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Sexual Assault Stigmatization, Secrecy, And Avoidance: Implications For Health-Injurious Processes And Outcomes

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SEXUAL ASSAULT STIGMATIZATION, SECRECY, AND AVOIDANCE: IMPLICATIONS FOR HEALTH-INJURIOUS PROCESSES AND OUTCOMES

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CHAPTER 1: INTRODUCTION

Sexual assault is prevalent and highly debilitating, with serious and long-lasting repercussions for survivors' health (Brown, Testa, & Messman-Moore, 2009; Campbell, Dworkin, & Cabral, 2009; Koss & Figueredo, 2004; Neville & Heppner, 1999). Common psychological health consequences of sexual assault include depressive symptoms, anxiety, posttraumatic stress symptoms, and suicidality (Au, Dickstein, Comer, Salters-Pedneault, & Litz, 2013; Black et al., 2011; Fergusson, Swain-Campbell, & Horwood, 2002; Koss & Figueredo, 2004; Najdowski & Ullman, 2009b; Ullman & Brecklin, 2002). Sexual assault survivors also tend to have elevated rates of physical health problems, such as poorer subjective health, somatic symptoms, chronic health conditions, and mortality (Black et al., 2011; Campbell & Soeken, 1999; Koss, Figueredo, & Prince, 2002; Golding, Cooper, & George, 1997; Ullman & Brecklin, 2003; Zoellner, Goodwin, & Foa, 2000). Further, sexual assault has been associated with a range of health-injurious behaviors, such as hazardous drinking, drug use, self-injury, high-risk sexual behavior, and eating disturbances (Black et al., 2011; Dubosc et al., 2012; Najdowski & Ullman, 2009a; Turchik & Hassija, 2014).

However, not all survivors of sexual assault experience long-term negative sequela. Studies have found that, although it is common for survivors to experience deleterious mental and physical health outcomes, a sizable portion do not develop these problems. This has prompted researchers to investigate why some survivors of sexual assault suffer from a host of health problems, while others do not. Many conceptual models have been tested and explanatory mechanisms proposed, such as:

characteristics of the assault (relationship to the perpetrator, severity, tactic used by the perpetrator), attributions of blame/ responsibility, world beliefs, social reactions to disclosure, and coping strategies (Abbey, BeShears, Clinton-Sherrod, & McAuslan, 2004; Koss et al., 2002; Najdowski & Ullman, 2009b; Ullman, Townsend, Filipas, & Starzynski, 2007). However, there is a paucity of research examining how stigmatization and secrecy influence coping and recovery processes. Initial research suggests that enacted and internalized stigmatization have implications for survivors' disclosure decisions, coping, and recovery (Deitz, Williams, Rife, & Cantrell, 2015; Gibson & Leitenberg, 2001; Miller, Canales, Amacker, Backstrom, & Gidycz, 2011). Continued research on these processes is critical for understanding how stigma contributes to survivors' health. Thus, the purpose of the present studies is to investigate the roles of stigmatization and secrecy in the recovery of sexual assault survivors.

The first goal of this dissertation is to examine how sexual assault stigma contributes to physical health symptoms and health risk behaviors (hazardous drinking and disordered eating) through its effects on avoidance coping, secrecy, thought suppression, and depressive symptoms (Study 1). The preoccupation model of secrecy (Lane & Wegner, 1995) was used as a theoretical framework for understanding how stigmatization contributes to poor well-being and health among sexual assault survivors. Many survivors receive stigmatizing responses after disclosure, internalize negative stereotypes about sexual assault, and may actively conceal the experience as a result (Deitz et al., 2015; Miller et al., 2011; Reylea & Ullman, 2015). The secrecy model posits that the process of keeping information about oneself hidden from others can

paradoxically result in preoccupation with the suppressed thoughts (Lane & Wegner, 1995). Further, the process of concealing a secret, such as one's sexual assault experience, is psychologically taxing, hinders trauma resolution, and has deleterious health effects (Amstadter & Vernon, 2008; Keefe, Lumley, Anderson, Lynch, & Carson, 2001; Lumley et al., 2011). For example, Major and Gramzow (1999) tested Lane and Wegner's (1995) secrecy model in a study of women's adjustment to abortion. The authors found that women who felt stigmatized were more likely to keep their abortion secret from friends and family, and secrecy was positively related to intrusive thoughts, attempts to suppress thoughts, and distress.

The second goal of this dissertation is to experimentally investigate health consequences of stigma (Study 2). Specifically, this study investigated whether exposure to sexual assault-stigmatizing content increases negative affect; alcohol craving and drinking intentions; and food craving and eating intentions. To this author's knowledge, no published studies have investigated the impact of sexual assault stigmatization in a randomized experiment. However, the deleterious effects of stigma have been observed in other studies that have participants focus on their stigmatizing condition. For example, in studies of overweight participants, discussing, reading a passage, or watching a video about weight-based stigma has been associated with increased cardiovascular reactivity, increased cortisol production, negative emotions, impaired executive functioning, high calorie snack food consumption, and lower exercise and dietary health intentions (Brochu & Dovidio, 2014; Major, Eliezer, & Rieck, 2012; Major, Hunger, Bunyan, & Miller, 2014; Seacat & Mickelson, 2009; Schvey, Puhl, & Brownell, 2011; Schvey, Puhl, & Brownell,

2014). Stigmatizing and victim-blaming depictions of sexual assault survivors are ubiquitous in the media and society (Easteal, Holland, & Judd, 2015). Thus, it is important to understand how survivors respond when exposed to sexual assault stigmatization.

The present studies jointly contribute to the literature by utilizing methodological designs with different strengths and weaknesses. Although correlational designs preclude causality, they are advantageous for establishing external validity. Conversely, experimental designs lack the generalizability of correlational studies; however, they provide greater internal validity. The use of different methodologies combines the strengths of each and allows for a more comprehensive examination of the research question.

The following sections will define relevant terminology and discuss the scope of the problem. Then, literature on the health consequences of sexual assault will be reviewed. This will be followed by reviews of sexual assault stigma and consequences of stigma, using Lane and Wegner's (1995) preoccupation model of secrecy as a theoretical framework. Finally, the studies' goals and hypotheses will be provided.

Definitions and Prevalence

The term "sexual assault" encompasses various unwanted sexual activities, ranging from forced sexual contact (unwanted fondling or kissing) to completed rape (unwanted vaginal, anal, or oral intercourse; Koss, Gidycz, & Wisniewski, 1987; Koss et al., 2007; Planty, Langton, Krebs, Berzofsky, & Smiley-McDonald, 2013). Perpetrators can use a variety of tactics to obtain unwanted sexual activity, including verbal coercion (overwhelming with arguments, pressure, and threatening to end the relationship when

the woman does not want sex), physical force, and the victim's intoxication/ incapacitation (Koss et al., 1987; Planty et al., 2013). Women are more likely to be sexually assaulted than are men, and sexual assaults are more likely to be perpetrated by men (Black et al., 2011). Therefore, the present study focused on female survivors of sexual assault.

In Koss and colleague's (1987) seminal study on the prevalence of sexual assault, over half of female college students experienced some type of sexual assault since the age of 14, and over a quarter experienced an attempted or completed rape since the age of 14. Other studies have found sexual assault prevalence rates between 38% and 75% (Abbey, Parkhill, & Koss, 2005; Abbey, Ross, McDuffie, & McAuslan, 1996; Gidycz, Coble, Latham, & Layman, 1993; Humphrey & White, 2000; Johnson, Murphy, & Gidycz, 2017; Kalof, 2000; Testa, VanZile-Tamsen, Livingston, & Koss, 2004). Representative national surveys tend to have more conservative estimates due to question phrasing. The CDC's National Intimate Partner and Sexual Violence Survey found that 18.3% of women have experienced attempted or completed rape in their lifetime, and 44.6% have experienced some other type of sexual assault (Black et al., 2011). The high rates with which sexual assault occurs on college campuses prompted the American College Health Association to declare sexual assault as a major public health issue (ACHA, 2007), and in 2014, the White House initiated "Not Alone: The White House Task Force to Protect Students from Sexual Assault" (White House, 2014).

Health Consequences of Sexual Assault

Depressive symptoms. Research on post-sexual assault responses and recovery has found that survivors experience psychological distress in both the short and

long term. Within the first several months following the assault, it is extremely common for survivors to experience intense negative emotions, such as fear and anxiety, and for many survivors, psychological symptoms persist for years after the incident. (Frazier, 1990; Kilpatrick, Edmunds, & Seymour, 1992; Neville & Heppner, 1999; Resnick, 1993; Rothbaum, Foa, Murdock, Riggs, & Walsh, 1992). For instance, in studies that compared rape survivors to people who experienced some other type of crime, survivors reported greater anxiety and fear symptoms 6 months (Kilpatrick, Veronen, & Resnick, 1979), 1 year (Kilpatrick, Resick, & Veronen, 1981), and 2-3 years after the event (Resnick, 1993). Experiencing depressive symptoms is extremely common in the aftermath of sexual assault (Acierno et al., 2002; Campbell, Greeson, Raja, Bybee, & Raja, 2009; Kimberling et al., 2010; Pegram & Abbey, 2016). In a study of rape survivors recruited through advocacy centers, 44% of survivors were moderately depressed and 56% were severely depressed in the month following the assault (Frank & Stewart, 1984). In a study that assessed depressive symptoms 8 years post-rape (on average), 40% of survivors were moderately to severely depressed (Mackey et al., 1992). Further, in a longitudinal national sample of women, experiencing sexual assault significantly increased women's likelihood of developing clinical depression (Acierno et al., 2002). Similarly, Kimberling and colleagues (2010) found that sexual assault survivors were three times more likely to develop depression than women without sexual assault histories.

Physical health symptoms. According to biopsychosocial models of health, the stress of experiencing a traumatic event, such as sexual assault, can lead to physical health problems through impaired immune system functioning and dysregulated

inflammatory responses (Dutton et al., 2006; Woods et al., 2005). Consistent with this perspective, survivors of sexual assault have been found to have greater health problems when compared to nonvictims. Specifically, women who have been sexually assaulted have higher rates of mortality, chronic health conditions (e.g., fibromyalgia, gastrointestinal disorders), self-reported physical health symptoms (e.g., gynecological problems, fatigue, pain, headaches, and gastrointestinal problems) primary and secondary healthcare utilization, and medical expenses (Demaris & Kaukinen, 2005; Drossman, Talley, Leserman, Olden, & Barreriro, 1995; Eadie, Runtz, & Spencer-Rodgers, 2008; Golding, 1994; Golding, 1999; Golding et al., 1997; Kimberling & Calhoun, 1994; Paras et al., 2009; Plichta & Falik, 2001; Ullman & Brecklin, 2003; Walker et al., 1997). In a meta-analysis of 23 studies assessing the relationship between sexual victimization and lifetime diagnosis of somatic disorders, experiencing rape was associated with increased likelihood of being diagnosed with fibromyalgia, chronic pelvic pain, and gastrointestinal disorders (Paras et al., 2009). Moreover, the CDC's national survey compared women with histories of rape, physical violence, or stalking to women without histories of violence (Black et al., 2011). Among the women with histories of violence, 30% had chronic pain (compared to 17.8%), and 29.5% had chronic headaches (compared to 17.4%). Moreover, sexual assault survivors with greater psychological distress, such as PTSD and depression, tend to have more impaired stress responses and physical health problems (Campbell et al., 2008; Eadie et al., 2008; Pegram & Abbey, 2016; Woods et al., 2005; Zinzow et al., 2011; Zoellner et al., 2000).

Hazardous drinking. In addition to being a risk factor for sexual assault, hazardous drinking is a common consequence of victimization. In numerous cross-sectional studies, sexual assault survivors, as compared to nonassaulted women, report greater frequency and quantity of alcohol consumption as well as drinking problems (Marx, Nichols-Anderson, Messman-Moore, Miranda, & Porter, 2000; Nguyen, Kaysen, Dilworth, Brajcich, & Larimer, 2010; Turchik & Hassija, 2014). In addition, several longitudinal studies have examined the relationship between sexual victimization and alcohol outcomes. For instance, Kilpatrick and colleagues (1997) conducted a longitudinal study with over 3,000 women that spanned two years. Women who were sexually and/ or physically assaulted during the course of the study were approximately three times more likely to abuse alcohol than nonassaulted women. The relationship between being assaulted and alcohol abuse was significant even after controlling for baseline levels of substance use and assault history. The authors did not find reverse effects of alcohol abuse increasing risk of assault. However, in a three-year longitudinal study of college students, researchers found a reciprocal relationship between alcohol consumption and incapacitated rape (Kaysen, Neighbors, Martell, Fossos, & Larimer, 2006). Women who consumed more alcohol at the initial assessment were more likely to later be the victim of incapacitated rape, and experiencing incapacitated rape was associated with greater alcohol use in subsequent years. Finally, in a community sample of women, sexual assault revictimization prospectively predicted drinking problems one year later (Najdowski & Ullman, 2009a). Thus, although there seem to be conflicting findings for alcohol consumption increasing women's risk of victimization, many longitudinal studies

have found that rates of hazardous drinking increase following sexual assault. Among survivors of sexual assault, elevated levels of psychological distress are associated with heavier drinking and drinking problems, indicating that these individuals may be drinking to cope with negative emotions (Cappell & Greeley, 1987; Cooper, Frone, Russell, & Mudar, 1995; Conger, 1956; Grayson & Nolen-Hoeksema, 2005; Kessler, Sonnega, Bromet, Hughes, & Nelson, 2005; Lindgren, Neighbors, Blayney, Mullins, & Kaysen, 2012; Ullman, Filipas, Townsend, & Starzynski, 2005).

Disordered eating. Sexual assault victimization has been linked to disordered eating symptoms (Brewerton, 2007; Dubosc et al., 2012; Laws & Golding, 1996). The National Women's Study found that women with bulimia nervosa (BN) reported significantly higher rates of rape (26.6%) as compared to women without BN (13.3%; Dansky, Brewerton, Kilpatrick, & O'Neil, 1997). In a study that compared women who were raped in the past year to women who experienced some other type of trauma, over half of rape survivors had disordered eating symptoms, whereas only 6% of women with other trauma histories had symptoms (Faravelli, Giugni, Salvatori, & Riccas, 2004). Collins, Fischer, Stojek, and Becker (2014) conducted a prospective study that followed women over a 3-month period. They found that women who were sexually assaulted in the 3 months prior to data collection reported significantly more disordered eating symptoms at the follow-up interview. It has been posited that some sexual assault survivors engage in disordered eating behaviors to escape negative emotions and self-awareness (Dansky et al., 1997; Dubosc et al., 2012; Heatherton & Baumeister, 1991)

Sexual Assault as a Stigma

Stigma has been conceptualized as a socially devalued identity associated with "negative stereotypes and beliefs" (Quinn & Earnshaw, 2013, pg. 1). Experiencing stigmatization is stressful and increases vulnerability to a range of adverse health outcomes, including psychological distress, health-injurious behaviors, reduced help-seeking behaviors, social withdrawal, physiological dysregulation, physical illness, and mortality (Brewin, Andrews, & Valentine, 2000; Campbell et al., 2009; Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009; Link, Struening, Neese-Todd, Asmussen, & Phelen, 2001; Quinn et al., 2014). Quinn and Earnshaw (2013) proposed a theoretical framework describing how stigmatization can corrode one's sense of self and increase vulnerability to psychological distress and poorer overall health. Specifically, the authors posited that the extent to which stigmatization negatively impacts health depends on how salient the stigmatized identity is to the self, and the negatively valenced content of stigma-related beliefs and experiences. The valenced content of a stigmatized identity may be determined by negative stereotypes and beliefs associated with the stigma (Quinn & Earnshaw, 2013; Quinn et al., 2014)

Social reactions to sexual assault disclosure have serious health implications for survivors. Disclosure of sexual assault can be immensely stressful and is often referred to as the "secondary victimization" (Symonds, 1980) and the "second assault" (Martin & Powell, 1994) because survivors often receive negative social reactions that are unsupportive or harmful (Ullman, 1999; Ullman, 2000). Negative social reactions include responses such as: stigmatizing and blaming the victim, socially withdrawing from the victim, attempting to control the victim's decisions, minimizing the assault, and making

egocentric comments (Ullman, 2000). Receiving negative social reactions to disclosure can be detrimental for a survivor's recovery and has been linked to an array of deleterious outcomes, including PTSD, depression, self-blame, avoidance coping, suicidality, poorer physical health, and hazardous drinking (Borja, Callahan, & Long, 2006; Littleton, 2010; Relyea & Ullman, 2015; Sigurvinsdottir & Ullman, 2015; Ullman & Filipas, 2001; Ullman et al., 2007; Ullman & Najdowski, 2009). Further, in Quinn and colleagues' (2014) study, greater sexual assault "outness," conceptualized as the extent to which other people knew about their victimization, was associated with greater psychological distress. This finding might be explained by the high prevalence of negative social reactions to assault disclosure (Ullman, 1999; Relyea & Ullman, 2015).

Moreover, internalization of negative stereotypes and beliefs about sexual assault may be a mechanism through which sexual assault harms mental health. In a study of female college students, severity of the assault was related to greater internalization of stigma, which in turn, was associated with greater trauma symptom severity (Deitz et al., 2015). Survivors' internalization of stigma also may be related to maladaptive coping. In a study of women who were sexually assaulted during the past year, stigma was associated with greater reliance on avoidance coping strategies (Gibson & Leitenberg, 2001). Further, many survivors report fears of stigmatization, which may influence disclosure decisions and recovery (Ahrens, 2006). In a study of undergraduate women who were sexually assaulted, almost a quarter of survivors said fear of stigmatization motivated their decision not to disclose their assault (Miller et al., 2011). Further, survivors' perceptions of stigma threat at the baseline interview was prospectively related

to lower levels of posttraumatic growth and higher rates of sexual revictimization at the four-month follow-up. Stigma-motivated nondisclosure also was commonly reported in Mackey and colleagues' (1992) study of sexual assault survivors. In their study, participants that reported stigma threat as a barrier for disclosure were more likely to be depressed.

Mechanisms through which Stigma Impacts Health

Stigma and coping. The extent to which an event is appraised as threatening depends on whether the individual perceives that he or she has sufficient resources (e.g., social support) to meet the demands of the stressor (Lazarus, 1966; Lazarus & Folkman, 1984). Unfortunately, many survivors of sexual assault receive stigmatizing reactions and internalize stigma. This may be a tax on their resources, making them less equipped to cope with assault-related stress. Depending on this appraisal process, individuals engage in coping efforts in attempts to reduce their stress. The stress and coping literature defines coping as attempts to mitigate the demands of a stressor by regulating cognitions, emotions, behaviors, physiological responses, and one's environment (Lazarus, 1966; Lazarus & Folkman, 1984). According to Miller and Kaiser's (2001) stigma-related stress and coping model, adapted from Compas and colleagues' (2001) stress and coping model, stigmatized individuals can use coping efforts that approach stigma-related stress, or they can use efforts that involve avoidance. Approach-oriented coping involves proactive techniques that attempt to attenuate the impact of the stressor (Compas et al., 2001; Miller & Kaiser, 2001). This includes problem solving, expressing emotions, eliciting social support, and cognitive restructuring. In contrast, avoidance-oriented coping

involves strategies that redirect cognitions and emotions away from the stressor, for instance: avoiding thoughts and reminders of the stressor, avoiding encountering the stressor, denial, and wishful thinking (Miller, 2006).

Sexual assault survivors' experiences with stigmatization may limit their options for attenuating stress; therefore, they may be less likely to utilize approach coping strategies. These strategies could require the woman to reveal her identity as a sexual assault survivor, making her vulnerable to further stigmatization. Thus, survivors who fear stigmatization may be more likely to rely on avoidance-oriented coping strategies. Studies have found that survivors who receive negative social reactions to sexual assault disclosure, including stigmatizing and blaming responses, are more likely to use avoidance coping efforts, such as cognitively distancing oneself from the assault and withdrawing (Ullman, 1996; Ullman, Filipas, Townsend, & Starzynski, 2007). Internalization of stigma also has been associated with avoidance coping, and may be a mechanism through which sexual assault influences coping processes (Gibson & Leitenberg, 2001).

