports of fears of being judged and/or blamed by others for having experienced AISA (Budden, 2009). Informed by the social-ecological framework of resilience, these fears may arise through perceived violation of social norms informed by AISA-related rape myths, for example that AISA only occurs to those who did not sufficiently protect themselves and translating to expectations to not become vulnerable (e.g., by being intoxicated; Brown et al., 2018; Starfelt et al., 2015). Given the importance of perceived social norm violations, the fears of judgement reported by AISA survivors may implicitly capture shame (Budden, 2009). One potent and simultaneously insidious illustration of such in Study 4 was Amy's reluctance to disclose AISA lest she be seen as "almost just another statistic of, like, girls who drink and, you know, get assaulted," (p. 139). This statement communicates it is common knowledge that sexual assault is a likely outcome among intoxicated women and therefore can be avoided by not being intoxicated; by becoming one such woman, she had failed to uphold the social expectation of avoiding risky situations. In combination with her inclination to hide the AISA experience from others, shame may be indicated. Thus, although on a superficial level shame did not appear to be experienced often, it was implied when statements like Amy's were evaluated for their meaning within the sociocultural context. As such, the robust results regarding shame in Study 3 and the interpretations of Study 4 suggest it

may be a particularly relevant mechanism to target in treatment of negative emotional outcomes following AISA.

Clinical Implications

My research has several clinical implications in that my results inform targets to address in intervention and treatment to mitigate the potential negative emotional outcomes for those who have survived AISA. My research also indicates potential broader societal avenues for preventing AISA by educating potential perpetrators.

From a clinical practice perspective, the results of my studies support that targeting certain psychological processes may have implications for different emotional responses in the context of AISA. Namely, increasing self-caring and reducing self-coldness may be beneficial in counteracting AISA-related anxiety and depression, as well as countering anxiety and depression among people who have not experienced AISA. Self-compassion is malleable, evidenced by Smeets et al.'s (2014) results that a brief three-week mindful self-compassion intervention study with undergraduate women resulted in higher self-compassion immediately post-intervention, compared to a time-management control (Smeets et al., 2014). Demonstrating the utility of higher self-compassion in general, increasing self-compassion was related to lower depression and anxiety six weeks later, compared to a wait-list control (Neff & Germer, 2013). Also, a randomized control trial (RCT) of a mindful self-compassion intervention, compared to medical treatment-as-usual, showed that as self-compassion increased, depression decreased immediately following the treatment and three months after (Friis et al., 2016). A recent meta-analysis of RCTs showed that self-compassion-focused therapies resulted in greater improvements in anxiety and depression symptoms compared to waitlist

controls, and equal improvements compared to active control conditions (Wilson et al., 2019). Ultimately, increasing self-compassion via self-compassion focused interventions may be generally advantageous in alleviating anxiety and depression and may be a proactive avenue to offset negative emotional outcomes if adverse events, including AISA, were to occur.

Regarding the potential mechanisms specific to the association between AISA and negative emotional outcomes, fear-based processes including shame and FOSC may be particularly important in PTSD symptoms. Supporting this, Øktedalen et al. (2015) conducted a 12-week longitudinal RCT ($N = 65$) comparing two trauma interventions and showed that increased shame and guilt compared to a given participant's baseline predicted worsened PTSD symptoms three days later, though PTSD symptoms did not predict subsequent higher shame and guilt. Thus, supporting the results of Study 3, Øktedalen et al.'s (2015) results indicate shame is a salient mechanism linking trauma and PTSD symptoms over time and that shame should be addressed in treatments for PTSD symptoms. Although no RCT studies have yet examined the effects of reducing FOSC on PTSD symptoms, several studies show that lower FOSC is associated with less severe PTSD symptoms (Boykin et al., 2018; Miron et al., 2016; Winders et al., 2020). Moreover, recent preliminary intervention studies are showing promise for addressing both shame and FOSC regarding treatment of PTSD symptoms, suggesting tentative evidence and warranting future larger scale, RCT studies. Specifically, using a small trauma-exposed community sample ($N = 10$), Au et al. (2017) explored the efficacy of a six-week compassion focused intervention developed particularly to address trauma-related shame (e.g., using self-compassionate, mindful acceptance of shame emotions).

The results showed that 80% of participants reported reduced shame, 90% reported reduced PTSD symptoms, and participants also reported reduced self-blame and higher self-compassion (Au et al., 2017). Although FOSC was not explicitly assessed or targeted in Au et al.'s (2017) study, strategies such as mindfully accepting shame emotional experiences addresses elements of FOSC, including potentially challenging the FOSC-related belief that painful emotional experiences arising from self-compassion are intolerable. Indeed, evidencing the link between shame and FOSC, FOSC mediated the effects of shame-related traumatic memories and the centrality of such on anxiety, depression, and paranoid symptoms (Matos et al., 2017). Together, shame and FOSC are potentially important processes in treatments aimed at reducing PTSD symptoms.

Additionally, using the cognitive model of trauma, addressing shame-, self-blaming-, and FOSC-related negative appraisals may be important, as is done with cognitive processing therapy (CPT; Ehlers & Clark, 2000; Resick et al., 2016). Though only recently explored, there is evidence of the effectiveness of CPT for substance involved sexual assault (Jaffe et al., 2021).

Shame and worry-based processes, including self-coldness, may be important in anxiety. Although there are, to date, no RCTs examining the effects of addressing shame and/or the self-coldness component of self-compassion on subsequent anxiety symptoms, there is increasing acknowledgement regarding the importance and potential of shame as a factor to address in the treatment in anxiety, particularly GAD (e.g., Schoenleber et al., 2014; Watson & Greenberg, 2017). Additionally, a small ($N = 14$) intervention study exploring emotion focused therapy (EFT), which involves a central shame-processing element, as a treatment approach to GAD, showed post-treatment reductions in GAD

symptom frequency (Timulak et al., 2017). Moreover, extending Timulak et al.'s (2017) preliminary study and highlighting the increasing recognition of addressing shame-related processes in the treatment of GAD, Timulak et al. (2020) have shared their protocol for a planned RCT examining EFT as a treatment approach for GAD, depression, and PTSD symptoms. Regarding self-coldness, an intervention study showed that decreases in self-coldness was associated with improved anxiety symptoms, and that worry-based processes mediated this link (Wadsworth et al., 2018). In summary, the results of my dissertation studies and emerging evidence from preliminary intervention studies, indicate shame and self-coldness, via worry-based processes, may be relevant treatment targets in GAD symptomatology following AISA. Future intervention studies should explore both shame and self-coldness as treatment targets for GAD symptoms.

Shame and ruminative based processes, including CSB, may be important in depression. Given that ruminative processes are thought to prevent emotional processing, including processing shame emotions, incorporating emotional processing strategies in treatment for depression may be merited. Supporting this, Gómez Penedo et al. (2020) conducted a RCT comparing cognitive behavioural therapy (CBT) with an emotional processing component (i.e., exposure-based CBT; EBCT) to standard CBT for depression. Results showed that both the EBCT and CBT group had lower depression symptoms, with both groups showing cognitive restructuring mediated the pathway to lower depression. However, the EBCT group predicted lower depression through the additional pathway of greater increases in emotional processing during treatment and self-efficacy compared to the CBT group (Gómez Penedo et al., 2020). As such, addressing both emotional processing and cognitive restructuring may address both

shame and CSB, with the results of my study highlighting them as worthwhile targets to address in treatment of AISA-related depression symptoms.

Along with the results of my dissertation studies indicating specific processes to target during treatment that may lessen negative emotional outcomes following AISA, broader societal prevention and intervention efforts may also be necessary. Given the socio-cultural AISA-specific stigma and the influence of which demonstrated in Study 4, efforts to challenge rape myths and victim-blaming messaging within the legal system, news and social media, and social networks (Aroustamian, 2020; Edwards et al., 2011; Stubbs-Richardson et al., 2018) may reduce internalized CSB, shame, self-coldness, and FOOSC. Previous findings reviewed in Chapter 1 show the utility of social media as one potentially powerful avenue to accomplish this (Alaggia & Wang, 2020), as it provides a space for survivors and supporters to have a voice. Additionally, the fact that many people see and interact with social media platforms and the content is at the same time, largely driven by users, is also a novel and promising (Alaggia & Wang, 2020). Namely, perceptions of what one's peers believe is persuasive in affecting change, and just as perceptions that peers accept rape myths may perpetuate them, and potentially retraumatize AISA survivors if they disclose their experiences and receive negative victim-blaming responses, the opposite may also occur (Alaggia & Wang, 2020). Additionally, greater education among legal professionals about AISA and challenging rape myth acceptance may reduce the instances of victim-blaming responses, in turn fostering a more supportive, safe environment for AISA survivors to come forward (Relyea & Ullman, 2015). The detrimental effects of negative, victim blaming responses warrants such a change, and the additional benefit of identifying and convicting more

perpetrators would also reduce their ability to continue offending, thus potentially preventing both the instances of AISA and the negative emotional effects (Schwarz et al., 2017). Similar processes may occur upon challenging rape myths among social contacts, for example, through peer-to-peer education, in that AISA survivors may be more likely to disclose their experience, and/or be met with a positive, supportive reaction, which may prevent or lessen negative appraisals (Garza et al., 2021).