The extensive literature on stress and coping indicates that coping strategies have a strong impact on recovery from stressful events, and using only avoidance-oriented coping efforts can be particularly maladaptive and injurious for health (Folkman & Moskowitz, 2004; Miller & Kaiser, 2001). Studies of sexual assault survivors also have found this association between avoidance coping and poorer recovery outcomes (Frazier, 2003; Koss et al., 2002; Littleton, Horsley, John, & Nelson, 2007; Ullman et al., 2007; Zeidner & Endler, 1996). Specifically, survivors that utilize more avoidance coping

techniques report greater PTSD and depressive symptoms (Frazier, Mortenson, & Steward, 2005; Meyer & Taylor, 1986; Ullman et al., 2007).

In addition, survivors that use avoidance coping strategies are more likely to engage in hazardous drinking and disordered eating, which often co-occur (Anderson, Simmons, Martens, Ferrier, & Sheehy, 2006). Both health risk behaviors have been hypothesized to serve self-medication and escape functions (Anderson et al., 2006; Cappell & Greeley, 1987; Cooper et al., 1995; Conger, 1956; Heatherton & Baumeister, 1991). Evidence for this theory comes from a body of research linking avoidance coping to alcohol-related problems as well as disordered eating (Anderson et al., 2006; Cooper et al., 1995; Ghaderi & Scott, 2000; Sherwood et al., 2000; Smyth, Heron, Wonderlich, Crosby, & Thompson, 2008). Moreover, numerous studies of sexual assault survivors have found that survivors with high levels of psychological distress are more likely to use alcohol and food to escape negative emotions (Collins et al., 2014; Dansky et al., 1997; Dubosc et al., 2012; Grayson & Nolen-Hoeksema, 2005; Holzer et al., 2008; Lindgren et al., 2012; Ullman et al., 2005).

Stigma and secrecy. Some survivors of sexual assault may avoid potential stigmatization by keeping the assault secret from others. Secrecy is distinct from nondisclosure in that it involves active concealment or inhibition of revealing one's secret (Kelly, 1999; Lane & Wegner, 1999). Although it may be advantageous to hide one's stigmatized identity in certain social situations (for example, to protect oneself from potential negative judgments and interpersonal consequences), research has primarily found negative consequences of secrecy (Goffman, 1963; Kelly, 1999; Lane & Wegner,

1999; Major & Gramzow, 1999). Active concealment of a stigmatized identity has been linked to depression and physical health problems, such as somatic complaints, impaired immunity, and more rapid progression of disease (Cole, Kemeny, Taylor, Visscher, & Fahey, 1996; Frost, Parsons, & Nanin, 2007; Goffman, 1963; Hatzenbuehler et al., 2009; Kelly, 1999; Major & Gramzow, 1999). Further, stigma may contribute to poorer health indirectly through its effects on secrecy (Frost et al., 2007; Goffman, 1963).

Whereas concealing secrets is harmful for health, revealing secrets through verbal or written emotional disclosure is protective for health (Spiegel, Bloom, Kraemer, & Gottheil, 1989; Petrie, Booth, Pennebaker, Davison, & Thomas, 1995; Slavin-Spenny, Cohen, Oberleitner, & Lumley, 2011). The health benefits of emotional disclosure in response to trauma are well-documented (Pennebaker & Beall, 1986; Pennebaker & Susman, 1988). The process of confiding in others about trauma-related thoughts and emotions promotes trauma recovery by reducing negative affect and facilitating cognitive processing, integration, and meaning-making of the event (Horowitz, 1986; Pennebaker, 1985; Silver & Wortman, 1980). Thus, concealment of trauma, such as sexual assault, may deprive the individual from receiving the health benefits of emotional expression and social support.

Concealing a stigma also has cognitive consequences. According to Lane and Wegner's (1995) preoccupation model of secrecy, secrecy involves active concealment of one's secret and requires effortful suppression of secret-related thoughts. This process of having to regularly monitor and suppress the information being kept secret is cognitively taxing (Kelly, 1999; Major & Gramzow, 1999; Smart & Wegner, 1999). In

addition, active suppression of thoughts results in increased accessibility of the intrusive thoughts, and subsequently, further suppression attempts (Lane & Wegner, 1999; Wegner, Schneider, Carter & White, 1987; Wegner & Zanakos, 1994). Thus, secrecy can result in a "paradoxical obsessive preoccupation with the secret" (Lane & Wegner, 1999, pg. 237). Evidence for the paradoxical effect of thought suppression is well-documented in both correlational and experimental research (Abramowitz, Tolin, & Street, 2001; Kohn, Rholes, & Schmeichel, 2012; Nixon, Cain, Nehmy, & Seymour, 2009; Smart & Wegner, 1999; Wegner et al., 1987; Wegner & Zanakos, 1994).

Suppressing intrusive thoughts impedes cognitive and emotional processing of traumatic events, and thereby adversely affects mental and physical health (Amstadter & Vernon, 2008; Lumley et al., 2011; Petrie, Booth, & Pennebaker, 1998; Gold & Wegner, 1995). Among traumatized individuals, suppression of intrusive thoughts has been linked to maintenance of posttraumatic stress symptoms, and elevated rates of anxiety and depressive symptoms (Amstadter & Vernon, 2008; Foa & Riggs, 1993; Kashdan, Barrios, Forsyth, & Steger, 2006; Roemer, Litz, Orsillo, & Wagner, 2001; Roemer & Salters, 2004; Wenzlaff & Wegner, 2000). In addition, thought suppression may impair sympathetic and parasympathetic activity, suppress immune system functioning, and contribute to physical health problems, such as pain (Gold & Wegner, 1995; Lumley et al., 2011; Pegram, Lumley, Jasinski, & Burns, 2017; Petrie et al., 1998). Traumatized individuals who attempt to suppress intrusive thoughts may be more likely to engage in health risk behaviors to escape intrusive thoughts and negative emotions. For example, HIV-related thought suppression was associated with greater sexual risk taking in a study of gay men (Hoyt,

Nemeroff, & Huebner, 2006). In addition, in a study of female college students, experiencing a recent rape or attempted rape indirectly increased vulnerability for disordered eating through its effects on thought suppression (Collins et al., 2014).

Goals and Hypotheses of the Present Studies

Study 1. The goal of Study 1 was to cross-sectionally evaluate a conceptual model that examines the relationships between stigmatizing social reactions to sexual assault disclosure, internalization of stigma, avoidance coping, secrecy, thought suppression, and depressive symptoms in relation to three health outcomes: physical health symptoms, hazardous drinking, and disordered eating symptoms. The hypothesized model is presented in Figure 1.

Summary of hypothesized model. Based on the literature and theoretical rationale described above, the following effects were hypothesized.

Survivors who receive more stigmatizing social reactions will be more likely to utilize avoidance coping strategies (Path a) and feel the need to keep the assault secret (Path b). Survivors with greater internalization of stigma will be more likely to utilize avoidance coping strategies (Path c), feel the need to keep the assault secret (Path d), and experience more depressive symptoms (Path e). Greater use of avoidance coping strategies will be associated with greater depressive symptoms (Path f). Assault secrecy will be associated with more depressive symptoms (Path g) and attempts to suppress intrusive thoughts (Path h). Experiencing more depressive symptoms will be associated with more physical health symptoms (Path i), hazardous drinking (Path j), and disordered eating (Path k). Attempts to suppress intrusive thoughts will be associated with more

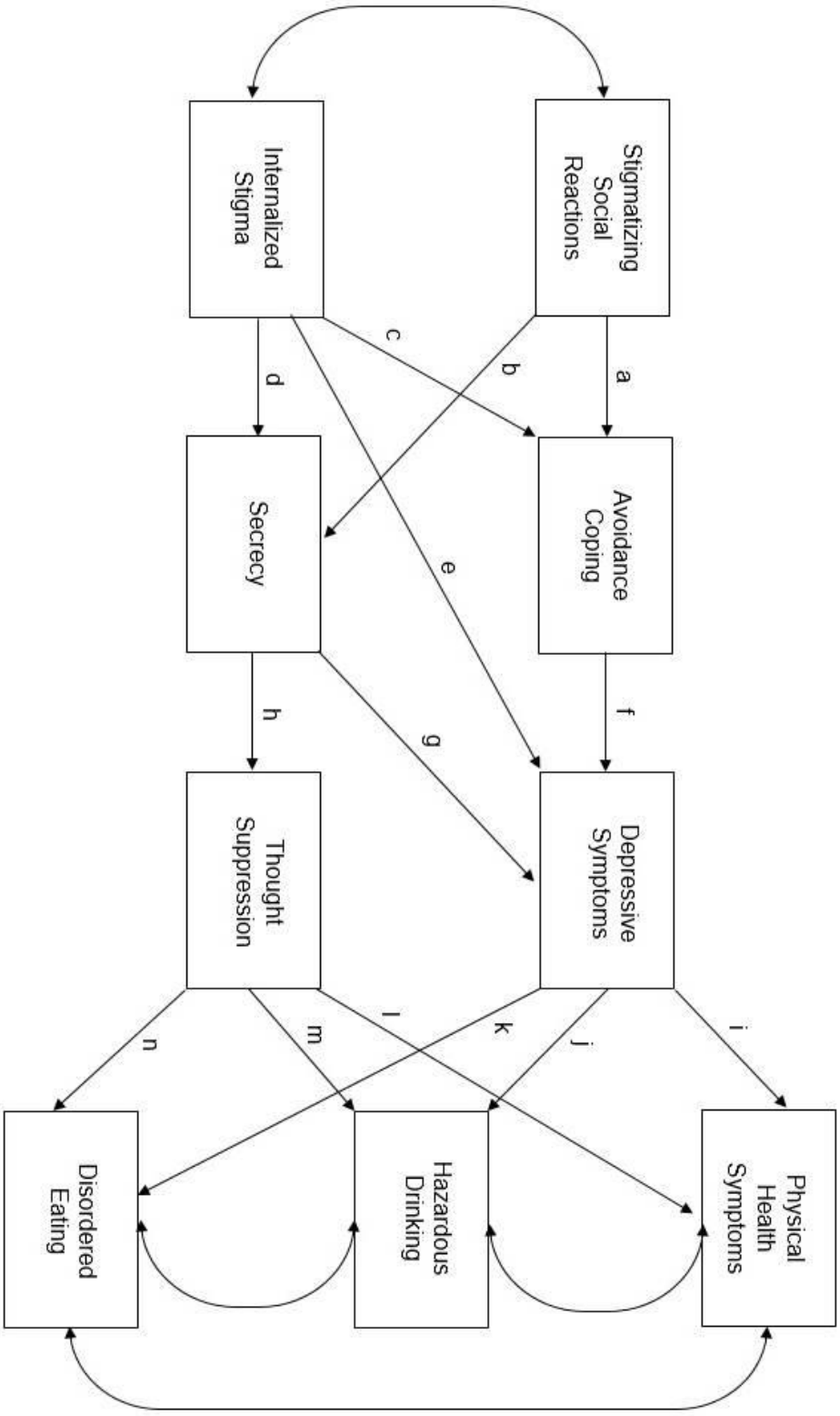


Figure 1. Hypothesized Model of Stigmatizing Social Reactions and Internalized Stigma as they relate to Secrecy, Coping, Depressive Symptoms, Thought Suppression, and Health Outcomes

physical health symptoms (Path l), hazardous drinking (Path m), and disordered eating (Path n). Both types of stigma will indirectly contribute to health outcomes through effects on avoidance coping, secrecy, depressive symptoms and thought suppression.

Study 2. Because stigmatization is a common experience for sexual assault survivors, it is important to not only study self-reported experiences and chronic effects of stigma, but also the immediate effects of sexual assault stigmatization on affect and regulation of health behaviors. Thus, the goal of Study 2 was to investigate the effects of sexual assault-stigmatization exposure on alcohol craving and drinking intentions, food craving and eating intentions, and negative affect. Participants were randomly assigned to read one of three short passages involving stigmatization of a woman who disclosed a sexual assault, stigmatization of a woman who disclosed a nonsexual crime victimization, or supportive responses to a woman who disclosed a sexual assault. Based on research identifying the harmful psychological effects of stigmatization (Quinn & Earnshaw, 2013; Quinn et al., 2014), it is hypothesized that exposure to the sexual assault stigma condition, as compared to the other two conditions, would be more threatening and result in higher levels of negative affect (**Hypothesis 1**). Based on research identifying the escape coping functions of alcohol consumption and disordered eating (Anderson et al., 2006; Cooper et al., 1995; Heatherton & Baumeister, 1991), it was hypothesized that survivors' usual drinking to cope motives would moderate the relationship between experimental condition and alcohol outcomes (**Hypotheses 2-3**). Specifically, exposure to sexual assault stigmatization would be related to more alcohol craving and drinking intentions for women who report more drinking to cope motives. Similarly, it was hypothesized that survivors'

usual eating to cope motives would moderate the relationship between experimental condition and eating outcomes (**Hypotheses 4-5**). That is, exposure to sexual assault stigmatization would be related to more unhealthy food craving and eating intentions for women who report more eating to cope motives.

CHAPTER 2: STUDY 1 METHOD

Participants

Participants were 974 women living in the United States recruited through Amazon's Mechanical Turk. Inclusion criteria required participants to be between the ages of 18 and 35. Analyses were restricted to women who reported at least one sexual assault experience since the age 14 (62.7%, *n* = 611). To test a hypothesis of close fit (H_0: RMSEA = .05; H_a: RMSEA = 0.08), a power analysis indicated that the minimum sample size needed for adequate power of 0.80 and an alpha of 0.05 is 392 (MacCallum, Browne, & Sugawara, 1996; Preacher & Coffman, 2006); thus, this study is adequately powered.

The average age of participants was 27.93 (*SD* = 4.38). Seventy-two percent (*n* = 440) of participants identified as Caucasian, 9.7% (*n* = 59) identified as African American, 6.2% (*n* = 38) identified as Hispanic, 5.2% (*n* = 32) identified as Asian or Pacific Islander, 4.1% (*n* = 25) identified as multiracial, 1.3% (*n* = 8) identified as Native American, 0.2% (*n* = 1) identified as Arabic or Middle Easterner, and 1.3% (*n* = 8) declined to answer. Almost all of participants (99.2%) had at least a high school degree, 86.6% had at least some college education, and approximately half (49.3%) had a bachelor's degree or higher. Twenty percent of participants were full-time students at the time of the study and 9.7% were part-time students. Thirty-eight percent of participants were employed full-time; 35.4% were employed part-time; 13.3% were unemployed, not looking for work; 11.0% were unemployed, looking for work; and 2.8% were disabled/ not able to work. Thirty-six percent of participants were married; 35.4% were single, in a relationship;

23.1% were single, not in a relationship; and 6.0% were engaged. Most participants identified as heterosexual (78.5%), 15.9% identified as bisexual, 3.8% identified as lesbian, and 1.8% identified with some other sexual orientation.

Procedure

The survey was advertised on Amazon's Mechanical Turk, an internet marketplace that pays people to complete a variety of online tasks including research surveys. The study was described as a women's health study, focusing on women's dating and sexual experiences and health. The advertisement stated that the survey would take approximately one hour to complete and that participants would be compensated $2.00 for their time.

If interested and eligible, participants were directed to the online survey, which was hosted on Qualtrics. They were first shown the research information sheet, which described the focus of the study and range of topics including unwanted sexual experiences, potentially traumatic experiences, stigmatization, depression, and health behaviors and problems. It also described compensation for their participation, confidentiality of their data, that they could quit the study at any time, and counseling resources. Upon completion of the survey, participants were provided with a survey code which they were instructed to enter into Mechanical Turk. They were then compensated $2.00 (typical compensation for completing a survey on Mechanical Turk ranges from less than $1.00 to $5.00; Schmidt, 2015). All study procedures were approved by the Wayne State University's Institutional Review Board.

Measures

Demographic information. The following demographic information was collected: age, ethnicity, education, income, relationship status, and sexual orientation, (Appendix A).

Sexual assault victimization. The Sexual Experiences Survey (Appendix B; Koss et al., 2007) was used to measure sexual victimization since age 14. The SES uses behaviorally-specific language to assess 7 different unwanted sexual experiences (including sexual contact, verbal coercion, attempted rape, and rape) through 5 different tactics (coercion, alcohol/ incapacitation, threats, and physical force). Participants were instructed to indicate the number of times they experienced the unwanted sexual activity on a scale of (1) never to (5) five or more times. Multiple versions of the SES have demonstrated good internal consistency (Johnson et al., 2017; Testa et al., 2004). A sample outcome item includes, “A man put his penis into my vagina, or someone inserted fingers or objects without my consent by…” Sample tactics include: “using force, for example holding me down with their body weight, pinning my arms, or having a weapon,” and “taking advantage of me when I was too drunk or out of it to stop what was happening”. This measure was primarily included to screen participants and provide descriptive information. Participants who endorsed any of the items were classified as sexual assault survivors.

Participants were asked a series of follow-up questions regarding characteristics of the unwanted sexual activity, including: time since the assault, relationship to the perpetrator, previous consensual sexual activity with the man, victim/ perpetrator level of intoxication, perceived life threat, perpetrator’s use of force, if they sustained any physical

injuries, if they sought medical attention, and if they label the experience as a sexual assault. These variables were used to provide descriptive information about survivors.

Stigmatizing social reactions. Stigmatizing social reactions to sexual assault disclosure were assessed using the Social Reaction Questionnaire's (SRQ) 6-item Treat Differently subscale (Appendix C; Ullman, 2000). Sexual assault survivors were asked if they ever disclosed the unwanted sexual experience to anyone. Survivors who disclosed the incident were asked to report how often they received various reactions from the person(s) they told about the assault on a scale from (0) never to (4) always. Sample items include: "said he/ she feels you're tainted by this experience," "acted as if you were damaged goods or somehow different now," and "avoided talking to you or spending time with you". The SRQ is frequently used with samples of sexual assault survivors and the Treat Differently subscale has demonstrated good internal consistency (α = .86; Relyea & Ullman, 2013; Ullman et al., 2007). The subscale had a Cronbach's alpha of .92 in the current study.

Internalized stigma. Internalization of sexual assault stigma was assessed using a new scale created for the purposes of this study, adapted from Gibson and Leitenberg's (2001) stigma scale (Appendix D). The measure instructed participants to answer questions regarding the unwanted sexual experience they reported. Sample items include: "I feel different from other women because of this experience," and "I am concerned about what other people would think of me if they found out what happened". Response options ranged from (1) not at all to (5) very much. The final measure contained 12 items and demonstrated good internal consistency (α = .95).

Avoidance coping. Avoidance coping was assessed with Addison and colleague's (2007) 16-item disengagement subscale of the Coping Strategies Inventory Short-Form (Appendix E; CSI-SF; Tobin, Holroyd, Reynolds, & Wigal, 1989). Participants were instructed to indicate how they handled their unwanted sexual experience. Sample items include: "I tried to forget the whole thing" and "I spent some time by myself." Response options ranged from (1) not at all to (5) very much. The disengagement subscale has demonstrated good internal consistency reliability in previous research (α = .90; Addison et al., 2007) and in the current study (α = .90).

Sexual assault secrecy. Sexual assault secrecy was assessed using a new scale created for the purposes of this study, which was adapted from Larson and Chastain's (1990) Self-Concealment Scale (Appendix F). Participants were asked to answer the questions regarding the unwanted sexual experience they reported. Sample items include: "I feel that I have to keep it secret from my friends," "I feel like I must hide it," and "I work hard to keep the incident secret from others". Response options ranged from (1) strongly disagree to (5) strongly agree. The final measure contained 10 items and demonstrated good internal consistency (α = .92).