Strengths and Limitations

The results of my dissertation studies should be interpreted in light of their respective and collective strengths and limitations. One collective strength is the use of mixed quantitative and qualitative methods, which inform a multidimensional understanding of risk and resilience factors among AISA survivors (Gelo et al., 2008). The quantitative approaches used in Studies 1, 2, and 3 enabled testing specific hypotheses corresponding to theoretical models of resilience (i.e., protective vs compensatory), the cognitive model of trauma, and the factor structure of the SCS (Ehlers & Clark, 2000; Fergus & Zimmerman, 2005). Additionally, the large (Studies 1 and 2) and moderate (Study 3) sample sizes are general strengths of my dissertation and allowed for the identification of potentially generalizable patterns in relation to risk and resilience factors regarding negative emotional outcomes of AISA (Gelo et al., 2008).

The quantitative studies in my dissertation also utilized strong statistical methods, with the comprehensive nested CFA model comparisons and use of ordinal scoring in Study 2 elucidating the best relative factor structure of the SCS and supporting the validity of the scoring approaches used in Studies 1 and 3. The multivariate regression analyses in Study 1 were a suitable first step given that this study was the first to examine

self-compassion as a resilience (or risk, in its absence) factor for the negative emotional outcomes related to AISA. Additionally, by suggesting the compensatory roles of higher self-caring and lower self-coldness and delineating the relative roles of the six self-compassion subcomponents, the results set the foundation for the more comprehensive, simultaneous mediation model in Study 3.

The simultaneous mediation model in Study 3 has several advantages, the first being that the use of SEM improves the statistical power of the analyses compared to multivariate regression, in part due to the ability to model and estimate missing values (i.e., maximum likelihood estimation) rather using listwise deletion as is used in multivariate regression (Gunzler et al., 2013). Similarly, SEM models are more efficient, and thus more powerful, through the ability to estimate latent variables, which better account for measurement error by modeling unreliability of the measures and correcting the correlations among variables accordingly (Streiner, 2006). Therefore, despite the relatively smaller sample size in Study 3 relative to Studies 1 and 2, the model was adequately powered to detect small-to-medium effects (Soper, 2021). Another advantage is that SEM accommodates models testing multiple mediators and outcomes simultaneously, allowing for assessment of the effects of each mechanism on the outcomes over-and-above the effects of other potentially relevant mechanisms, and accounting for the potential overlap among outcomes (Gunzler et al., 2013). Consequently, SEM enables the identification of the key mediators and their unique pathways (or lack thereof) to each outcome, highlighting the underlying unique factors linking AISA to each negative outcome (Gunzler et al., 2013).

Complimenting the quantitative approaches of Studies 1, 2, and 3, the qualitative methods used in Study 4 provided in depth, person-centered accounts of AISA survivors' lived experiences, particularly regarding the interrelated factors of self-compassion, FOSC, and self-blame. Moreover, aligned with the social-ecological framework, contextualizing the compensatory/protective models of resilience and the cognitive model of trauma (Ehlers & Clark, 2000; Fergus & Zimmerman, 2005) by exploring AISA survivors' experiences within the cultural context advances the understanding of survivors' risk and resilience factors (Ungar, 2013). Indeed, quantitative methods are well suited to parse out possible unique, specific effects and pathways, thereby identifying the processes that may be most relevant. However, by divorcing such effects from competing processes, the entirety of AISA survivors' experiences may not be captured, for example, survivors identified the positive impact of motivation to live according to their values in overcoming the adverse effects of AISA in Study 4, which may echo self-compassion, an effect not found in Study 3. As such, qualitative methods may complete the picture by exploring and capturing the relevant processes as they are experienced in full by AISA survivors, within the socio-cultural context. The results of thematic analysis in Study 4 therefore connect the general patterns found in Studies 1 and 3 with AISA survivors' complex, nuanced, and subjective lived experiences (Ehlers & Clark, 2000; Fergus & Zimmerman, 2005; Gelo et al., 2008).