Depressive symptoms. The 20-item Center for Epidemiological Studies Depression Scale (CES-D) was used to assess depressive symptoms (Appendix G; Radloff, 1977). Participants were presented with a range of depressive symptoms and instructed to select which statement best reflects how they have been feeling during the past week. Sample items include: "I felt that I could not shake off the blues even with help from my family or friends," "I felt that everything I did was an effort," and "I had crying

spells". Participants answered questions on a scale of (0) rarely or none of the time, (1) some of a little of the time (less than 1 day), (2) occasionally or a moderate amount of time (3-4 days), or (3) most or all of the time (5-7 days). The CES-D has demonstrated good internal consistency reliability in both clinical (α = .90) and nonclinical samples (α = .85; Radloff, 1977). The measure had a Cronbach's alpha of .93 in the current study.

Thought suppression. The 15-item White Bear Suppression Inventory (Appendix H; WBSI; Wegner & Zanakos, 1994) was used to assess participants' suppression of intrusive thoughts. Participants were instructed to answer items in relation to their sexual assault. Sample items include: "There are images that come to mind that I cannot erase," and "I have thoughts I try to avoid". Response options ranged from (1) strongly disagree to (5) strongly agree. This measure has been used with rape survivors and demonstrated good internal consistency in previous research (α = .91; Collins et al., 2014) and in the current study (α = .96).

Physical health symptoms. Physical health symptoms was assessed with the Patient Health Questionnaire Somatic Symptom Scale (Appendix I; PHQ-15; Kroenke, Spitzer, Williams, & Lowe, 2010). The measure provides a checklist of 15 physical health problems and instructs participants to indicate how much they have been bothered by each symptom during the past 4 weeks. Response options were modified for this study and included a scale of (0) not at all bothered, (1) mildly, it did not bother me much, (2) moderately, it was unpleasant but I could stand it, and (3) severely, I could barely stand it. Sample symptoms included: stomach pain, headaches, shortness of breath, pain during intercourse, and menstrual cramps. The PHQ-15 has demonstrated good internal

consistency (α = .79) and convergent validity, and has been associated with healthcare utilization and clinician ratings of somatic symptoms (Interian, Allen, Gara, Escobar, & az-Martinez, 2006; Rost, Dickinson, Dickinson, & Smith, 2006). The measure also demonstrated good internal consistency in the current study (α = .87).

Hazardous drinking consequences. The Brief Young Adult Alcohol Consequences Questionnaire (Appendix J; Kahler, Strong, & Read, 2005; Read et al., 2006) was used to assess consequences of hazardous drinking in the past 12 months. This measure contains 24 items assessing different forms of alcohol consequences, such as interpersonal consequences, academic/ work consequences, risky behavior, and psychological dependence. Sample items include: "I have often found it difficult to limit how much I drink," "While drinking, I have said or done embarrassing things," "The quality of my work or school work has suffered because of my drinking," and "I have taken foolish risks when I have been drinking". Response options were dichotomized into yes/ no and were summed. This measure has demonstrated good internal consistency as well as concurrent validity with other measures of alcohol problems (Kahler et al., 2005; Read et al., 2006). Cronbach's alpha was .93 in the current study.

Disordered eating. Disordered eating symptoms was assessed using the 30-item Minnesota Eating Behavior Survey (Appendix K; MEBS; von Ranson, Klump, Iacono, & McGue, 2005). The MEBS has demonstrated good psychometric properties in community samples of girls and women (von Ranson et al., 2005). The measure contains 4 subscales for assessing a variety of disordered eating symptoms, including: body dissatisfaction, binge eating (e.g., secretive eating, preoccupation with food), compensatory behavior

(e.g., self-induced vomiting, use of laxatives), and weight preoccupation (e.g., excessive dieting). Participants were asked if the statements are generally true or generally false of them; no specific time frame was provided. Sample items include: “I’m always wishing I was thinner” (body dissatisfaction subscale); “Sometimes, when I’m with other people, I won’t eat much, but later, when I’m alone, I’ll eat a lot” (binge eating subscale); “Sometimes I use diet pills to control my weight” (compensatory behavior subscale); and “If I gain a pound, I worry that I will keep gaining more and more weight” (weight preoccupation subscale). Responses options ranged from (1) definitely false to (4) definitely true. Cronbach’s alpha was .94 in the current study.

CHAPTER 3: STUDY 1 RESULTS

Data Cleaning

Standard data cleaning procedures were used to inspect and clean the data (Tabachnick & Fidell, 2012). A total of 1,100 women completed at least some of the online study; of these individuals, 103 case deletions were made because there was a substantial amount of missing data (over 20%), 12 case deletions were made because participants failed most of the attention checks inserted throughout the survey (failed at least 3 out of 5 [60% or more]), and 11 case deletions were made because the study was completed in an abnormally short amount of time (less than 10 minutes; the median amount of time to complete the survey was 30.39 minutes). This left a final sample size of 974 (of which, 611 were sexual assault survivors).

Variables were then screened for missing data. No variable had 5% or more of missing data and thus imputation procedures were not needed. None of the participants had missing data for all of the items of a scale; thus, mean substitution at the scale level was not needed. For participants missing data for some items within a scale, their existing data were averaged to compute their scale scores. Finally, variables were screened for normality by assessing skewness and kurtosis values. Of the women who disclosed their assault, approximately half (n = 161) did not receive any stigmatizing social reactions; this resulted in the variable being positively skewed. To achieve normality, the stigmatizing social reactions variable was transformed using a square root transformation.

Scale Development

Two new scales were developed for this study. Testing of the factor structures was conducted based on guidelines provided in Tabachnick and Fidell (2012). First, bivariate correlations between items were examined to ensure they correlate at least .30 with other items and share common variance. Next, principal components analyses with varimax rotation were conducted. Eigenvalues and explained variance of extracted factors were examined to determine how many factors to retain. Factors were considered for retention if they had Eigenvalues over 1 and the cumulative proportion of variance explained was at least 60%.

Internalized Stigma Scale. Two of the internalized stigma items, "I would not want to date someone who had this happen to them" and "Most of the negative things people say about sexual assault victims are true," did not correlate reasonably well with the other

Table 1.

Principal Components Analysis of Internalized Stigma Scale

Item	Factor Loading
1. I feel different from other women because of this experience.	.68
2. I am ashamed that it happened to me.	.86
3. I feel tainted/ "dirtied" by this experience.	.83
4. I feel guilty that it happened to me.	.85
5. I feel that this experience is a sign of personal failure.	.82
6. I am concerned that other people would thinking something negative about me if they found out.	.87
7. I am embarrassed about what happened.	.80
8. I am concerned that people would not respect me as much if they were to find out what happened.	.88
9. I am concerned about how other people would react if they were to find out what happened.	.86
10. I am concerned that people would judge me harshly if they were to find out about it.	.87
11. I don't blame people for wanting to keep their distance from me when they find out about this experience.	.57
12. I judge myself harshly because of this experience.	.82

items (correlated less than .30 with 9 and 4 of the other items, respectively) and were eliminated. Principal components analysis revealed one primary component explaining 66.10% of the variance. Items and factor loadings are provided in Table 1.

Secrecy Scale. Two of the secrecy items, "I am comfortable telling people about the incident," "It's fine if people know about it," and "I am very careful whom I tell about the incident" did not correlate at least .30 with all the other items and were eliminated. One primary component emerged explaining 64.23% of the variance in secrecy. Items and factor loadings are shown in Table 2.

Table 2.

Principal Components Analysis of Secrecy Scale

Item	Factor Loading
1. It is a secret.	.83
2. I keep it to myself.	.74
3. I'm often afraid I'll reveal it.	.70
4. It is so private that I would lie if anybody asked me about it.	.87
5. I feel that I must keep it a secret from my friends.	.88
6. I feel that I must keep it a secret from my family.	.78
7. I am concerned people will find out about it.	.75
8. I feel like I must hide it.	.89
9. I work hard to keep the incident secret from others.	.83
10. I worry that people who know about the incident will tell others.	.72

Descriptive and Bivariate Analyses

Over half of survivors (55.8%, *n* = 341) reported rape as their worst assault, 11.5% (*n* = 70) reported attempted rape as their worst assault, 9.2% (*n* = 56) reported verbal coercion as their worst assault, 7.5% (*n* = 46) reported attempted verbal coercion as their worst assault, and 16% (*n* = 98) reported sexual contact as their worst assault. Descriptive information for assault characteristics are provided in Table 3. As can be seen in the table,

Table 3.

Descriptive Information for Sexual Assault Characteristics (N = 611)

Aspects of the Sexual Assault	*M (SD)*	Scale	% (*n*)
Years since the incident	7.65 (5.28)		
Gender of the perpetrator			
Female only			2.3% (14)
Male only			95.7% (585)
Both female and male			2.0% (12)
Relationship to the perpetrator			
Stranger			12.4% (76)
Acquaintance, friend, or casual date			54.8% (335)
Current or former romantic partner			27.8% (170)
Relative			4.9% (30)
Prior consensual sexual activity?			
No			56.3% (344)
Yes			43.7% (267)
Victim's level of intoxication	2.39 (1.50)	1-5	
Perpetrator's level of intoxication	2.28 (1.33)	1-5	
Degree of perpetrator's physical force	3.44 (1.76)	1-7	
Perpetrator threatened weapon			
No			93.5% (571)
Yes			6.5% (40)
Physical injuries sustained			
No			80.5% (492)
Yes			19.5% (119)
Extent physically injured	1.54 (0.86)	1-5	
Sought medical attention			
No			92.1% (563)
Yes			7.9% (48)
Perceived life was in danger	1.79 (1.11)	1-5	
Extent considered a sexual assault	4.24 (2.08)	1-7	
Sexual Assault Disclosure			
Did they disclose the incident?			
No			48.8% (298)
Yes			51.2% (313)
No. people told	3.75 (9.73)		
How soon after did they disclose			
Immediately to days later			61.6% (193)
Weeks to months later			14.4% (45)
One or more years later			24.0% (75)

survivors experienced their worst assault 7.65 years ago on average. The perpetrator was usually male (95.7%). Approximately half (54.8%) of assaults were committed by an

acquaintance, friend, coworker, or casual date; 27.8% were committed by a current or former romantic partner, fiancé, or spouse; 12.4% were committed by a stranger, and 4.9% were committed by a relative. In 43.7% of assaults, survivors had previously engaged in consensual activity with the perpetrator. On average, survivors and perpetrators were a little to somewhat intoxicated at the time of the assault. Most assaults did not involve use of a weapon (93.5%). Most survivors did not sustain physical injuries (80.5%) or seek medical attention (92.1%). Approximately half of survivors (51.2%) told someone about the incident, and they told 3.75 people on average. Of the women who disclosed the incident, a majority (61.6%) told someone immediately to days later, 14.4% told someone weeks to months later, and 24.0% told someone one or more years later.

Bivariate relationships and descriptive information for study variables are presented in Table 4. Correlations between stigmatizing social reactions and other variables only include women who disclosed the incident (n = 313); the sample size for all other correlations is 611. Results indicated that stigmatizing social reactions was significantly positively correlated with all other study variables (internalized stigma, avoidance coping, secrecy, depressive symptoms, thought suppression, physical health symptoms, and hazardous drinking) with the exception of disordered eating. Internalized stigma was significantly positively correlated with all study variables. The proposed mediators (avoidance coping, secrecy, depressive symptoms, and thought suppression) were all significantly positively intercorrelated. The dependent variables (physical health symptoms, hazardous drinking, and disordered eating) were significantly positively intercorrelated and significantly positively correlated with all proposed mediators.

Table 4.

Bivariate Correlations and Descriptive Information for Study Variables Used in Study 1 Path Analyses

Variable	1	2	3	4	5	6	7	8	9
1. Stigmatizing Reactions	---								
2. Internalized Stigma	.37***	---							
3. Avoidance Coping	.38***	.72***	---						
4. Secrecy	.26***	.53***	.52***	---					
5. Depressive Symptoms	.23***	.34***	.38***	.19***	---				
6. Thought Suppression	.26***	.56***	.60***	.37***	.45***	---			
7. Physical Symptoms	.14*	.30***	.31***	.13**	.61***	.37***	---		
8. Hazardous Drinking	.25***	.22***	.20***	.15***	.24***	.21***	.15***	---	
9. Disordered Eating	.09	.26***	.27***	.23***	.34***	.29***	.27***	.23***	---
Mean	0.47	2.70	2.89	2.70	1.03	3.39	0.80	7.53	2.29
Standard Deviation	0.56	1.09	0.90	1.05	0.66	1.04	0.52	6.33	0.59
Response Scale	0-4	1-5	1-5	1-5	0-3	1-5	0-3	0-24	1-4
Range	0-2	1-5	1-5	1-5	0-2.85	1-5	0-3	0-24	1.07-3.80

Note. $*p < .05$. $**p < .01$. $***p < .001$. Correlations between Stigmatizing Social Reactions and other variables only include women who disclosed the incident (n = 313). The sample size for all other correlations is 611. Stigmatizing Social Reactions reported in this table is the transformed variable (untransformed: M = 0.54, SD = 0.84, Range = 0-4).

Path Analyses

Model specification. To test the study's hypotheses, path analytic models were conducted using LISREL 8.80 with a maximum likelihood method of estimation (Figure 1). Total aggregation with reliability correction procedures were conducted to form latent constructs (Williams & O'Boyle, 2008). Specifically, the average or sum of each measure was treated as a single indicator of the latent variable, theta-epilson values were calculated using the formula $(1\text{-}rel_s)\sigma_s^2$, and lambda values were set to one. Model specification allowed the exogenous variables to intercorrelate and allowed the error between the dependent variables to covary. Modification indices were evaluated to determine if inclusion of additional paths would improve model fit (Kline, 2015). However, respecification of the model based on modification indices was considered on the basis of theory.

Model fit evaluation. Multiple fit indices were used to determine how well the model fit the data: comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMSR). CFI and TLI values over .95 suggest good model fit; values between .90 and .95 suggest adequate fit. RMSEA and SRMSR values less than .05 suggest good fit; values between .05 and .08 suggest adequate fit (Kline, 2015).

Model results. Of the 611 sexual assault survivors in this study, only half (51.22% *n* = 313) disclosed the incident to another person and therefore had a valid score for stigmatizing social reactions. To address this, the hypothesized model, which includes stigmatizing social reactions as one of the independent variables, was conducted just with

survivors who disclosed the incident (n = 313). Then, a second set of models was conducted using the full sample (N = 611), omitting the stigmatizing social reactions variable.

Stigmatizing social reactions and internalized stigma predicting health outcomes. The hypothesized multi-mediation model with stigmatizing social reactions and internalized stigma indirectly predicting physical health symptoms, hazardous drinking, and disordered eating through avoidance coping, secrecy, depressive symptoms, and thought suppression was evaluated. Based on the aforementioned fit criteria, the hypothesized model had poor fit, χ^2 (18, 313) = 151.44, p < .001; CFI = .83; TLI = .67; RMSEA = .15; SRMR = .11. As shown in Figure 2, the hypothesized paths were statistically significant with three exceptions: the path from stigmatizing social reactions to secrecy, the path from internalized stigma to depressive symptoms, and the path from secrecy to depressive symptoms. A revised model was conducted which omitted these nonsignificant paths.

The first revision of the model, which omitted the three nonsignificant paths, revealed poor model fit, χ^2 (21, 313) = 155.16, p < .001; CFI = .83; TLI = .71; RMSEA = .14; SRMR = .12. Figure 3 presents the revised model. Modification indices were examined which suggested additions of several paths: from avoidance coping to thought suppression, from secrecy to avoidance coping, and from thought suppression to depressive symptoms. Based on the modification indices as well as past research and theory linking these constructs, a second revision of the model was conducted with these additional paths.

Figure 4 presents the second revision of the model, which added the three paths described above. The model fit the data well, χ^2 (18, 313) = 29.66, p = .04; CFI = .99; TLI = .97; RMSEA = .05; SRMR = .04. A chi-square difference test was conducted to compare this model to the previous model (before new paths were added), χ^2 = 125.50, df = 3, p < .001. The significant p-value indicates that the model with more factors, the second revised model, is a significantly better fit than the previous model (Kline, 2015). With the addition of these paths, two paths that were previously statistically significant dropped below significance: secrecy to thought suppression and thought suppression to hazardous drinking. Thus, a third revised model was conducted which eliminated these nonsignificant paths.

The third revised model, which omitted the nonsignificant paths described above, revealed good model fit, χ^2 (20, 313) = 33.26, p = .03; CFI = .98; TLI = .97; RMSEA = .05; SRMR = .05. A chi-square difference test comparing this model to the previous one was conducted, χ^2 = 3.60, df = 2, p = .17. The second revised model has more factors than the third revised model. The nonsignificant p-value indicates that the additional factors in the previous model do not significantly improve the fit of the data (Kline, 2015); thus, there is support to retain the third revised model.

As shown in Figure 5, survivors who received more stigmatizing social reactions utilized more avoidance coping strategies. Survivors with greater internalization of stigma were more likely to utilize avoidance coping strategies and feel the need to keep the assault secret. Greater use of avoidance coping strategies was associated with more depressive symptoms and attempts to suppress intrusive thoughts. Survivors who wanted

to the keep the assault secret utilized more avoidance coping strategies. Experiencing more depressive symptoms was associated with poorer health outcomes (more physical health symptoms, hazardous drinking, and disordered eating). Greater attempts to suppress intrusive thoughts was associated with more physical health symptoms and disordered eating. The final model accounted for 42% of the variance in physical health symptoms, 9.8% of the variance in hazardous drinking, and 11.3% of the variance in disordered eating. As shown in Table 5, all total indirect effects were statistically significant.

Internalized stigma predicting health outcomes. As described above, the hypothesized model was conducted again with the full sample of sexual assault survivors (*N* = 611) which omitted the stigmatizing social reactions variable. The hypothesized model, presented in Figure 6, did not fit the data well, χ^2 (13, 611) = 300.20, $p < .001$; CFI = .82; TLI = .61; RMSEA = .19; SRMR = .13. Similar to the hypothesized model that was conducted with the 313 survivors who disclosed the incident, the paths from internalized stigma to depressive symptoms and from secrecy to depressive symptoms were nonsignificant. A revised model was conducted which omitted these nonsignificant paths.

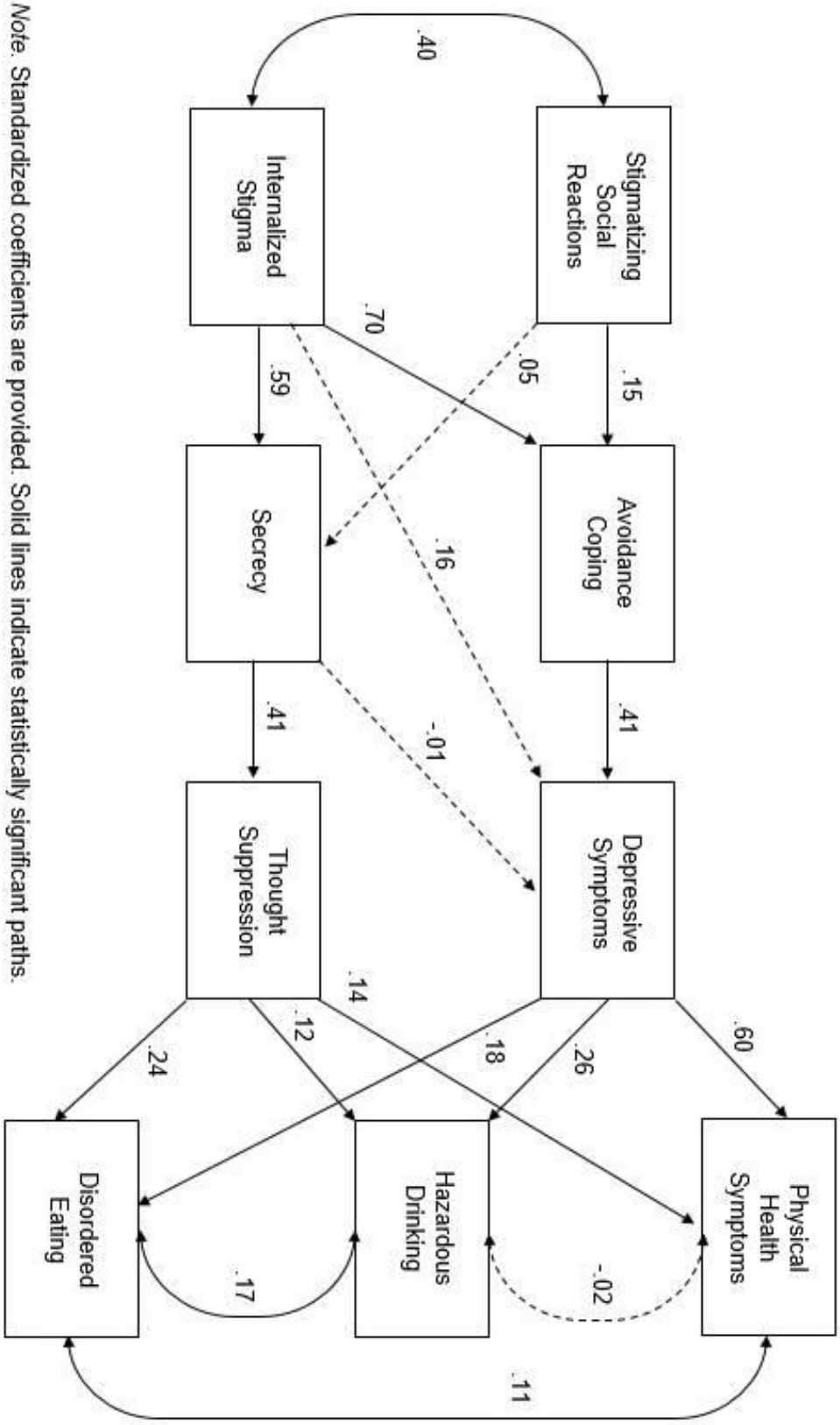
The first revision of the model, which eliminated two nonsignificant paths, had poor model fit, χ^2 (15, 611) = 302.65, $p < .001$; CFI = .82; TLI = .66; RMSEA = .18; SRMR = .13. The model is presented in Figure 7. Similar to the model conducted with the partial sample, modification indices suggested the addition of several paths: from avoidance coping to thought suppression, from secrecy to avoidance coping, and from thought suppression to depressive symptoms. Based on the modification indices as well as past

research and theory linking these constructs, a second revision of the model was conducted with these additional paths.

Figure 8 presents the second revision of the model, which includes the addition of three paths. The model fit the data well, χ^2 (12, 611) = 35.58, $p < .001$; CFI = .99; TLI = .97; RMSEA = .06; SRMR = .04. A chi-square difference test compared this model to the previous one (before new paths were added), $\chi^2 = 267.07$, $df = 3$, $p < .001$. The significant p-value indicates that the model with more factors, the second revised model, is a significantly better fit than the previous model. With the addition of these paths, the path between secrecy and thought suppression was no longer statistically significant. A third revised model was conducted which eliminated this nonsignificant path.

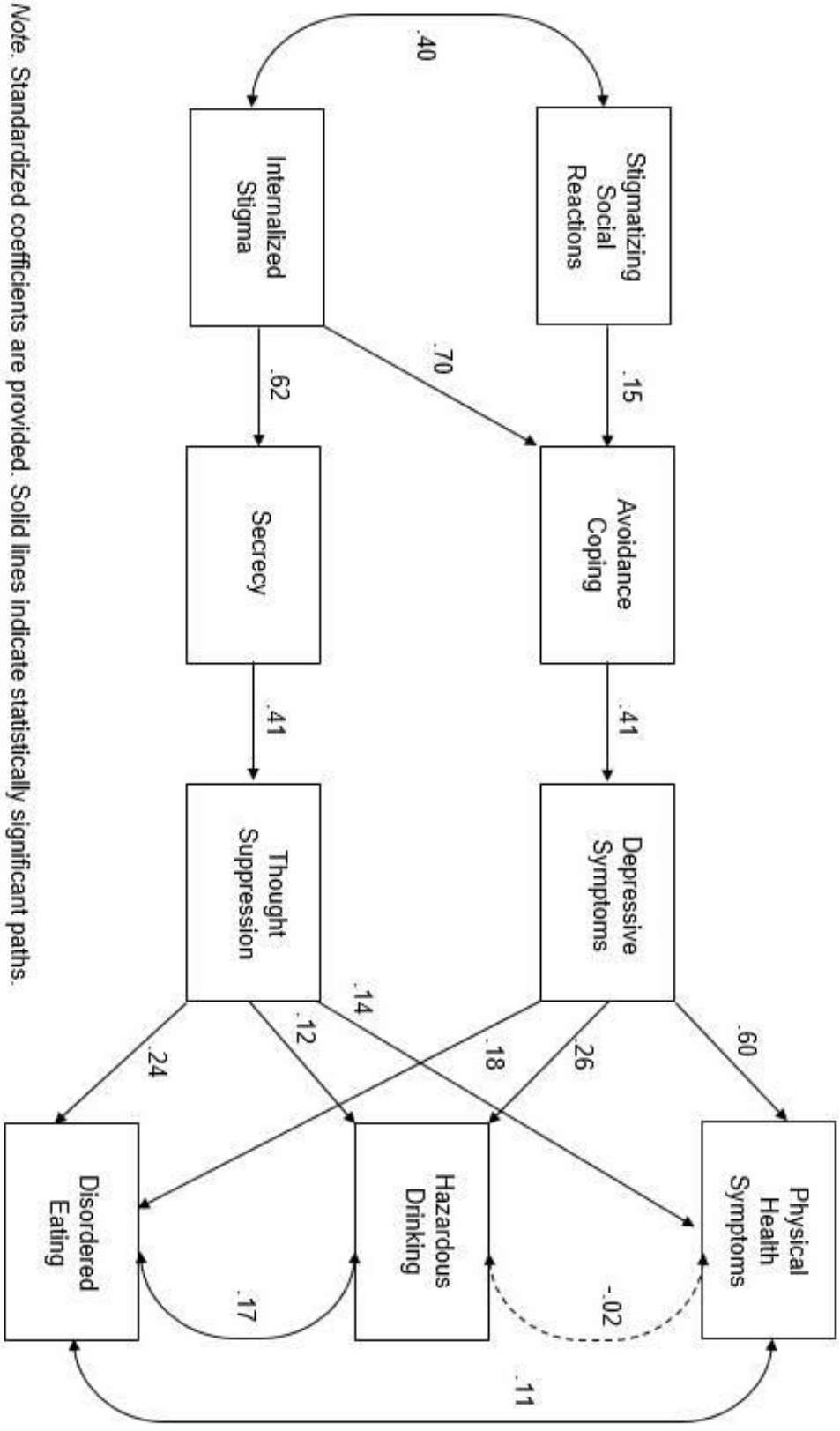
The third revised model, presented in Figure 9, revealed good model fit, χ^2 (13, 611) = 35.90, $p < .001$; CFI = .99; TLI = .97; RMSEA = .05; SRMR = .04. A chi-square difference test provided support for retaining this model as compared to the second revised model, $\chi^2 = 3.60$, $df = 2$, $p = .17$. The nonsignificant p-value indicates that the additional factors in the previous model do not significantly improve the fit of the data (Kline, 2015). As shown in Figure 9, the pattern of results was similar to the final model with the partial sample (Figure 5). Survivors with greater internalization of stigma were more likely to utilize avoidance coping strategies and feel the need to keep the assault secret. Greater utilization of avoidance coping strategies was associated with more depressive symptoms and attempts to suppress intrusive thoughts. Survivors who wanted to the keep the assault secret utilized more avoidance coping strategies. Experiencing more depressive symptoms was associated with poorer health outcomes (more physical

health symptoms, hazardous drinking, and disordered eating). Greater attempts to suppress intrusive thoughts also was associated with more physical health symptoms, hazardous drinking, and disordered eating (the path from thought suppression to hazardous drinking was not significant in the final model with the partial sample of disclosers). The final model accounted for 47% of the variance in physical health symptoms, 8.1% of the variance in hazardous drinking, and 15.9% of the variance in disordered eating. All total indirect effects were statistically significant (see Table 5).



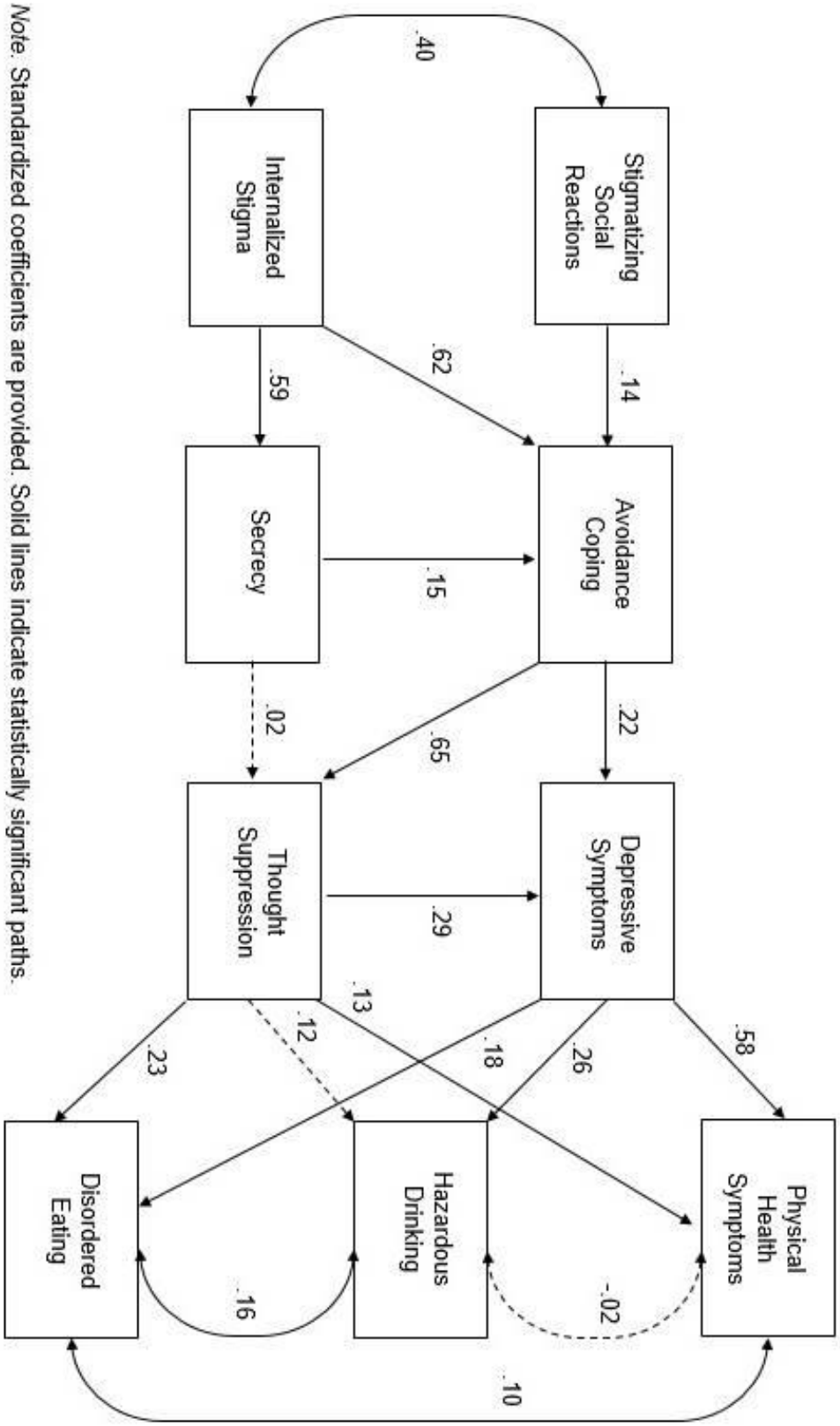
Note. Standardized coefficients are provided. Solid lines indicate statistically significant paths.

Figure 2. Model of Stigmatizing Social Reactions and Internalized Stigma as they relate to Secrecy, Coping, Depressive Symptoms, Thought Suppression, and Health Outcomes (N = 313)



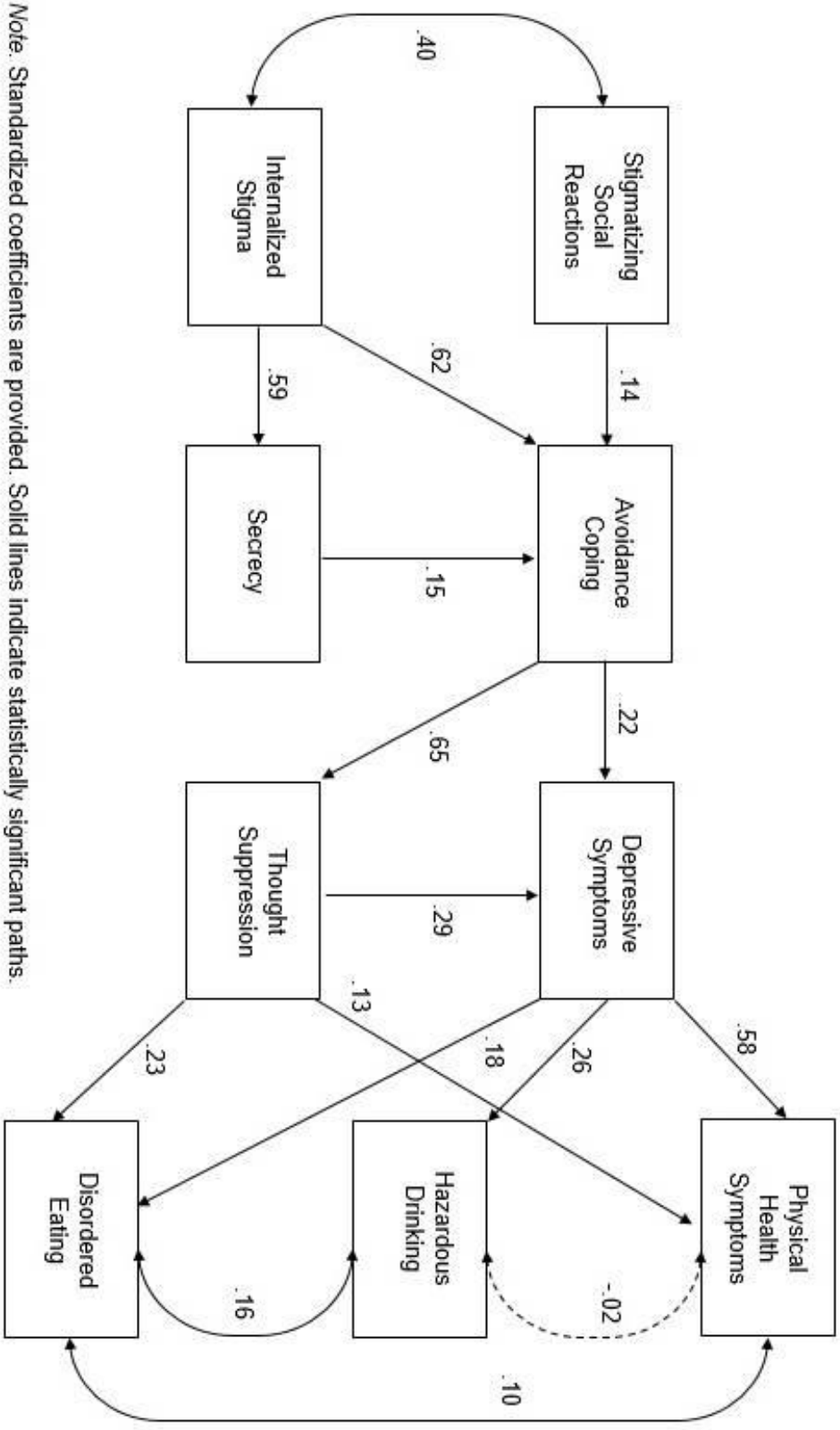
Note. Standardized coefficients are provided. Solid lines indicate statistically significant paths.

Figure 3. First Revised Model of Stigmatizing Social Reactions and Internalized Stigma as they relate to Secrecy, Coping, Depressive Symptoms, Thought Suppression, and Health Outcomes (N = 313)



Note. Standardized coefficients are provided. Solid lines indicate statistically significant paths.

Figure 4. Second Revised Model of Stigmatizing Social Reactions and Internalized Stigma as they relate to Secrecy, Coping, Depressive Symptoms, Thought Suppression, and Health Outcomes (N = 313)



Note. Standardized coefficients are provided. Solid lines indicate statistically significant paths.

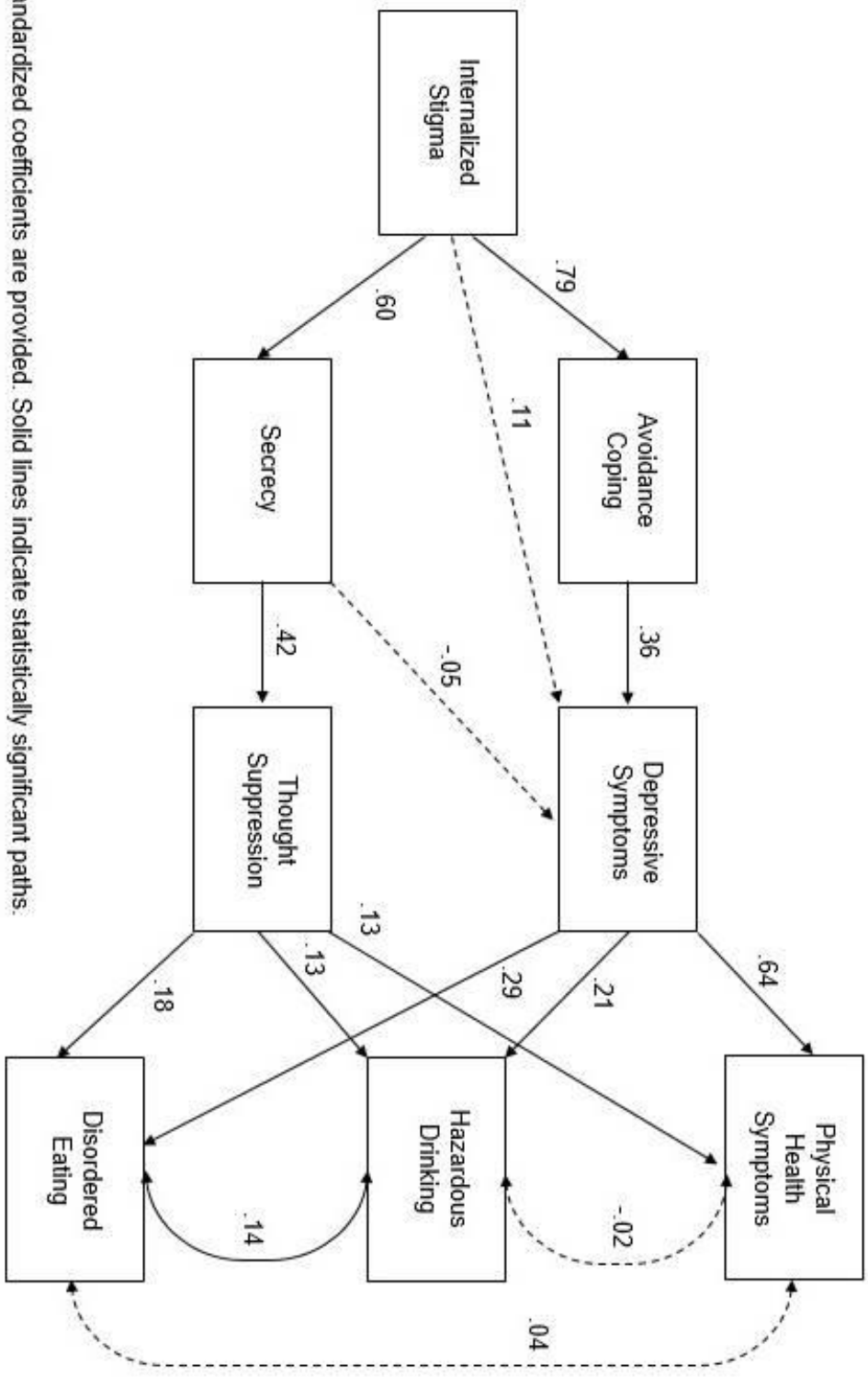
Figure 5. Final Model of Stigmatizing Social Reactions and Internalized Stigma as they relate to Secrecy, Coping, Depressive Symptoms, Thought Suppression, and Health Outcomes (N = 313)

Table 5.