In addition to mixed method, another collective strength of my dissertation studies is that I utilized different populations to ensure generalizability and reliability of results. Study 1 participants were first- and second-year undergraduate students who reported drinking frequently, a demographic chosen because AISA is most likely to occur among

this age group (i.e., emerging and young adults; Arnett et al., 2014) and among university students (Black et al., 2011; Breiding et al., 2014; Howard et al., 2008; O’Callaghan & Ullman, 2021). Study 2 participants were first- and second-year undergraduate students with no particular drinking tendencies, a relevant population to use for testing the factor structure of the SCS given that various previous studies about self-compassion also used university/college student samples. Additionally, the focus of my dissertation on emerging and young adults allowed for the CFA results to be generalizable to this age group. Study 3 participants were emerging and young adult community-dwellers who reported drinking frequently, a sample chosen to extend the results of Study 1 beyond a student sample, a common critique of psychology-based research (Gallander Wintre et al., 2001). In all samples across Studies 1, 2, and 3, gender was not restricted to women as has previously been done in explorations of sexual assault and AISA. By also including men⁶, my results advance understanding of AISA and its correlates, risk, and resilience beyond how it may function for women, which although important, dismisses the fact that men also experience AISA and are at risk of negative emotional outcomes (Kehayes et al., 2019). Finally, Study 4 participants were a mix of community-dwelling and university student women⁷ who had experienced AISA. By focusing on exploring AISA survivors’ experiences in depth, I aimed to complement and extend the first three studies which included both AISA survivors and those who had not experienced AISA.

⁶ Although all genders were recruited in Studies 1, 2, and 3, small *n* for genders other than women and men unfortunately precluded separate and/or inclusion in analyses.

⁷ Although study inclusion was not limited to women, no men or people of other genders volunteered to participate, potentially indicating greater perceived stigma among men or GSD people who experience AISA.

Despite the above strengths, there are limitations to my dissertation studies warranting discussion, including the cross-sectional study designs which precluded exploring test-retest estimates of the SCS factor structures in Study 2, and assessment of directionality and causality for Studies 1 and 3. For example, self-compassion may precede and contribute to reduced PTSD, anxiety, and depression, and/or lower PTSD, anxiety, and depression may precede and contribute to high self-compassion, or a third variable may explain the cross-sectional associations. Similarly, shame, FOOSC, CSB, and BSB may predict worsened negative emotional outcomes, or vice versa. Additionally, while I tested the protective and compensatory resilience models in Study 1, followed by the mediation model informed by the cognitive model of trauma in Study 3, other models of the relations between the study variables are possible. For example, a moderated mediation model with CSB mediating the link between AISA and negative outcomes, and the AISA to CSB link moderated/buffered by self-caring, should be tested in future. Such a model was not explored in Study 3, because although I had sufficient power to detect small-to-medium effects with the model tested, it was likely underpowered to detect small effects and/or small-to-medium effects within more complex models (Soper, 2021). Relatedly, Study 1 may have had restricted power due to the relatively low rate of AISA reported in the sample (i.e., 6.1%), although the large sample may have mitigated this. Finally, while saturation was indicated in Study 4, the sample size was admittedly relatively small.

Although the samples used in my dissertation were comprised of different populations, they were also predominantly White, well-educated and higher socioeconomic status (SES), emerging and young adults, which may reduce

generalizability. Specifically, the results of my study are most applicable to people with similar backgrounds to those represented in my studies, and future research should explore whether the results are replicated among people from other backgrounds (e.g., people of colour, lower SES, LGBTQ+, disabled people). Given the higher levels of oppression faced by people from the above backgrounds, they may be at greater risk of negative emotional outcomes following AISA (Littleton & DiLillo, 2021).

Another limitation was that measures in all studies were self-report. Further, the single-item AISA measure did not assess assault severity, and the wording may have reflected relatively less severe assault experiences, and/or only captured those who perceived drinking as a causal factor in their sexual assault. While this warrants cautious comparison to studies measuring AISA behaviourally and more comprehensively (e.g., Peter-Hagene & Ullman, 2018), the broad AISA item used in this dissertation may have countered the tendency for AISA survivors not to label their experience as sexual assault (Schwarz et al., 2017). Additionally, the validity of the measure is supported through its links with depression, anxiety, and PTSD symptoms in my studies and in previous research (Kehayes et al., 2019). The focus on AISA survivors who were drinking at the time of the assault without comparison to perpetrator-drinking AISA or non-alcohol-involved sexual assault is another limitation. Nonetheless, prior research suggests that AISA survivors who were drinking tend to experience heightened self-blame, PTSD, and depression (Peter-Hagene & Ullman, 2018; Ullman & Najdowski, 2010), making the present research particularly relevant to this group of sexual assault survivors.