Standardized Total Indirect Effects in Final Path Models

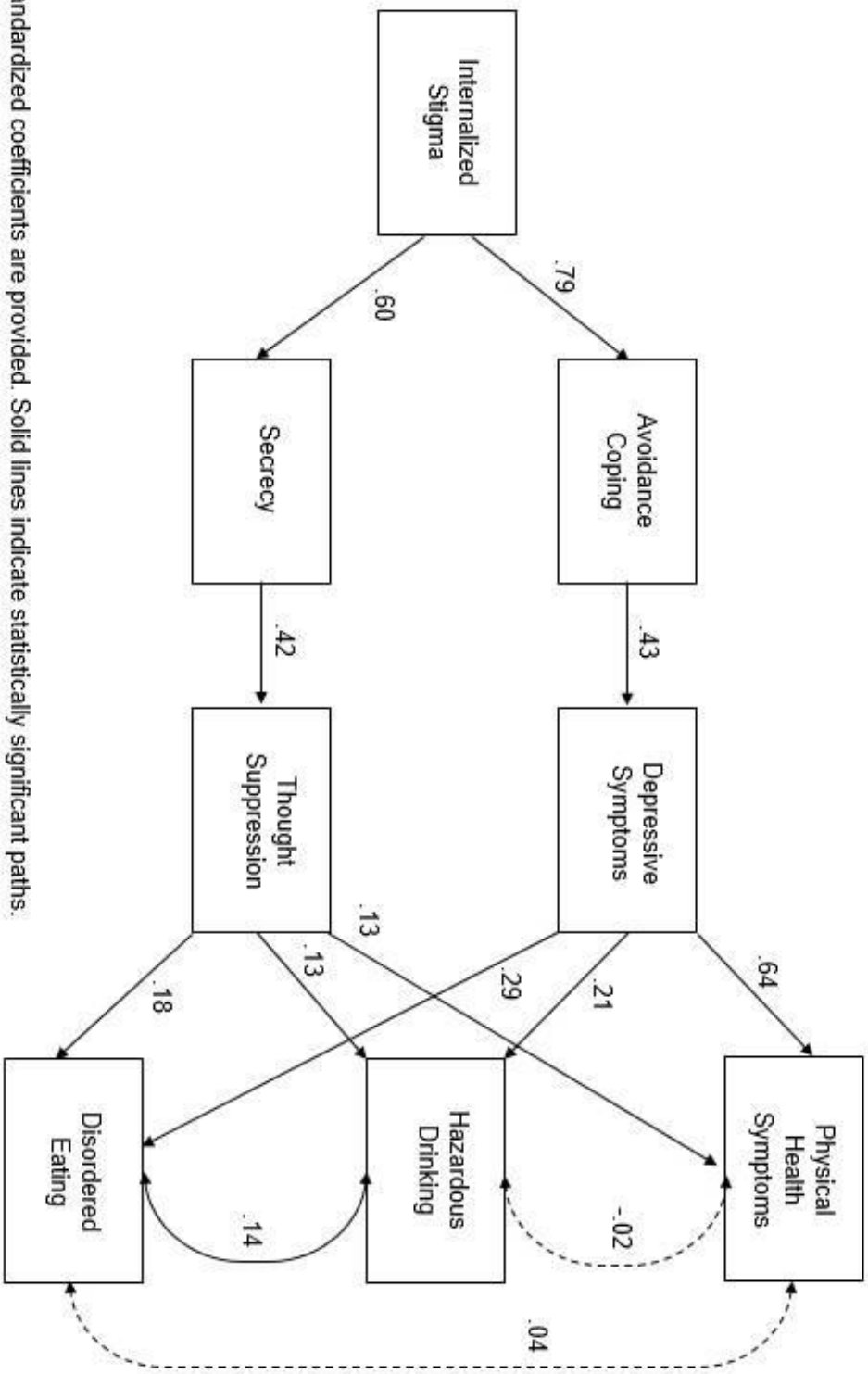
	Model with Disclosers (n = 313)	Model with Full Sample (N = 611)
Stigmatizing Social Reactions → Depressive Symptoms	.06	---
Stigmatizing Social Reactions → Thought Suppression	.09	---
Stigmatizing Social Reactions → Physical Health Symptoms	.04	---
Stigmatizing Social Reactions → Hazardous Drinking	.02	---
Stigmatizing Social Reactions → Disordered Eating	.03	---
Internalized Stigma → Avoidance Coping	.09	.10
Internalized Stigma → Depressive Symptoms	.29	.34
Internalized Stigma → Thought Suppression	.47	.53
Internalized Stigma → Physical Health Symptoms	.23	.27
Internalized Stigma → Hazardous Drinking	.09	.14
Internalized Stigma → Disordered Eating	.15	.19
Avoidance Coping → Depressive Symptoms	.19	.23
Avoidance Coping → Physical Health Symptoms	.32	.34
Avoidance Coping → Hazardous Drinking	.13	.17
Avoidance Coping → Disordered Eating	.22	.24
Secrecy → Depressive Symptoms	.06	.08
Secrecy → Thought Suppression	.10	.12
Secrecy → Physical Health Symptoms	.05	.06
Secrecy → Hazardous Drinking	.02	.03
Secrecy → Disordered Eating	.03	.04
Thought Suppression → Physical Health Symptoms	.17	.21
Thought Suppression → Hazardous Drinking	.09	.07
Thought Suppression → Disordered Eating	.05	.10

Note. All coefficients are statistically significant at $p < .05$.



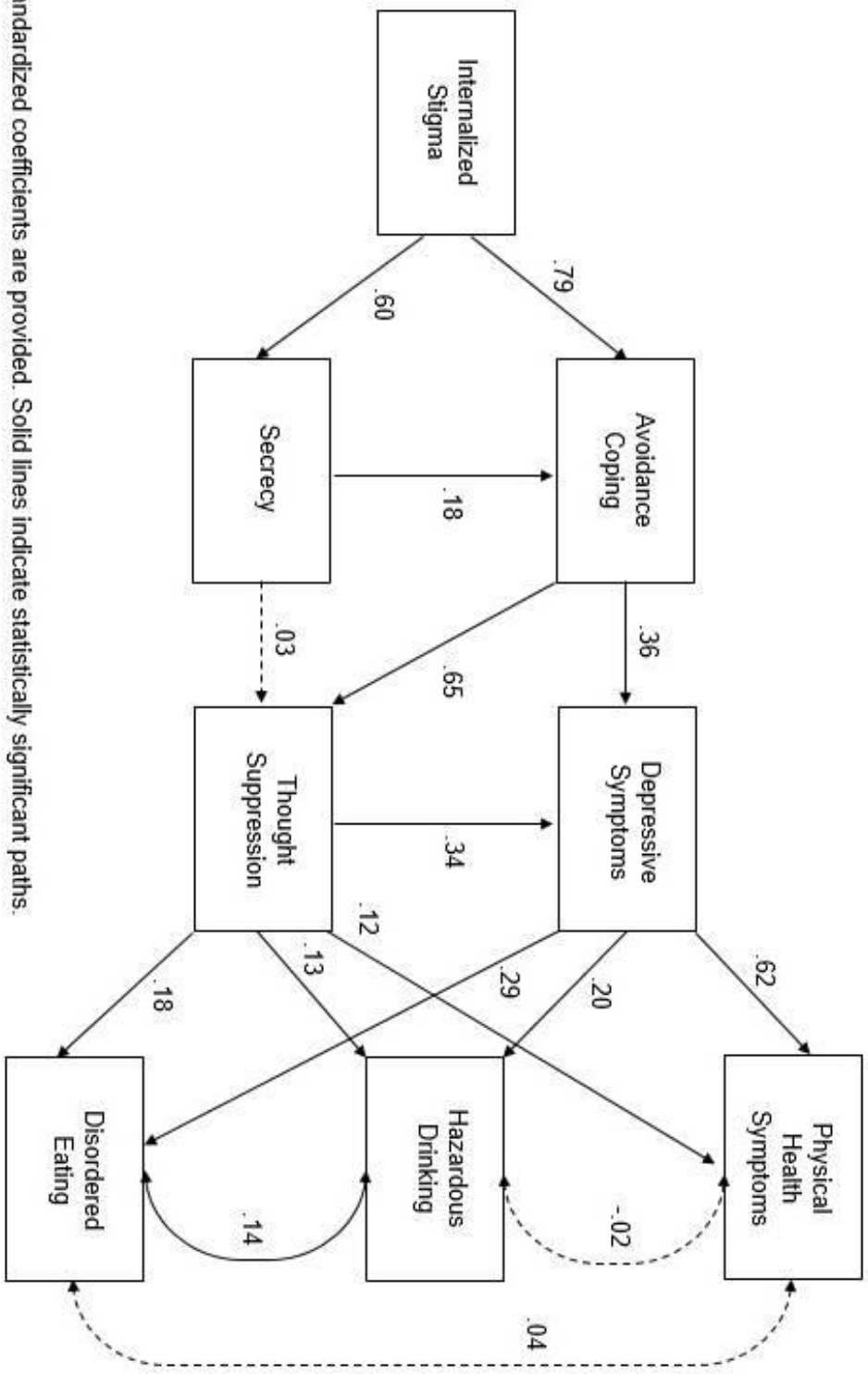
Note. Standardized coefficients are provided. Solid lines indicate statistically significant paths.

Figure 6. Model of Internalized Stigma as it relates to Secrecy, Coping, Depressive Symptoms, Thought Suppression, and Health Outcomes (N = 611)



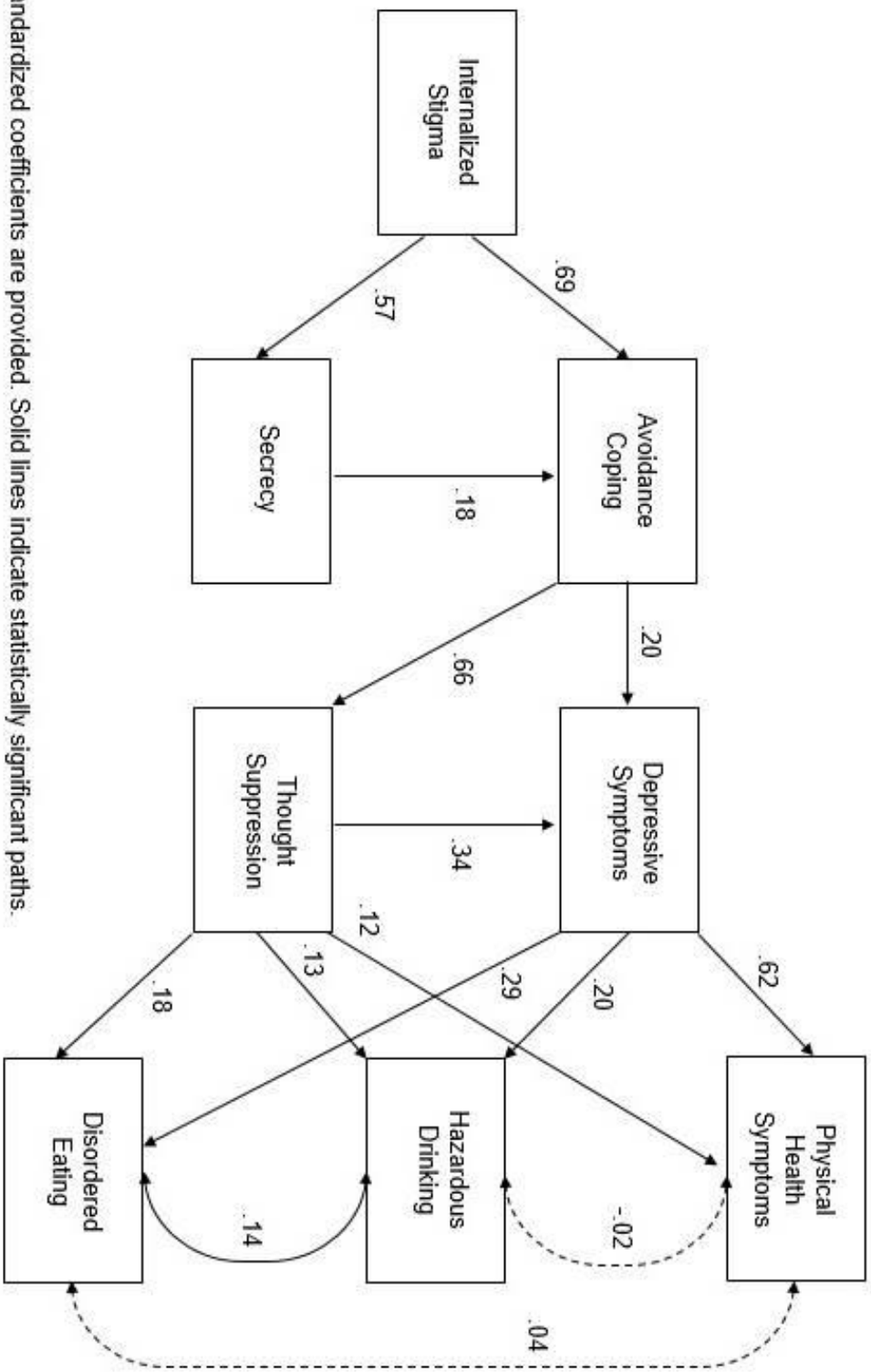
Note. Standardized coefficients are provided. Solid lines indicate statistically significant paths.

Figure 7. First Revised Model of Internalized Stigma as it relates to Secrecy, Coping, Depressive Symptoms, Thought Suppression, and Health Outcomes (N = 611)



Note. Standardized coefficients are provided. Solid lines indicate statistically significant paths.

Figure 8. Second Revised Model of Internalized Stigma as it relates to Secrecy, Coping, Depressive Symptoms, Thought Suppression, and Health Outcomes (N = 611)



Note. Standardized coefficients are provided. Solid lines indicate statistically significant paths.

Figure 9. Final Model of Internalized Stigma as it relates to Secrecy, Coping, Depressive Symptoms, Thought Suppression, and Health Outcomes (N = 611)

CHAPTER 4: STUDY 2 METHOD

Participants

Participants were 400 women living in the United States recruited through Amazon's Mechanical Turk. Inclusion criteria required participants to be between the ages of 18 and 35 and to have experienced a sexual assault since the age of 14. A power analysis for a hierarchical multiple regression with 3 tested predictors, conducted in G*Power, indicated that a minimum sample size of 327 would be required to meet a power of 0.80, alpha of 0.05, and a medium effect size (f = .20; Faul, Erdfelder, Lang, & Buchner, 2009). Thus, this study is adequately powered for the proposed analyses.

The average age of participants was 28 years old (SD = 4.45). Seventy-one percent (n = 285) of participants identified as Caucasian, 10.0% (n = 40) identified as African American, 8.5% (n = 34) identified as Hispanic, 6.3% (n = 25) identified as multiracial, 2.3% (n = 9) identified as Asian or Pacific Islander, 1.3% (n = 5) identified as Native American, 0.3% (n = 1) identified as Arabic or Middle Easterner, and 0.3% (n = 1) declined to answer. Nearly all (99.7%) of participants had at least a high school degree, 85.4% had at least some college education, and approximately half (48.3%) had a bachelor's degree or higher. Twenty-one percent of participants were full-time students at the time of the study and 7.8% were part-time students. Thirty-seven percent of participants were employed full-time; 34.4% were employed part-time; 14.3 were unemployed, not looking for work; 12.6% were unemployed, looking for work; and 1.5% were disabled/ not able to work. Thirty-nine percent of participants were married; 36.8% were single, in a relationship; 17.5% were single, not in a relationship; and 7% were

engaged. Most participants identified as heterosexual (81.5%), 15.3% identified as bisexual, 2.5% identified as lesbian, and 0.8% identified with some other sexual orientation.

Procedure

Participants were recruited through Amazon's Mechanical Turk. The study was advertised as a women's relationships and health study. The advertisement also stated that the survey would take approximately 30 minutes to complete and that participants would be compensated $2.00 for their time. If interested and eligible, participants were directed to the online study hosted on Qualtrics. Prior to beginning the study, participants complete a brief screening survey to ensure that they meet inclusion criteria. Specifically, the screening survey assessed gender, age, and history of sexual assault since age 14. Participants who met inclusion criteria (i.e., female, between the ages 18 and 35, who were sexually assaulted) were directed to the information sheet, which described the focus of the study, compensation, confidentiality, that they can quit at any time, and counseling resources.

Next, participants completed measures on their usual use of alcohol and food to cope with stress. They were then randomly assigned to read one of three short passages involving 1) stigmatization of a woman who disclosed a sexual assault, 2) stigmatization of a woman who disclosed a nonsexual crime victimization, or 3) supportive responses to a woman who disclosed a sexual assault (Appendix L). Participants were told that the researcher is trying to understand how people use the internet as a platform to share their personal experiences, including disclosure of negative life events; thus, they are being

asked to read a blog post written by someone who has experienced a distressing event and answer questions about their reactions to the blog. Participants then completed measures assessing their alcohol and palatable food craving, drinking and eating intentions, negative affect, and perceptions about the passage they read. Upon completion of the study, participants were provided with a survey code which they were instructed to enter into Mechanical Turk. They were compensated $2.00 for their time.

Stimulus materials. Participants randomly assigned to the sexual assault stigma condition read a (fictional) blog post written by a sexual assault survivor who disclosed her experience (Appendix L). The stimulus was developed to depict a date rape in which the woman ran into a man she liked, but did not know well, while spending time with her friends. They spent time together in a social setting, engaged in consensual sexual activity, and decided to go back to the man's apartment. The woman described how she did not want to have sexual intercourse; however, the man persisted in his sexual advances, despite her refusals. This stimulus was developed to include common incidence factors reported by perpetrators and victims of sexual assault, including: time spent at a party or social setting before the assault, consensual sexual activity that preceded the assault, the perpetrator's overestimation of the woman's sexual interest, perpetrator's use of isolating/ controlling factors (e.g., sexual assaults frequently occur in the perpetrator's apartment), and a power differential (e.g., dependence on the man for transportation; Abbey & Jacques-Tiura, 2011; Muehlenhard & Linton, 1987). The woman's disclosure of her sexual assault experience was met with (fictional) stigmatizing

comments from readers (e.g., “How stupid are you… You ‘froze?’”), which were intended to activate feelings of stigma among sexual assault survivors.

Participants randomly assigned to the crime stigma condition read a similar blog post that ends with the woman’s debit card being stolen. The author of the blog post describes her interaction with the man before he robbed her and her reaction to incident. The story receives similar stigmatizing comments (e.g., “How stupid are you… You left your wallet with some guy you barely knew?”).

Participants randomly assigned to the sexual assault support condition read the same blog post as the sexual assault stigma stimulus condition; however, there were supportive instead of stigmatizing comments (e.g., “Please don’t blame yourself. You didn’t ask for this to happen. It’s not your fault.”).

Pilot testing. The study underwent pilot testing procedures to examine potential methodological errors. Participants were 45 women, between the ages of 18 and 35, who experienced a sexual assault, recruited from Mechanical Turk. In addition to completing the full study, participants also were asked a series of open- and close-ended questions about their perceptions of how realistic the blog posts were and their emotional reactions to reading the story (Appendix M). Participants were compensated $2.00 for their time.

Measures

Demographic information. Demographic information was assessed, specifically: age, ethnicity, education, income, relationship status, sexual orientation (Appendix A).

Sexual assault victimization. Participants’ history of sexual assault victimization since age 14 was assessed using a modified version of the Sexual Experiences Survey,

which is described above (Appendix B; Koss et al., 2007). This measure was primarily included to screen participants and provide descriptive information.

Coping motives to drink. Participants' drinking to cope with negative affect was assessed using 4 items from the Drinking Motives Questionnaire- Revised, Coping Motives subscale (Appendix N; Cooper, 1994). Participants indicated how often they drink for reasons, such as "To forget your worries," "Because it helps when you're in a bad mood," and "to relax". Response options were: (1) never/ almost never, (2) sometimes, (3) often, and (4) always/ almost always. This measure has been used with samples of sexual assault survivors and has demonstrated good internal consistency reliability in previous research (α = .94; Lindgren et al., 2012) and in the current study (α = .84).

Coping motives to eat. Coping motives to eat was assessed using the Coping Subscale from the Palatable Eating Motives Scale (Appendix O; PEBS; Burgess, Turan, Lokken, Morse, & Boggiano, 2014). The PEBS assesses how frequently participants eat tasty foods and drinks for a variety of reasons. The PEBS items are identical to the Drinking Coping Motives subscale with the exception of one item. This item, "To forget about your problems" was changed to "To relax" so that the two measures would have the same items and because the item was redundant with another item ("To forget your worries"). Response options were: (1) never/ almost never to (4) always/ almost always. The PEBS has demonstrated good convergent validity (Burgess et al., 2014). Cronbach's alpha in the current study was .85.

Alcohol craving. The 8-item Alcohol Urge Questionnaire was used to assess current alcohol craving (Appendix P; AUQ; Bohn, Krahn, & Staehler, 1995). The AUQ has

good validity and reliability for assessing in the moment desire to drink (α = .91 in Bohn et al., 1995). The AUQ has been used in many experimental studies and is sensitive to situational influences, such as exposure to alcohol cues (MacKillop, 2006). Response options ranged from (1) strongly disagree to (7) strongly agree. Sample items include “It would be difficult to turn down a drink this minute” and “I crave a drink right now.” Cronbach’s alpha was .85 in the current study.

Food craving. Participants’ current craving for palatable foods was assessed using the Intense Desire to Eat (3 items), Obsessive Preoccupation with Food (3 items), and Anticipation of Positive Reinforcement (3 items) subscales from the General Food Cravings Questionnaire- State (GFCQ-S; Appendix Q; Nijs, Franken, & Muris, 2007). The GFCQ-S was developed to assess state-dependent food craving and is influenced by situational variables in experimental studies (Maas, Ridder, de Vet, & de Wit, 2012). Cronbach alpha for the overall measure was .93, and alphas for the subscales ranged from .74 to .89 (Nijs et al., 2007). Participants were asked to report, on a scale from (1) strongly disagree to (5) strongly agree, the extent to which they agree with the statements at that very moment. Sample items include: “I’m craving tasty food,” “My desire to eat something tasty seems overpowering,” and “Eating something tasty would feel wonderful.” The measure demonstrated good reliability in the current study (α = .94).

Eating intentions. To assess eating intentions, participants viewed images of 6 healthy foods (e.g., fruit, yogurt, granola bar) and 6 unhealthy foods (e.g., chips, pizza, candy), and were asked what quantity of the food they would want to consume at that moment. Response options ranged from 0/ do not want to 5 or more (Appendix R).

Responses were summed. This procedure was modeled after experiments involving snack selection (e.g., Juergensen & Demaree, 2015).

Drinking intentions. To assess drinking intentions, participants viewed images of 5 nonalcoholic beverages (e.g., water, orange juice), and 5 alcoholic beverages (e.g., wine, beer), and were asked to indicate the quantity/ number of drinks they would want to consume at that moment. Response options ranged from 0/ do not want to 5 or more (Appendix S). Responses were summed. This task was developed for the purposes of this study.

Negative affect. The 10 negative affect items of the Positive and Negative Affect Scale (Appendix T; Watson, Clark, & Tellegen, 1988) was used to assess participants' distressing feelings and emotions. The measure asked participants to indicate how they feel at the present moment on a scale from (1) very slightly or not at all to (5) extremely. The negative affect items are: distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, and afraid. In addition, the PANAS was modified to include "angry". The PANAS has been widely used to assess mood states and has demonstrated good reliability in previous research (moment negative affect α = .85 in Watson et al., 1988) and in the current study (α = .91).

CHAPTER 5: STUDY 2 RESULTS

Pilot Study

Sexual assault stigma condition. Overall, participants in the sexual assault stigma condition (*n* = 15) found the blog post and comments to be realistic. Participants were asked to describe what was realistic about the blog post and all mentioned at least aspect of the blog that was realistic. For example, one participant said, "The whole story was realistic. She went out with a guy, ended the night at his place, she told him no, but he would not stop." Another participant said "I can picture the situation of being out with friends and running into a crush. She wanted to spend more time with him so it's reasonable that she wanted to go home with him." When asked what was unrealistic about the blog post, 60% (*n* = 9) of participants said nothing about the blog was unrealistic. The other participants said the comments seemed unrealistic (*n* = 2), the author's reaction (e.g., "freezing") was unrealistic, the fact that she would disclose the incident in a blog post was unrealistic (*n* = 1), and the way the author described the incident was unrealistic (*n* = 1).

Participants also were asked to describe what was realistic about the comments to the blog post; all were able to describe at least one thing that was realistic. Eighty percent (*n* = 12) said it was realistic for the author to receive victim-blaming comments (e.g., "People really think that way and say things like that to victims" and "People say that stuff all the time. They always say it was the girl's fault."). Twenty percent of participants (*n* = 3) said the negativity/ tone of the comments was realistic. When asked what was unrealistic about the comments, 60% (*n* = 9) said nothing about the comments

was unrealistic and 33.33% (*n* = 5) said it was unrealistic that all the comments were negative (e.g., “no one was sympathetic, and the comments were not fighting with each other”).

Most participants (86.67%, *n* = 13) said they could imagine reading a blog post like that and 100% (*n* = 15) said they could imagine reading comments to a post like that. Overall, participants thought the comments were extremely stigmatizing, blaming, or negative (*M* = 4.67, *SD* = 1.05, on a 5-point scale) and that the author would be extremely upset if she read the comments to her blog post (*M* = 4.80, *SD* = 0.76, on a 5-point scale). Most participants said they were able to relate to the woman’s experience in her story (*M* = 4.07, *SD* = 0.96, on a 5-point scale) and to receiving those types of reactions (*M* = 3.93, *SD* = 1.16, on a 5-point scale).

As a manipulation check, participants were asked to describe what the blog post and comments were about. Although participants’ responses varied in level of detail, all were able to accurately describe that a sexual assault took place and that the comments blamed the victim.

Nonsexual crime stigma condition. Overall, participants in the nonsexual crime stigma condition (*n* = 14) found the blog post and comments to be realistic. When asked to describe what was realistic about the blog post, all were able to describe at least aspect of the blog that was realistic. Examples of participant comments include: “The scenario seemed like something that could happen” and “her emotions of betrayal and embarrassment”. When asked to describe what was unrealistic about the blog post, 28.57% (*n* = 4) of participants said nothing was unrealistic, 28.57% (*n* = 4) said it was

unlikely the restaurant wouldn't notice, 21.43% (*n* = 3) said the woman's reaction was unrealistic (e.g., "that she didn't press charges and get her money back"), and 21.43% (*n* = 3) expressed doubt about how the man was able to use her card.

All participants thought the negative, victim-blaming comments were realistic. Example comments include: "They seem accurate based on what I often see in the comment sections in online articles. People are harsh" and "They were accusatory and were full of people offering unhelpful opinions about how she could have avoided the situation in which someone else was in the wrong". However, participants were split on how universally negative they thought comments would be. Half thought there was nothing unrealistic about the comments; the other half thought at least one person would be supportive.

All participants said they could imagine reading a similar blog post and comments. Overall, participants thought the comments were extremely stigmatizing, blaming, or negative (*M* = 4.64, *SD* = 0.63, on a 5-point scale) and that the author would be extremely upset if she read the comments to her blog post (*M* = 4.71, *SD* = 0.47, on a 5-point scale). On average, participants were moderately able to relate to the woman's experience (*M* = 3.14, *SD* = 1.41, on a 5-point scale) and to receiving those types of reactions (*M* = 3.79, *SD* = 1.42, on a 5-point scale). All participants were able to accurately describe the content of the blog post and comments.

Sexual assault support condition. When asked to describe what was realistic about the blog post, all were able to describe at least thing that was realistic (*n* = 16). For example, one participant stated, "I think that everything was realistic. It is very plausible

that she could have met up with the guy and then went home with him. Unfortunately, it's very real that the rape could have happened as well." Over half (56.25%, *n* = 9) did not think there was anything about the blog that was unrealistic, 18.75% (n = 3) thought the victim's actions were unrealistic ("She should have been more forceful saying no or get up and leave or call for help. She was weak."), 12.5% (*n* = 2) thought it was unrealistic to only receive supportive responses, one participant thought the comments seemed generic, and one participant thought the way it was written for social media seemed unrealistic.

Most participants (87.5%, *n* = 14) thought the supportiveness of the comments was realistic, one participant said "not much" was realistic because responses are usually mixed with positive and negative comments, and one participant declined to answer. However, when asked what was unrealistic about the comments, over half (56.25%, *n* = 9) said the author would be unlikely to receive so many supportive comments (e.g., "there wasn't a comment victim blaming"). Thirty-one percent of participants said nothing was unrealistic about the comments, and 12.5% (*n* = 2) said the comments could have been more detailed or helpful.

All participants said they could imagine reading a similar blog post and most (87.5%, *n* = 14) said they could imagine similar reading comments. Overall, participants thought the comments were not at all stigmatizing, blaming, or negative (*M* = 1.13, *SD* = 0.34, on a 5-point scale) and that the author would not be at all upset if she read the comments to her blog post (*M* = 1.31, *SD* = 0.79, on a 5-point scale). Participants were moderately able to relate to the woman's experience in her story (*M* = 3.75, *SD* = 1.18,

on a 5-point scale) and to receiving those types of reactions (*M* = 3.00, *SD* = 0.89, on a 5-point scale). All participants were able to accurately describe the content of the blog post and comments.

Preliminary Data Analyses

Data cleaning. Standard data cleaning procedures were used to inspect and clean the data (Tabachnick & Fidell, 2012). A total of 425 women completed at least some of the online study; of these individuals, 25 case deletions were made because there was a substantial amount of missing data (over 20%) and/ or the study was completed the study in an abnormally short amount of time, leaving a final sample size of 400. Most of the case deletions dropped out of the study very early, before the experimental manipulation. Next, variables were screened for missing data. No variable had 5% or more of missing data, and thus imputation procedures were not needed. None of the participants had missing data for all of the items of a scale; thus, mean substitution at the scale level was not needed. For participants missing data for some items within a scale, their existing data were averaged to compute their scale scores. Finally, variables were screened for normality by assessing skewness and kurtosis values. The number of alcoholic drinks variable was significantly positively skewed and was transformed using a square root transformation.

Descriptive and bivariate analyses. Seventy-four (*n* = 296) percent of participants reported rape as their worst assault, 10.3% (*n* = 41) reported attempted rape as their worst assault, 5.3% (*n* = 21) reported verbal coercion as their worst assault, 2.8%

(*n* = 11) reported attempted verbal coercion as their worst assault, and 7.8% (*n* = 31) reported sexual contact as their worst assault.

Bivariate correlations and descriptive information for study variables are presented in Table 6. Bivariate correlations indicated that negative affect was significantly positively related to drinking to cope motives, alcohol craving, drinking intentions, eating to cope motives, and unhealthy eating intentions; it was not significantly associated with food craving. Alcohol craving was significantly positively related to drinking to cope motives, eating to cope motives, negative affect, drinking intentions, and unhealthy eating intentions; it was not significantly associated with food craving. Drinking intentions was significantly positively related to all study variables. Food craving was significantly positively related to eating to cope motives, unhealthy eating intentions and drinking intentions. Unhealthy eating intentions was significantly positively related to eating to cope motives, negative affect, alcohol craving, drinking intentions, and food craving; it was not significantly associated with drinking to cope motives.

Hypothesis Testing

Hypothesis 1: Main effect of experimental condition on negative affect. A one-way ANOVA was conducted comparing levels of negative affect among participants based on experimental condition. Although levels of negative affect were low for all groups, the overall ANOVA indicated significant differences, $F(2,397) = 5.53$, $p = .004$. Consistent with the hypothesis, an LSD post hoc test revealed that participants in the sexual assault stigma condition reported greater levels of negative affect (*M* = 1.78, *SD*

Table 6.

Bivariate Correlations and Descriptive Information for Study 2 Variables (N = 400)

Variable	1	2	3	4	5	6	7
1. Drinking to cope motives	----						
2. Eating to cope motives	.32***	----					
3. Negative affect	.20***	.18***	----				
4. Alcohol craving	.33***	.13*	.30***	----			
5. Drinking intentions	.33***	.18***	.32***	.63***	----		
6. Food craving	.04	.36***	.07	.07	.12*	----	
7. Unhealthy eating intentions	.08	.34***	.15**	.14**	.33**	.52**	----
Mean	2.28	2.37	1.64	2.24	0.89	2.60	6.74
Standard Deviation	0.78	0.79	0.69	1.12	1.12	1.04	5.51
Response Scale	1-4	1-4	1-5	1-7	0-30	1-5	0-30
Range	1-4	1-4	1-4.45	1-6.25	0-4.47	1-5	0-26

Note. *$p < .05$. **$p < .01$. ***$p < .001$. Drinking Intentions reported in this table is the transformed variable (untransformed: $M = 2.05$, $SD = 3.59$, Range = 0-20).

= 0.75) than participants in the crime stigma condition (M = 1.50, SD = 0.61, p = .001) and sexual assault support condition (M = 1.62, SD = 0.68, p = .04).

Hypotheses 2-3: Interaction between experimental condition and drinking to cope motives on alcohol outcomes. It was hypothesized that drinking to cope motives would moderate the relationship between experimental condition and alcohol outcomes (alcohol craving and drinking intentions); that is, exposure to the sexual assault-stigma stimulus would be related to more alcohol craving and drinking intentions for women who report more drinking to cope motives. To test these hypotheses, two moderated regression analyses were conducted using the PROCESS macro (Hayes, 2013; Model 1). The moderation model was estimated with experimental condition as a multicategorical variable. This option in PROCESS allows multicategorical variables to be represented with k – 1 variables (dummy coding; Hayes, 2015). The first dummy coded variable compared the sexual assault stigma condition to the crime stigma condition and the second dummy coded variable compared the sexual assault stigma condition to the sexual assault support condition. Each model tested 2 interactions: one comparing the sexual assault stigma condition to the crime stigma condition and the other comparing the sexual assault stigma condition to the sexual assault support condition. Because examination of group differences between the crime stigma condition and sexual assault support condition was not a primary goal of this study, the analyses were not repeated with a different reference group to allow for this comparison.

Alcohol craving. Results of this model indicated that more drinking to cope motives was related to significantly more alcohol craving (b = 0.73, SE = 0.13, p < .001,

95% CI [0.48, 0.98]). Sexual assault stigma was not related to more alcohol craving than crime stigma (*b* = -0.09, *SE* = 0.13, *p* = .50, 95% CI [-0.34, 0.17]), nor was it related to more alcohol craving than sexual assault support (*b* = -0.09, *SE* = 0.13, *p* = .50, 95% CI [-0.34, 0.17]). The first interaction comparing the two stigma conditions was not significant (*b* = -0.28, *SE* = 0.17, *p* = .10, 95% CI [-0.62, 0.05]). However, the second interaction comparing the sexual assault stigma condition and sexual assault support condition was significant (*b* = -0.41, *SE* = 0.17, *p* = .02, 95% CI [-0.74, -0.07]). Conditional effects

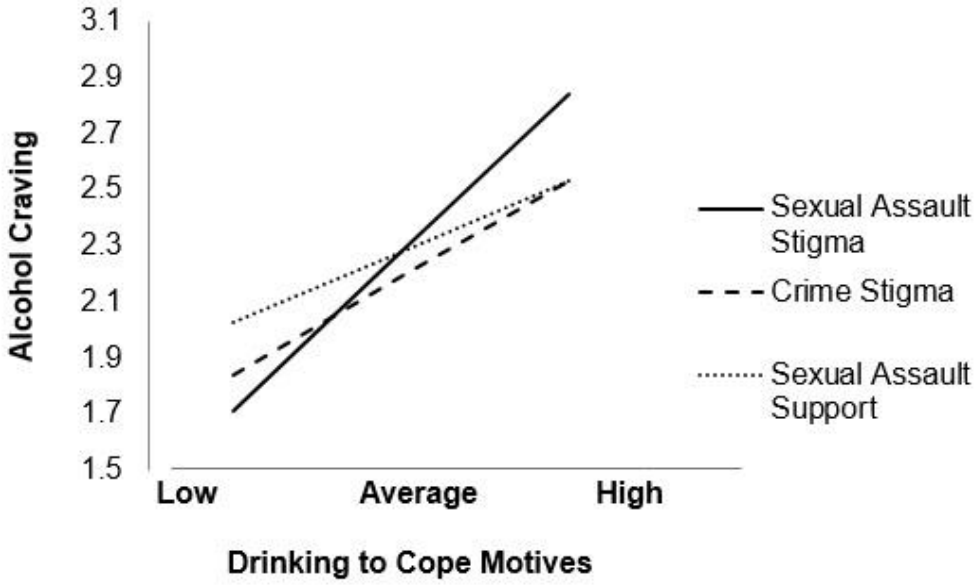


Figure 10. Alcohol craving as a function of experimental conditions and drinking to cope

revealed that the relationship between drinking to cope motives and alcohol craving was positive and statistically significant for all 3 experimental conditions; however, the relationship was stronger for participants in the sexual assault stigma condition (*b* = 0.73, *SE* = 0.13, *p* < .001, 95% CI [0.48, 0.98]) as compared to the sexual assault support

condition (*b* = 0.32, *SE* = 0.11, *p* = .01, 95% CI [0.10, 0.55]). These results are depicted in Figure 10. Thus, this hypothesis was partially supported.

Drinking intentions. Results of this model indicated that more drinking to cope motives was associated with greater drinking intentions (*b* = 0.76, *SE* = 0.13, *p* < .001, 95% CI [0.51, 1.01]). In addition, participants in the sexual assault stigma condition had significantly greater drinking intentions than participants in the crime stigma condition (*b* = -0.29, *SE* = 0.13, *p* = .03, 95% CI [-0.54, -0.04]). However, levels of drinking intentions did not significantly differ between the sexual assault stigma and sexual assault support conditions (*b* = -0.20, *SE* = 0.13, *p* = .11, 95% CI [-0.45, 0.05]). Consistent with the hypothesis, the first interaction comparing the two stigma conditions was significant (*b* = -0.37, *SE* = 0.17, *p* = .03, 95% CI [-0.70, -0.04]) as well as the second interaction comparing the sexual assault stigma condition and sexual assault support condition (*b* = -0.41, *SE* = 0.17, *p* = .01, 95% CI [-0.75, -0.09]). Conditional effects revealed that drinking

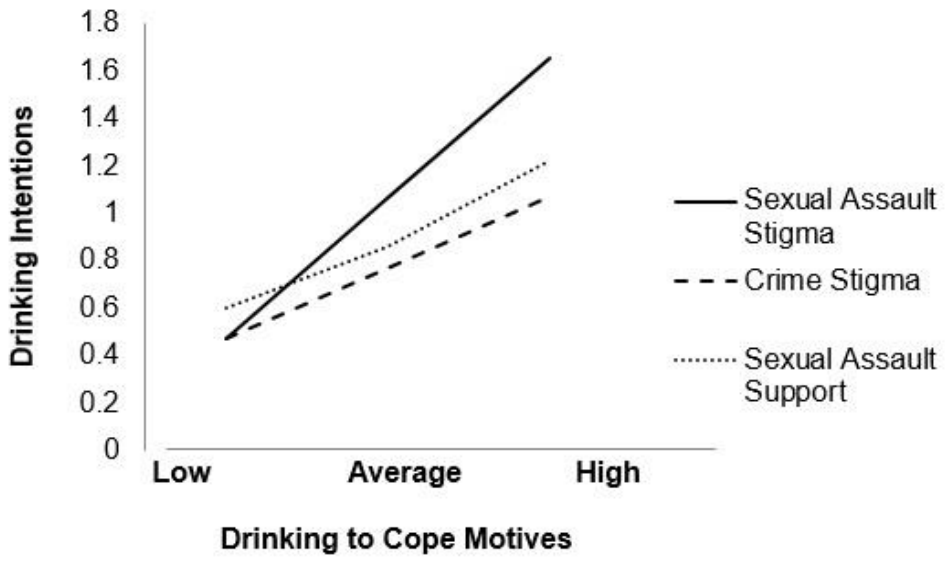


Figure 11. Drinking intentions as a function of experimental conditions and drinking to cope

to cope motives were positively related to alcohol craving for all experimental conditions; however, the relationship was statistically stronger for participants in the sexual assault stigma condition (b = 0.76, SE = 0.13, p < .001, 95% CI [0.51, 1.01]) as compared to the crime stigma condition (b = 0.39, SE = 0.11, p < .001, 95% CI [0.16, 0.61]) and the sexual assault support condition (b = 0.34, SE = 0.11, p = .003, 95% CI [0.12, 0.56]). These results are depicted in Figure 11.