In addition, neither history of CSA nor other traumatic events were measured; therefore, anxiety and depression may be the result of unmeasured CSA experiences and

not the AISA given their high co-occurrence (Amado et al., 2015). Similarly, self-esteem was not measured; however, prior research suggests that self-compassion is related to emotional distress even after controlling for self-esteem (Neff, 2003b). Further, Study 1 only assessed anxiety and depression as emotional outcomes of AISA, which prevents comparison to the results regarding PTSD in Study 3. Relatedly, while exploring PTSD, anxiety, and depression simultaneously, as done in Study 3, is a novel contribution to the field, other negative emotional outcomes may be relevant and important to explore, particularly as they may be associated with PTSD, anxiety, and depression (e.g., drinking to cope post-assault; Littleton et al., 2009). To compare AISA survivors' responses to those without this experience, all participants in Study 3 completed the PTSD scale (see Barlow et al. 2017 for a similar approach), and the PTSD reference event was not AISA specific (in contrast see the Trauma-Related Shame Inventory; Øktedalen et al. 2014). The anxiety and depression measures used in Study 1 and Study 3 were also not AISA specific, and as such, there is the possibility that PTSD, anxiety, and depression symptoms were triggered by another unmeasured variable rather than AISA (e.g., another trauma such as physical assault, a motor-vehicle accident, other life stressors, and/or pre-existing mental illness). Additionally, each of the outcomes were assessed with measures designed to be used as screeners (Kessler et al., 2002; Kroenke et al., 2001; Spitzer et al., 2006; Weathers et al., 2013). Their use as outcome measures may limit the more nuanced and complex dimensions of the concepts they measure. As such, the results of my studies are most relevant to the dimensions assessed by the measures and may not extend to those that were not – for example, influences on social functioning were not examined, despite being components of clinical PTSD, anxiety, and depressive disorder

formulations (American Psychiatric Association, 2013). Future directions should compare the results from these measures to more comprehensive assessments, for example, clinical interviews, and to AISA specific measures of PTSD, anxiety, and depression symptoms.

Similarly, the shame, CSB, and BSB measures were also non-AISA specific (in contrast see the Rape Attribution Questionnaire, though it does not differentiate CSB from BSB; Frazier, 2003). Given no existing CSB/BSB measures were feasible for an online survey to my knowledge, I modified the ABQ for use with adults, potentially introducing error variance as the psychometric properties are currently unknown.⁸

Regarding the analyses of Study 4, I approached data interpretation using elements consistent with both the coding reliability and codebook approach, which may be a novel and therefore potentially less valid approach (Braun & Clarke, 2020). Moreover, my prior understanding and training in resilience theories (e.g., Ungar, 2013) likely framed how I arrived at the thematic structure regardless of whether such was entirely intentional. This may thus influence the conclusions drawn from Study 4, and while not inherently a limitation (i.e., my training in resilience and self-compassion may have simultaneously allowed for greater sensitivity and deeper exploration), this perspective warrants transparent acknowledgment.

Additionally, Study 3 and Study 4 were conducted during the COVID-19 pandemic, which may have influenced results. Given the pandemic was global, the effects on results may have affected the entire sample (e.g., increased overall levels of

⁸ To address this limitation, I am currently co-supervising an undergraduate student using the data from Study 3 to explore the psychometric properties, including the factor structure, of the revised ABQ.

negative emotional outcomes), and thus may not have influenced the specific pattern of results for each study (Dozois, 2021).

Directions for Future Research

Along with the suggested areas for future research within each manuscript, the results of my dissertation could be expanded upon by using longitudinal methods to explore the directionality and sequence of the mediation model tested. More complex models may also be plausible and should be examined, such as the moderated mediation model with CSB mediating the link between AISA and negative outcomes, and the AISA to CSB link moderated/buffered by self-caring as mentioned above. Along with replicating my results, such models should be tested using larger and more racially and age diverse samples, with both community-dwelling and student samples.

Future studies should use multi-item, behaviorally based measures of victim drinking AISA that capture severity (e.g., SES-R; Koss et al., 1982) to compare to and build on the results of my dissertations studies. Additionally, along with replicating the results I showed with general measures, future studies should include AISA-specific measures of PTSD severity, shame, and CSB and BSB.

In Study 3, the model for GAD and PTSD outcomes showed partial mediation, suggesting additional mechanisms warrant exploration in future research, such as anger, psychological inflexibility, and a direct assessment of internalized stigma (Boykin et al., 2018; Littleton et al., 2009). Regarding Study 2 specifically, one future research endeavour is to improve the potentially redundant, poorly specified SCS (Neff, 2003b) items that likely contributed to the adequate – but not excellent – fit of the two-factor

hierarchical model, and the relatively slight differences between the hierarchical model and the lower-order two factor model.

Participants in Study 4 emphasized the importance of incorporating perpetrators in intervention and prevention efforts, rather than heavily focusing on survivors' responsibility in avoiding and then healing from AISA. As such, an additional future research direction is exploring potential prevention and intervention options targeting perpetrators, at both societal and individual levels (see clinical implications section for a thorough discussion regarding societal and individual intervention strategies for AISA survivors). Focusing on what may be effective in reducing risk for perpetrators in perpetuating sexual assault may be one especially important endeavor, particularly given that previous research has focused heavily on the role of potential victims in avoiding sexual assault rather than targeting how to reduce perpetration. There is evidence that history of perpetrating sexual assault is the strongest predictor of perpetrating future sexual assault, suggesting future research might prioritize intervention studies among known sexual assault perpetrators (Loh et al., 2005). Regarding the specific factors such intervention studies might target, perpetrators of sexual assault are more likely to report perceived token resistance, hyper-gendered, adversarial beliefs about women, negative attitudes towards women, involvement in social groups accepting rape myths, and they showed personality traits associated with nonclinical levels of psychopathy, antisocial behavior, and alcohol problems (Abbey & Jacques-Tiura, 2011; Loh et al., 2005). Moreover, compared to general sexual assault, AISA perpetrators are higher on impulsivity, alcohol consumption in sexual situations, and hold more beliefs about alcohol consumption being a cue for women's' sexual interest (Zawacki et al., 2003).

These results indicate a need for examining the effectiveness of studies using a combined approach addressing societal-level rape myths and gendered stereotypes and individual-level factors such as reducing alcohol consumption, strategies for managing impulsivity particularly in high-risk situations (e.g., at parties), and increasing empathy towards survivors and/or emphasizing personal gains of not perpetrating sexual assault, particularly among those high in psychopathy where it may be difficult to increase empathy; Abbey & Jacques-Tiura, 2011; Loh et al., 2005). Future studies might also build on previous findings suggesting that nonconfrontational, alliance-building approaches *by other men* was related to increased knowledge about sexual assault, empathy toward survivors, and motivation to actively prevent sexual violence (Piccigallo et al., 2012). There is also some support for the effectiveness of peer-led interventions to change attitudes and beliefs, followed by professional interventions to provide guidance on changing behaviours (Baldwin-White et al., 2021). As such, future studies examining prevention and intervention efforts involving reducing perpetrator risk of sexually assaulting people may further explore these factors prospectively in different populations to assess their effectiveness (e.g., university students, community, adolescents).