Hypotheses 4-5: Interaction between experimental condition and eating to cope motives on eating outcomes. It was hypothesized that eating to cope motives would moderate the relationship between experimental condition and eating outcomes (palatable food craving and eating intentions), that is, exposure to the sexual assault-stigmatization stimulus would be related to more palatable food craving and eating intentions. To test these hypotheses, two moderation regression analyses were conducted, parallel to the analytic plan described above.

Palatable food craving. Results of this model indicated that more eating to cope motives was associated with more food craving (b = 0.43, SE = 0.11, p < .001, 95% CI [0.22, 0.64]). Sexual assault stigma elicited significantly more food craving than crime stigma (b = 0.26, SE = 0.12, p = .03, 95% CI [0.02, 0.49]); however, there were no significant differences in food craving between sexual assault stigma and sexual assault support (b = 0.02, SE = 0.12, p = .86, 95% CI [-0.21, 0.25]). Contrary to the hypothesis, neither the interaction comparing the two stigma conditions was significant (b = 0.01, SE = 0.15, p = .96, 95% CI [-0.29, 0.31]) nor the interaction comparing the sexual assault stigma condition and sexual assault support condition (b = 0.10, SE = 0.15, p = .49, 95%

CI [-0.19, 0.39]). Thus, the relationship between eating to cope and food craving did not vary based on experimental condition.

Unhealthy eating intentions. Results of this model indicated that more eating to cope motives was associated with more unhealthy eating intentions (b = 3.31, SE = 0.58, p < .001, 95% CI [2.17, 4.45]). However, there were no significant differences in unhealthy eating intentions between the two stigma conditions (b = -0.77, SE = 0.64, p = .23, 95% CI [-2.02, 0.48]) nor the two sexual assault conditions (b = 0.29, SE = 0.63, p = .64, 95% CI [-0.94, 1.53]). The first interaction comparing the two stigma conditions was significant (b = -2.03, SE = 0.82, p = .01, 95% CI [-3.64, -0.45]). However, the second interaction comparing the sexual assault stigma condition and sexual assault support condition was not significant (b = -0.97, SE = 0.79, p = .22, 95% CI [-2.53, 0.59]). Conditional effects revealed that eating to cope motives was positively associated with unhealthy eating intentions for all of the experimental conditions; however, the relationship was stronger for participants in the sexual assault stigma condition (b = 3.31, SE = 0.58, p < .001, 95% CI [2.17, 4.45]) as compared to the crime stigma condition (b = 1.28, SE = 0.58, p = .03, 95% CI [0.15, 2.41]). Thus, this hypothesis was partially supported. These results are depicted in Figure 12.

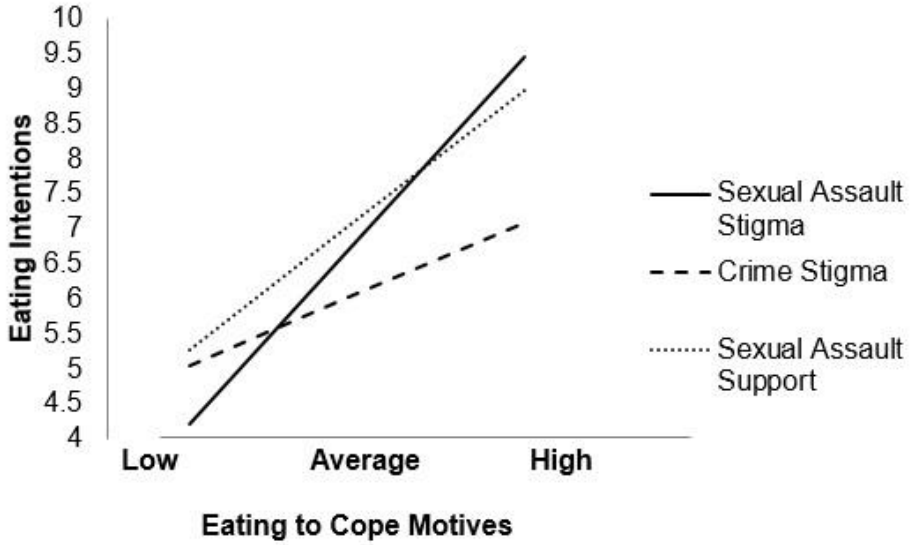


Figure 12. Unhealthy eating intentions as a function of experimental conditions and eating to cope

CHAPTER 6: DISCUSSION

This dissertation examined stigmatization as a critical risk factor for sexual assault survivors' physical health symptoms and health risk behaviors. The first goal of this dissertation was to explore a theoretical framework which proposes mechanisms through which stigmatization contributes to adverse health outcomes (Study 1). In particular, a theoretical model was examined whereby enacted and internalized stigmatization indirectly contributes to hazardous drinking, disordered eating, and physical health symptoms by impeding coping and emotional processing of sexual assault. Hypothesized pathways were partially supported in a cross-sectional model; however, a modified model fit the data better than the theoretical model, as described below. Because half of survivors did not disclose the incident, and thus did not receive any direct stigmatizing social reactions, an additional model was evaluated using the full sample (which omitted social reactions) and had similar results. The second goal of this dissertation was to experimentally investigate effects of sexual assault stigmatization on affect and regulation of health behaviors (Study 2). It was expected that sexual assault stigmatization, as compared to stigmatization of nonsexual crime victimization and supportive reactions to sexual assault, would result in higher levels of negative affect, more alcohol craving and drinking intentions among women who usually drink to cope with stress, and more unhealthy food craving and eating intentions among women who usually eat to cope with stress. These hypotheses were mostly supported, as described below.

Study 1 Summary of Findings

Sexual assault victimization is prevalent. In this sample, over 60% of women experienced some type of unwanted sexual activity since the age of 14. Rates of sexual assault in this study are comparable to prior studies (Abbey, Parkhill, & Koss, 2005; Johnson et al., 2017; Koss et al., 1987). However, rates of attempted and completed rape are notably higher than those found in prior studies. Using the same instrument as this study (the revised SES; Koss et al., 2007), Johnson and colleagues (2017) found that 27% of participants experienced an attempted or completed rape as their most severe sexual assault, whereas over 40% experienced attempted or completed rape in the present study. Rates of rape in this study also were much higher than Koss and colleagues' (1987) original study, which found a prevalence rate of 25%. The difference in rates could be due to a difference in sampling (many studies of sexual assault victimization, including the two aforementioned studies, include samples of undergraduate students) and recruitment strategies (although this study did not specifically target survivors of sexual assault, the study advertisement mentioned that unwanted sexual experiences would be one of the research topics). In addition, it is possible that increased news coverage of sexual assault survivors coming forward as well as current social interventions (e.g., "Time's Up," "#MeToo," and the Women's Movement) could have increased participants' acknowledgement of and willingness to share their unwanted sexual experiences.

Stigmatization impedes coping and emotional processing of sexual assault. In both of the final models (model with disclosers and model with the full sample), women who received more stigmatizing reactions to disclosure and who internalized sexual

assault stigma used more avoidance coping strategies. These findings are in line with previous research linking negative social reactions to avoidance coping (Ullman, 1996; Ullman et al., 2007) as well as research linking internalized stigma to avoidance coping (Gibson & Leitenberg, 2001). Consistent with study hypotheses, these associations suggests that survivors who experience stigmatization may feel more restricted in their options for coping with stress. Many approach coping strategies, such as expressing emotions and eliciting social support, may make survivors vulnerable to experiencing stigmatization. Thus, it is not surprising that stigmatization may be related to less effective coping strategies, such as denial and social withdrawal.

Consistent with hypotheses, the more survivors internalized stigma, the more they felt the need to keep the assault a secret. It is plausible that these women wanted to keep their assault-status hidden out of fear of negative judgment and scrutiny. Unfortunately, however, concealing the assault may deprive survivors from receiving the health benefits of emotional expression (Pennebaker & Beall, 1986; Pennebaker & Susman, 1988). Confiding in others is crucial for survivors to work through trauma-related thoughts and emotions and make meaning of the event (Horowitz, 1986; Pennebaker, 1985; Silver & Wortman, 1980).

The hypothesis that receiving stigmatizing social reactions would be related to a greater desire to keep the assault a secret was not supported in the path analysis. However, the significant association at the bivariate level between these variables suggests that receiving stigmatizing reactions to sexual assault disclosure may contribute to a fear of social disapproval and anticipation of future stigmatization. Thus, stigmatized

survivors may want to inhibit discussion of the assault to avoid these potential interpersonal consequences.

Concealing sexual assault has cognitive consequences. Based on the preoccupation model of secrecy (Lane & Wegner, 1995), it was hypothesized that a greater need to keep the sexual assault secret would require more effortful suppression of thoughts related to the event. This hypothesis was supported at the bivariate level, but not in the final path models. Specifically, the pathway between secrecy and thought suppression was significant in the theoretical model; however, this model did not fit the data well. A modified model which included a path from secrecy to avoidance coping as well as a path from avoidance coping to thought suppression fit the data better and thus was retained over the theoretical model. The constructs of secrecy and thought suppression are both conceptually similar to avoidance coping, and thus these variables may have accounted for much of the same variance in the model. It is also plausible that secrecy contributes to thought suppression indirectly through avoidance coping. This finding is not entirely inconsistent with the theoretical premise of this study. The process of having to keep the sexual assault secret may inhibit confrontation of assault-related thoughts and feelings (by means of avoidance coping and/ or thought suppression), thus impeding cognitive processing of the event. Subsequently, avoidance coping efforts and/ or thought suppression attempts will likely be associated with increased accessibility in assault-related cognitions and emotions. This finding is consistent with past research which suggests that secrecy is not productive for trauma resolution and can be harmful to health (Goffman, 1963; Kelly, 1999).

Avoidance coping and thought suppression are harmful to mental health. Consistent with the hypothesis, greater utilization of avoidance coping strategies was associated with experiencing more depressive symptoms. This finding coincides with an abundance of research linking sexual assault survivors' use of avoidance coping and poorer recovery outcomes, including depressive symptoms (Frazier et al., 2005; Koss et al., 2002; Littleton et al., 2007; Meyer & Taylor, 1986; Ullman et al., 2007). In the long term, avoidance coping may be ineffective for dealing with traumatic events and may prolong distress.

Although not originally hypothesized, greater suppression of assault-related thoughts was associated with experiencing more depressive symptoms. The theoretical model did not include this pathway; however, the modified model fit the data better and thus was retained. This finding supports the notion that attempts to suppress distressing trauma-related thoughts may result in a paradoxical increase in intrusive thoughts and subsequently distress (Amstadter & Vernon, 2008; Lumley et al., 2011; Pegram et al., 2017; Smart & Wegner, 1999; Wegner et al., 1987; Wegner & Zanakos, 1994).

Depressive symptoms and thought suppression are harmful to health. Drinking problems and disordered eating are often co-morbid, and both behaviors are hypothesized to serve self-medication and escape functions (Anderson et al., 2006; Cappell & Greeley, 1987; Cooper et al.,1995; Heatherton & Baumeister, 1991). This notion is supported by numerous studies of sexual assault survivors where high levels of psychological distress were associated with more alcohol-related problems and disordered eating (Collins et al., 2014; Dansky et al., 1997; Dubosc et al., 2012; Grayson

& Nolen-Hoeksema, 2005; Holzer et al., 2008; Lindgren et al., 2012; Ullman et al., 2005). Consistent with previous research as well as study hypotheses, experiencing more depressive symptoms was associated with more hazardous drinking and disordered eating in the present study.

Consistent with hypotheses, attempts to suppress unwanted thoughts about the sexual assault was associated with more disordered eating. It is possible that survivors who use thought suppression as a coping mechanism may turn to other problematic coping strategies, such as disordered eating, if cognitive avoidance is ineffective at reducing stress. Additionally, it was hypothesized that attempts to suppress unwanted thoughts would be related to more hazardous drinking among survivors. Although this hypothesis was supported at the bivariate level, it was only partially supported in the final path analyses. Specifically, greater thought suppression was associated more hazardous drinking in the theoretical models. However, modified models included an additional path from thought suppression to depressive symptoms, which fit the data better. In the final path model with the full sample, which did not include stigmatizing social reactions, greater use of thought suppression was associated with more hazardous drinking. However, this association was not significant in the final path model which included both enacted and internalized stigmatization. Thought suppression may exert its influence on hazardous drinking indirectly through its effects on depression. This would be consistent with previous research on the rebound effect of thought suppression. Specifically, research has found that thought suppression paradoxically results in increased accessibility of the unwanted thoughts, thereby leading to increased rumination and

psychological distress (Lane & Wegner, 1999; Wegner et al., 1987; Wegner & Zanakos, 1994).

Sexual assault survivors experience more physical health problems than women without assault histories, and this is likely due to increased psychological distress (Campbell et al., 2008; Eadie et al., 2008; Pegram & Abbey, 2016; Zoellner et al., 2000). Psychological distress may lead to health problems by impairing immune system functioning and dysregulating inflammatory responses (Dutton et al., 2006; Woods et al., 2005). This study found that survivors who experienced more depressive symptoms reported more physical health symptoms, such as headaches, back pain, pain or problems during sexual intercourse, and gastrointestinal issues. Thus, this hypothesis was supported and coincides with previous research.

Additionally, survivors who utilized thought suppression as a coping mechanism experienced more physical health symptoms; thus, this hypothesis was supported. Thought suppression may adversely affect health status because it impedes cognitive and emotional processing of the assault, which may prolong recovery (Lumley et al., 2011; Petrie et al., 1998).

Study 2 Summary of Findings

Exposure to sexual assault stigmatization elicits negative affect. Study 2 experimentally examined the effects of sexual assault stigmatization, as compared to nonsexual crime stigmatization and sexual assault support, on negative affect, alcohol craving, drinking intentions, palatable food craving, and unhealthy eating intentions among a sample of sexual assault survivors. Although overall levels of negative affect

were low, this study found that reading a stimulus in which a sexual assault survivor is stigmatized was associated with higher levels of negative affect than reading a stimulus in which a crime victim is stigmatized and a stimulus in which a sexual assault survivor is supported (supporting Hypothesis 1). Stigmatization can be activated by media coverage and other societal messages, similar to the stimulus developed for this study. Thus, this finding is important for understanding how survivors' exposure to sexual assault stigmatization activates state-level negative affect.

Unfortunately, it is also common for survivors to personally receive stigmatizing social reactions like the ones depicted in this study. For example, in Study 1 of this dissertation, half of sexual assault survivors who disclosed the assault received at least one stigmatizing reaction. This finding emphasizes the damaging impact of stigmatization on affect, especially given the high rates with which survivors are scrutinized by others. Moreover, this finding supports previous research linking negative social reactions and psychological symptomatology, such as greater posttraumatic stress and lower self-esteem (Ullman, 2000). The finding that sexual assault stigmatization was associated with more negative affect than the support condition is somewhat consistent with past research on the differential effects of positive and negative social reactions. Specifically, receiving positive social reactions is not especially effective at mitigating psychological distress, whereas receiving negative social reactions has been clearly shown to exacerbate distress (Ullman, 1999; Ullman, 2000).

Sexual assault stigmatization interacts with coping motives in predicting drinking and eating outcomes. For all the experimental conditions, usual drinking to

cope motives were associated with more alcohol craving as well as drinking intentions. Drinking to cope had the strongest effects on alcohol outcomes for the sexual assault stigma condition. Specifically, the relationship between drinking to cope and alcohol craving was stronger for the sexual assault stigma condition than the support condition (partially supporting Hypothesis 2). In addition, the relationship between drinking to cope and drinking intentions was stronger for the sexual assault stigma condition as compared to the crime stigma condition as well as the support condition (supporting Hypothesis 3).

Across experimental conditions, usual eating to cope with stress motives were associated with more unhealthy food craving and eating intentions. Contrary to Hypothesis 4, these effects were not stronger for women in the sexual assault stigma condition as compared to the other conditions. However, there was an interactive effect in predicting unhealthy eating intentions. Specifically, the relationship between eating to cope and unhealthy eating intentions was stronger for the sexual assault stigma condition as compared to the crime stigma condition (partially supporting Hypothesis 5).

In summary, exposure to sexual assault stigmatization triggered negative affect among survivors. Some of these individuals, particularly those who reported more drinking/ eating to cope motives in general, experienced more alcohol craving and reported more drinking and eating intentions, potentially as a means to self-medicate. Regulating stigma-related stress may have temporarily altered participants' motives for drinking and eating. This finding is consistent with previous correlational research that has found associations between sexual assault survivors' distress and health risk behaviors (Collins et al., 2014; Dansky et al., 1997; Dubosc et al., 2012; Grayson & Nolen-

Hoeksema, 2005; Holzer et al., 2008; Lindgren et al., 2012; Ullman et al., 2005). Surprisingly, this association was not found for palatable food craving. However, food craving was the only outcome variable not bivariately associated with negative affect. A more sophisticated analysis which includes negative affect in the prediction of food craving may further elucidate this finding.

Strengths

These studies have some notable strengths. By employing both correlational and experimental methodologies, this dissertation was able to investigate sexual assault survivors' experiences with stigmatization and how these experiences impact health. Although previous correlational research has documented adverse mental health effects of stigmatization among survivors, few studies have examined specific mechanisms through which stigmatization hinders recovery. Additionally, previous research has found disproportionately high rates of health risk behaviors among sexual assault survivors, but few studies have examined these health outcomes in relation to stigmatization. Study 1 makes an important contribution to this body of research by utilizing a novel theoretical framework specifying the importance of sexual assault stigmatization in relation to physical health symptoms, hazardous drinking, and disordered eating. In addition, to this author's knowledge, Study 2 is the first study to utilize an experimental design to investigate how sexual assault stigmatization impacts survivors' affect and regulation of health behaviors. Other strengths of these studies include the large sample sizes, diversity of participant socioeconomic backgrounds, and pilot testing of experimental stimuli.

Limitations

Study 1 participants were sexually assaulted 7-8 years ago on average. The amount of time between the assault and the current study could have impaired participants' ability to recall their experiences; therefore, recall bias is a significant limitation of the current study. In addition, Study 1 relied on cross-sectional, correlational data, which precludes causal inferences about the variables in this study. For instance, this study proposed that stigmatization adversely impacts health through secrecy, avoidance, and depression. In contrast, experiencing stigmatization may cause a feedback loop whereby survivors who socially withdraw and utilize avoidance coping strategies are more likely to internalize stigma. Similarly, there could be a feedback loop between many of the health outcomes in this study. For instance, in contrast to what was proposed in this study, experiencing physical health problems and/ or engaging in health risk behaviors could exacerbate depressive symptoms (versus depressive symptoms contributing to the development of those symptoms). This study also did not investigate how receiving stigmatizing social reactions could impact internalization of stigma, and how internalization of stigma could impact future disclosure decisions and social withdrawal. Determining the directionality of effects of enacted stigma and internalized stigma is crucial for understanding the negative sequelae of these experiences. To address the methodological limitations of cross-sectional research, a longitudinal design which recruits survivors soon after their assault, potentially from hospitals and/ or rape crisis centers, and follows them over time, is needed to understand temporal ordering of how these processes unfold.