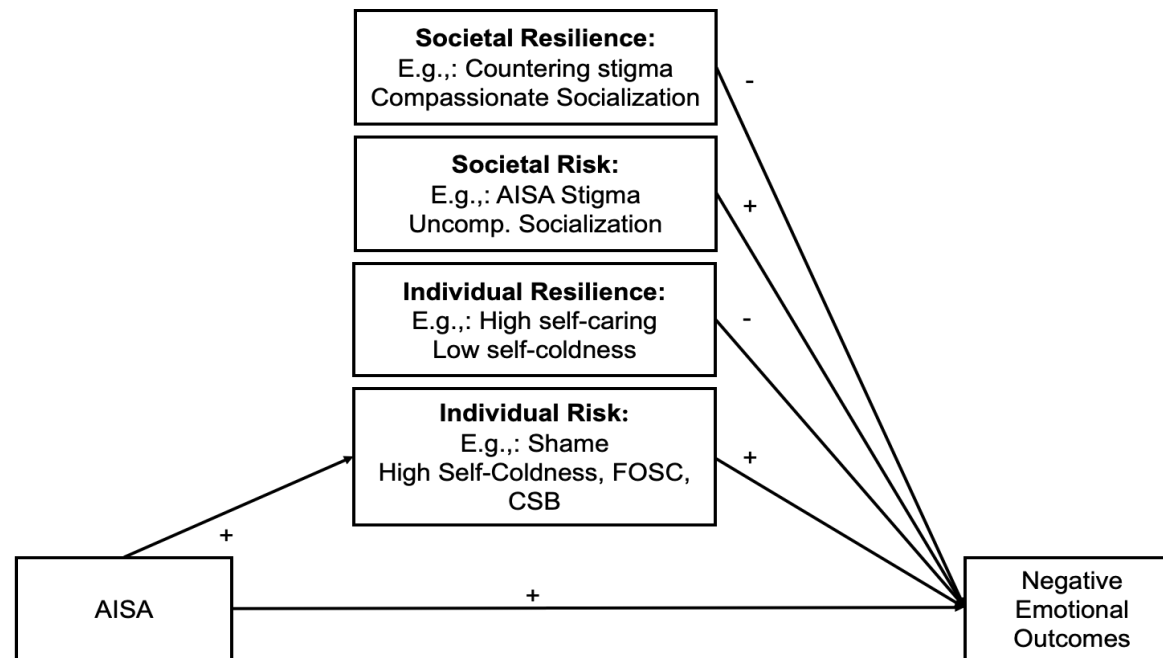
Similarly, future research should explore effective interventions in reducing and counteracting rape myth acceptance among women and other populations who are vulnerable to sexual assault (e.g., BIPOC; Littleton & DiLillo, 2021), and among legal and health professionals who may be interacting with survivors following AISA (Garza & Franklin, 2021). Such interventions may reduce victim-blaming, increase reporting of sexual assault and potential convictions. Related to prevention efforts targeting

perpetrators, higher conviction rates may also identify those at highest risk (i.e., previous offenders) and allow for more comprehensive prevention efforts (Loh et al., 2005).

Conclusions

I examined risk and resilience factors regarding the associations between AISA and negative emotional outcomes, exploring self-compassion in particular. Overall, my dissertation studies were guided by a positive psychology, strengths-based approach, and the cognitive model of trauma (Ehlers & Clark, 2000; Luthar et al., 2014). Across my four studies, I demonstrated that self-compassion (i.e., high self-caring, low self-coldness) functions as a compensatory resilience factor, counteracting the associations between AISA and anxiety and depression. I also compared six nested confirmatory factor analysis models of the SCS (Neff, 2003b), the results of which best supported a two-factor hierarchical model and informed the recommendation to use SEM latent variable estimation in future studies using this scale. I then tested a SEM mediation model exploring the relative mediating effects of self-caring, self-coldness, FOCS, CSB and BSB, and shame on the associations between AISA and PTSD, anxiety, and depression symptoms, respectively, controlling for gender. Shame was the strongest mediator linking AISA with all outcomes. In addition to shame for each, self-coldness partially mediated the AISA-anxiety symptom frequency association, FOCS partially mediated the AISA-PTSD symptom severity association, and CSB fully mediated the AISA-depression symptom frequency association. Advancing the results and interpretations in Study 1, these findings indicate avoidance-based processes, ruminative-/worry-based cognitions, and negative self-evaluative cognitions may be distinctly relevant for AISA-related PTSD, anxiety, and depressive symptoms, respectively, after

accounting for the effects of shame. Contextualized within the socio-ecological model of resilience, I also qualitatively explored the interrelated risk and resilience factors of AISA-specific stigma, self-compassion, FOSC, and self-blame among eight AISA survivors. Mirroring Study 1 and 3, themes involved 1) negative emotional outcomes of AISA, 2) low self-compassion, FOSC, internalized self-blame, and pre-existing maladaptive tendencies as risk factors that undermined resilience, and 3) facilitating self-compassion and resisting self-blame by living according to one's values and challenging FOSC as resilience factors. By synthesizing results across complimentary theoretical models and using mixed methods with different populations, my dissertation studies contributed to a more comprehensive understanding of risk and resilience factors among AISA survivors. My dissertation studies collectively demonstrated AISA survivors may benefit from interventions targeting the risk factors of low self-compassion, FOSC, shame, and CSB, and recognizing the possible influence of socio-cultural AISA-specific stigma. Equally important, my dissertation studies illustrated interventions may also capitalize on AISA survivors' resilience factors, including aspirations to be self-compassionate despite this being a challenge, and exploring values that motivate post-traumatic healing.

Figure 5*Conceptual Model of Integrated Theories*

Note. AISA: alcohol-involved sexual assault. FOSC: fear of self-compassion. CSB: characterological self-blame. Risk and resilience factors may be interrelated, not shown for simplicity.

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APPENDIX A. COPYRIGHT PERMISSION TO INCLUDE STUDY 1

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Martine Hébert, Ph.D. (psychology)
 Canada Research Chair in Interpersonal Traumas and Resilience
 Co-chair Marie-Vincent Interuniversity Chair in Child Sexual Abuse
 Director of the sexual violence and health team (EVISSA)
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On Wed, 11 Aug 2021 at 15:36, Noelle Strickland <Noelle.Strickland@dal.ca> wrote:

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I am preparing my Ph.D. thesis for submission to the Faculty of Graduate Studies at Dalhousie University, Halifax, Nova Scotia, Canada. I am seeking your permission to include a manuscript version of the following paper in the thesis:

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Thank you,

Noelle Strickland

APPENDIX C. REVISED ATTRIBUTION OF BLAME QUESTIONNAIRE USED IN STUDY 3.

Please read the following scenarios and rate the possible responses from 1 (definitely would not think) to 5 (definitely would think) if you were to experience that situation.

Scenario 1: Imagine that you are giving a report in front of an audience. When you start to talk, you say something that doesn't make sense. The audience members all look really confused. Some people even laugh at you.

1. Why do I always get into these situations?
2. I should try harder to avoid these situations.
3. I know this will happen to me again.
4. This happened to me now because it happens all the time.
5. This happens because I am not a very good worker/person.
6. I should have worked harder!
7. How can I keep this from happening to me again?
8. I should have reacted differently when I got the task.
9. If I were a smarter person, I wouldn't have these problems.
10. I should have asked to do the task another time.

Scenario 2: Imagine that one day at work you break into groups to work on a project. You get evaluated on how well you do on this project. During project development, some people in your group keep talking to you. As a result, you do not make much progress on the project. Your performance earns you a bad evaluation.

1. Why do I always get into these situations?
2. I should try harder to avoid these situations.
3. I know this will happen to me again.
4. This happened to me now because it happens all the time.
5. This happens because I am not a very good worker/person.
6. I should have worked harder!
7. How can I keep this from happening to me again?
8. I should have reacted differently when I got the task.
9. If I were a smarter person, I wouldn't have these problems.
10. I should have asked to do the task another time.

Scenario 3: Imagine that you are getting something out of your office just as the work-day is over. It is pretty quiet in the office because most of the co-workers have already gone home. Just then you see another group of co-workers breaking into an office near where you are. They see you and one of them pins you against the wall and threatens you.

1. Why do I always get into these situations?
2. I should try harder to avoid these situations.
3. I know this will happen to me again.

4. This happened to me now because it happens all the time.
5. This happens because I am not a very good worker/person.
6. I should have tried harder to avoid this situation!
7. How can I keep this from happening to me again?
8. I should have reacted differently when I saw this.
9. If I were a smarter person, I wouldn't have these problems.
10. I shouldn't have stayed late.

Scenario 4: Imagine that you've just bought your lunch after waiting in line for a long time. As you are walking away, someone bumps into you on purpose. You're not hurt, but most of your food spills on your clothes. The other people in the line start laughing at you.

1. Why do I always get into these situations?
2. I should try harder to avoid these situations.
3. I know this will happen to me again.
4. This happened to me now because it happens all the time.
5. This happens because I am not a very good worker/person.
6. I should have been more careful!
7. How can I keep this from happening to me again?
8. I should have reacted faster.
9. If I were a smarter person, I wouldn't have these problems.
10. I should have asked to do the task another time.

Scoring (the same for each set of responses):

Characterological self-blame: 1, 3, 4, 5, 9

Behavioral self-blame: 2, 6, 7, 8, 10

APPENDIX D. STUDY 4 INTERVIEW PROTOCOL.

“How do you normally respond when you treat yourself with kindness and compassion?”

If they respond with *negatively*: “what makes it difficult/hard/uncomfortable [or other word they used]?”

If they respond with *positively*: “what makes it positive/nice/comforting [or other word they used]?”

“Since you experienced sexual assault, what kinds of thoughts have you noticed going through your mind?”

“what role do you think alcohol played in your sexual assault experience?”

“How do you think the involvement of alcohol in your sexual assault influenced your emotional responses following the trauma?”

“What was the influence of experiencing sexual assault on your ability to treat yourself with kindness and compassion?”

“What would make treating yourself with compassion easier, in the context of your experience of sexual assault?”

“What would make treating yourself with compassion more difficult, in the context of your experience of sexual assault?”

“Where do you place the blame for your sexual assault?”