Another limitation of Study 1 included the use of empirically-based criteria (modification indices) to determine if inclusion of additional paths would improve model fit. Use of modification indices is atheoretical, capitalizes on chance, and increases risk of Type I error (Kline, 2015). However, this approach was deemed acceptable because the theoretical model was novel, untested in prior studies, and exploratory. Additionally, respecification of the model based on modification indices was only done if the suggested paths were theoretically plausible. Replication of these findings is needed to bolster the predictive validity of the final model.

Study 2 provides a new paradigm for experimentally investigating sexual assault stigmatization. Although this approach shows some initial promise, replication is needed and researchers should continue to explore other methods for inducing sexual assault stigmatization. The stimulus may have evoked some level of stress, however it is unclear how reading about another sexual assault survivor being stigmatized relates to survivors' own experiences of stigmatization. In addition, the drinking and eating intentions tasks were developed for this study, however it is unclear how well these tasks map onto actual drinking/ eating behavior. This could be more precisely studied in an in-person laboratory experiment where participants make real drink/ snack selections.

Directions for Future Research

These findings suggest that secrecy is a response to stigma for many survivors of sexual assault. Further, survivors may utilize maladaptive strategies to conceal their assault, such as avoidance coping and thought suppression, which can eventually lead to adverse health consequences. However, because this is the first study to apply Lane

and Wegner's (1995) secrecy model to sexual assault recovery, additional studies are needed to replicate these findings. Further, future studies should investigate when it is beneficial to reveal versus conceal one's sexual assault status. Kelly and McKillop (1996) argue that there are trade-offs to revealing secrets and that it is probably beneficial to reveal the secret if 1) it is distressing and 2) an appropriate confidant is available. However, revealing secrets to an unsupportive confidant may exacerbate symptomatology. Future studies should explore alternative ways to help sexual assault survivors whose experiences with stigmatization preclude them from eliciting social support and expressing emotions. In this case, emotional disclosure in the form of writing may have a compensatory effect for survivors. For example, one study utilized Pennebaker's (1997) written emotional disclosure methodology, which involves writing about a stressful experience for 15 to 30 minutes a day for several days, and found that written emotional disclosure compensated for inadequate social support among cancer patients (Zakowski, Ramati, Morton, Johnson, & Flanigan, 2004). Specifically, written emotional disclosure about cancer emotions (versus a neutral, nonemotional topic) buffered the impact of high levels of social constraints on psychological distress such that participants with high levels of social constraints who wrote about their emotions exhibited similar levels of distress as participants with low levels of social constraints. A similar methodological approach could be utilized to examine if written emotional disclosure is beneficial for sexual assault survivors who conceal their experience because of stigma.

Factors that may contribute to internalization of sexual assault stigma warrant further investigation. For example, one study found that women who were sexually

assaulted in adulthood felt more stigmatized if they had a history of childhood sexual abuse (Gibson & Leitenberg, 2001). Other potential contributing factors include attributions of responsibility (survivors who feel more personally responsible for the incident may feel more stigma); awareness of negative sexual assault stereotypes/ rape myths; receiving negative social reactions to disclosure; characteristics of the assault; relationship to the perpetrator; cumulative victimization experiences (including childhood abuse, other adult sexual victimization experiences, intimate partner violence, and other traumatic life events); and cultural ideologies regarding women, sexual behavior, and sexual assault.

Applying the preoccupation model of secrecy (Lane & Wegner, 1995), future studies could assess in the moment mechanisms through which stigmatization leads to negative health behaviors. Some of the assumptions of this model, particularly processes related to thought suppression, cannot be accurately tested with cross-sectional research. Efforts to suppress intrusive thoughts is hypothesized to sequentially instigate a paradoxical increase in intrusive thoughts; this process would be better assessed with an experimental design. Despite the complementary design of Study 2, an online experimental study allows for limited measurement of these processes. Future in-laboratory studies could have sexual assault survivors participate in an experimental thought suppression task and then assess intrusive thoughts, as measured by a cognitive bias task and/ or participants' self-reports. Future experimental studies also could explore how to most effectively activate survivors' feelings of stigmatization. Other experimental manipulations could include watching a video stimulus or describing their own

stigmatization experiences. Researchers have found that participation in trauma-focused interview and experimental studies is unlikely to induce long-term distress (Griffin, Resnick, Waldrop, & Mechanic, 2003; Rabenhorst, 2006). However, researchers should take precautions to minimize potential psychological risks of participating in a sexual assault-focused experiment, such as providing participants with clinical resources and informing them that they may be asked to describe their assault, that they may experience discomfort or distress, and that they can quit the study at any time.

Implications

Findings from these studies demonstrate the destructive health outcomes that may emerge as a result of sexual assault survivors' experiences with enacted and internalized stigmatization. These results have potentially important social and clinical implications. Intervening in stigma following sexual assault is of particular importance for preventing deleterious health consequences. Clinicians should assess survivors' level of stigmatization which may help them identify those at greater risk of avoidance-based coping. It is important for clinicians to help survivors develop skills to attenuate distress associated with stigma and confront cognitions and emotions related to the assault. Internalized stigma may develop as a result of survivors' awareness of negative sexual assault stereotypes as well as their causal attributions about the assault. Thus, therapeutic modalities that challenge these cognitions, such as attribution retraining, may be useful in reducing stigma. Attribution retraining involves modifying maladaptive beliefs through "corrective feedback, new information, and counterargument" (Massad & Hulsey, 2006, p. 202).

Treatment-seeking survivors often experience secondary victimization from formal support providers, such as law enforcement, medical personnel, and college administrators (Starzynski, Ullman, Filipas, & Townsend, 2005; Symonds, 1980; Ullman, 1999). Thus, it is imperative to provide education and skills-training interventions to formal support providers who are the first responders to many survivors, and often respond more negatively than informal support providers (e.g., friends, family; Foynes & Freyd, 2011; Kennedy et al., 2012; Starzynski et al., 2005; Ullman, 1999). Specifically, formal support providers need training on stigmatization and its role in recovery in order to effectively respond to survivors. Further, ethnic minority and socioeconomically disadvantaged survivors may be especially vulnerable to receiving stigmatizing reactions from formal support providers; thus, education and training efforts should be culturally sensitive (Jacques-Tiura et al., 2010; Kennedy et al., 2012).

Mass media coverage of sexual assault is often victim-blaming and perpetuates stigma (Easteal et al., 2015). Thus, effective anti-rape media campaigns are imperative for shifting societal norms regarding sexual assault. Campaigns utilizing social media may be particularly efficacious at mobilizing younger generations' engagement on the issue (Li, Kim, & O'Boyle, 2017). Although the topic of sexual assault has received much social media attention recently, including the Time's Up and #MeToo movements, researchers and activists must continue to find ways to sustain social intervention efforts over time and to find long-term policy solutions to prevent sexual violence. In addition to preventing sexual assault, social interventions should aim to ameliorate the stigma suffered by survivors. Communication campaigns could potentially reduce stigma by creating

awareness about sexual assault, dispelling misconceptions that perpetuate stigma, shifting culpability from victims to perpetrators, and improving public attitudes about survivors.

APPENDIX A

Demographic Questionnaire

We would like to ask some general background questions. This helps us determine if people with different types of backgrounds have similar or different experiences. Please try to answer all questions.

1. What is your gender?
   - Male
   - Female

2. What is your age? ____

3. What is your ethnicity?
   - African American/ Black
   - Arabic or Middle Easterner
   - Asian or Pacific Islander
   - Caucasian/ White
   - Hispanic
   - Native American/ American Indian
   - Multiracial
   - Other: _____

4. What is your highest level of education?
   - Some high school
   - High school graduate (or GED)
   - Vocational/ technical degree
   - Some college
   - Bachelor's degree
   - Master's degree
   - Professional or doctoral degree (Ph.D., M.D., D.D.S, J.D., etc.)

5. Which of the following best describes you?
   - I am a full-time student.
   - I am a part-time student.
   - I am not currently a student.

6. What is your employment status?
   - Employed, working 1-39 hours per week
   - Employed, working 40 or more hours per week
   - Not employed, looking for work
   - Not employed, NOT looking for work

Retired
Disabled, not able to work

7. How many people live in your household (including yourself)? ___

8. What is your annual household income before taxes?
Less than $20,000
$20,000 to $34,999
$35,000 to $49,999
$50,000 to $74,999
$75,000 to $99,999
$100,000 to $149,999
$150,000 to $199,999
$200,000 or more

9. What is your current relationship status?
Single, not dating exclusively
Single, in an exclusive dating relationship
Engaged
Married
Living with partner but not engaged or married

9. Do you consider yourself to be?
Heterosexual/ straight
Lesbian
Bisexual
Other: ____

APPENDIX B

Sexual Assault Victimization: Sexual Experiences Survey

The following questions concern sexual experiences that you may have had that were unwanted. We know that these are personal questions, so we do not ask your name or other identifying information. Your information is completely confidential. We hope that this helps you to feel comfortable answering each question honestly.

We want you to think about experiences that happened since you were 14 years old. Check the box showing the number of times each experience has happened to you. If several experiences occurred on the same occasion—for example, if one night someone told you some lies and had sex with you when you were drunk, you would check both boxes a and c.

Response options: 0- never to 5- five or more times

1. **Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent *(but did not attempt sexual penetration)* by:**
    a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
    b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
    c. Taking advantage of me when I was too drunk or out of it to stop what was happening.
    d. Threatening to physically harm me or someone close to me.
    e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
2. **Someone had oral sex with me or made me have oral sex with them without my consent by:**
    a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
    b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
    c. Taking advantage of me when I was too drunk or out of it to stop what was happening.
    d. Threatening to physically harm me or someone close to me.
    e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
3. **A man put his penis into my vagina, or someone inserted fingers or objects without my consent by:**

   a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
   b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
   c. Taking advantage of me when I was too drunk or out of it to stop what was happening.
   d. Threatening to physically harm me or someone close to me.
   e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
4. **A man put his penis into my butt, or someone inserted fingers or objects without my consent by:**
   a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
   b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
   c. Taking advantage of me when I was too drunk or out of it to stop what was happening.
   d. Threatening to physically harm me or someone close to me.
   e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
5. **Even though it did not happen, someone TRIED to have oral sex with me, or make me have oral sex with them without my consent by:**
   a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
   b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
   c. Taking advantage of me when I was too drunk or out of it to stop what was happening.
   d. Threatening to physically harm me or someone close to me.
   e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
6. **Even though it did not happen, a man TRIED to put his penis into my vagina, or someone tried to stick in fingers or objects without my consent by:**
   a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
   b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
   c. Taking advantage of me when I was too drunk or out of it to stop what was happening.
   d. Threatening to physically harm me or someone close to me.
   e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.

7. **Even though it did not happen, a man TRIED to put his penis into my butt, or someone tried to stick in objects or fingers without my consent by:**
    a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
    b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
    c. Taking advantage of me when I was too drunk or out of it to stop what was happening.
    d. Threatening to physically harm me or someone close to me.
    e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.

Assault Characteristics and Severity

You are receiving this next set of questions because you reported at least one unwanted sexual experience. We want you ask you a few follow-up questions about the incident and your experiences afterwards. If you experienced more than one unwanted sexual experience, please answer the questions below about the WORST incident.

1. How many years ago did the incident occur? ____

2. What was the sex of the person or persons who did them to you?
   Female only
   Male only
   Both females and males

3. Which of the following best describes your relationship with the person?
   Stranger
   Acquaintance or casual friend
   Close friend
   Coworker
   First date or casual date
   Steady dating partner
   Fiancé
   Spouse
   Ex dating partner
   Ex-spouse
   Relative

We would now like to find out a little more about the unwanted sexual activity. Please remember that your name is not on the interview and no one else will ever see your answers.

4. Prior to the unwanted sexual experience, had you previously engaged in any type of consensual sexual activity with this person? Consensual sexual activity includes holding hands and kissing as well as intercourse and sex acts when you both wanted it.
   No
   Yes

5. How intoxicated were you?
   Not at all
   A little
   Somewhat
   Quite
   Very

6. How intoxicated was the other person?
   Not at all
   A little
   Somewhat
   Quite
   Very

7. To what extent did you think your life was in danger?
   Not at all
   A little
   Somewhat
   Quite
   Very

8. Which number best describes the degree of physical force the person used?
   1- Not at all physically forceful to 7- Very physically forceful

9. Did the person use or threaten to use a weapon?
   No
   Yes

10. Did you sustain any physical injuries from the incident?
    No
    Yes

11. To what extent were you physically injured during the unwanted sexual activity?
    Not at all
    A little
    Somewhat
    Quite a bit
    Very much

12. Did you seek medical attention, including hospitalization?
    No, never
    Yes, immediately
    Yes, but not immediately

13. Which number best describes the extent to which you consider what happened to be sexual assault?
    1- Definitely not a sexual assault to 7- Definitely a sexual assault

APPENDIX C

Disclosure of Sexual Assault

The next set of questions have to do with the unwanted sexual experience you reported. If you experienced it more than once, please answer the questions about the WORST incident.

Sometimes after this kind of experience, people talk to others about what happened. Please think of people you may have talked to before answering the following questions.

1. Did you tell anyone about what happened with this man?
   No *(skip to next measure)*
   Yes

2. How soon after this happened did you tell someone?
   Immediately
   Hours later
   Days later
   Weeks later
   Months later
   About a year later
   More than one year later

3. How many people did you tell? Please be as exact as possible. _____

4. Whom did you tell? Choose all that apply.
   Mother
   Father
   Sister
   Brother
   Significant other/ spouse
   Other female family member
   Other male family member
   Female friend
   Male friend
   Counselor/ therapist
   Clergy (e.g., pastor/ rabbi/ priest/ imam)
   Police
   Rape crisis center
   Other: _____

Stigmatizing Social Reactions: Social Reactions Questionnaire

After talking about this type of experience, people may react differently toward you in a number or ways. Some of these ways may be helpful and others may not. Please indicate how often have you received each of the following reactions from others to whom you disclosed the incident.

Response options: 0- never to 4- always

Emotional Support/Belief

1. Told you that you were not to blame
2. Told you that you did not do anything wrong
3. Told you it was not your fault
4. Reassured you that you are a good person
5. Held you or told you that you are loved
6. Comforted you by telling you it would be all right or by holding you
7. Spent time with you
8. Listened to your feelings
9. Showed understanding of your experience
10. Reframed the experience as a clear case of victimization
11. Saw your side of things and did not make judgements
12. Was able to really accept your account of your experience
13. Told you he/she felt sorry for you
14. Believed your account of what happened
15. Seemed to understand how you were feeling

Treat Differently (Note: This subscale was used to assess stigmatizing social reactions)

16. Acted as if you were damaged goods or somehow different now
17. Pulled away from you
18. Treated you differently in some way than before you told him/her that made you uncomfortable
19. Avoided talking to you or spending time with you
20. Focused on his/her own needs and neglected yours
21. Said he/she feels you're tainted by this experience

Distraction

22. Told you to stop talking about it
23. Told you to stop thinking about it
24. Tried to discourage you from talking about the experience
25. Told you to go on with your life
26. Encouraged you to keep the experience a secret
27. Distracted you with other things

Take Control

28. Made decisions or did things for you
29. Tried to take control of what you did/decisions you made
30. Said he/she knew how you felt when he/she really did not
31. Told others about your experience without your permission
32. Treated you as if you were a child or somehow incompetent
33. Minimized the importance or seriousness of your experience
34. Made you feel like you didn't know how to take care of yourself

Tangible Aid/Information Support

35. Helped you get medical care
36. Provided information and discussed options
37. Helped you get information of any kind about coping with the experience
38. Took you to the police
39. Encouraged you to seek counseling

Victim Blame

40. Told you that you could have done more to prevent this experience from occurring
41. Told you that you were irresponsible or not cautious enough
42. Told you that you were to blame or shameful because of this experience

Egocentric

43. Expressed so much anger at the perpetrator that you had to calm him/her down
44. Said he/she feels personally wronged by your experience
45. Has been so upset that he/she needed reassurance from you
46. Wanted to seek revenge on the perpetrator

APPENDIX D

Internalized Stigma Scale

Sometimes after people experience an unwanted sexual experience they worry about what other people might think. The following questions ask about various concerns you may have experienced as a result of the experience.

Response options: 1-strongly disagree to 5- strongly agree

1. I feel different from other women because of this experience.
2. I am ashamed that it happened to me.
3. I feel tainted ("dirtied") by this experience.
4. I feel guilty that it happened to me.
5. I feel that this experience is a sign of personal failure
6. I am concerned that other people would think something negative about me if they found out.
7. I am embarrassed about what happened.
8. I am concerned that people would not respect me as much if they were to find out what happened.
9. I am concerned about how other people would react if they were to find out what happened.
10. I am concerned that people would judge me harshly if they were to find out about.
11. I would not want to date someone who had this happen to them.
12. Most of the negative things people think about sexual assault victims are true.
13. I don't blame people for wanting to keep their distance from me when they find out about this experience.
14. I judge myself harshly because of this experience.

<u>Additional Questions:</u>

1. How have your feelings changed since the incident?
   - Decreased a lot over time
   - Decreased some over time
   - Remained the same
   - Increased some over time
   - Increased a lot over time

2. Why do you think your feelings have changed/ remained the same since the incident? Please explain. _____

APPENDIX E

Avoidant Coping: Coping Strategies Inventory Short-Form, Disengagement Coping Subscale

Please take a few moments to think about the unwanted sexual experience you reported. As you read through the following items please answer them based on how you handled the event. Please read each item below and determine the extent to which you used it in handling the event.

Response options: 1- not at all to 5- very much

1. I went along as if nothing were happening.
2. I hoped a miracle would happen.
3. I realized that I was personally responsible for my difficulties and really lectured myself.
4. I spent more time alone.
5. I tried to forget the whole thing.
6. I wished that the situation would go away or somehow be over with.
7. I blamed myself.
8. I avoided my family and friends.
9. I didn't let it get to me; I refused to think about it too much.
10. I wished that the situation had never started.
11. I criticized myself for what happened.
12. I avoided being with people.
13. I avoided thinking or doing anything about the situation.
14. I hoped that if I waited long enough, things would turn out OK.
15. Since what happened was my fault I really chewed myself out.
16. I spent some time by myself.

APPENDIX F

Sexual Assault Secrecy Scale

Please take a few moments to think about the unwanted sexual experience you reported. Sometimes after people experience something like this, they worry about what other people might think. The following questions ask about various concerns you may have experienced as a result of the experience.

Response options: 1- strongly disagree to 5- strongly agree

1. I haven't shared it with anyone.
2. It is a secret.
3. I keep it to myself.
4. I'm often afraid I'll reveal it.
5. It is so private that I would lie if anybody asked me about it.
6. I feel that I have to keep it a secret from my friends.
7. I feel that I have to keep it a secret from my family.
8. I am comfortable telling people about the incident. (r)
9. I am concerned people will find out about my assault.
10. It's fine if people know about it. (r)
11. I feel like I have to hide it.
12. I work hard to keep the incident secret from others.
13. I am very careful whom I tell about the incident.
14. I worry that people who know about the incident will tell others

Additional Questions:

1. How have your feelings changed since the incident?
   Decreased a lot over time
   Decreased some over time
   Remained the same
   Increased some over time
   Increased a lot over time

2. Why do you think your feelings have changed/ remained the same since the incident? Please explain. _____

APPENDIX G

Center for Epidemiological Studies Depression Scale

Below is a list of ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

Response options: 0- rarely or none of the time, 1- some or a little of the time (less than 1 day), 2- occasionally or a moderate amount of time (3-4 days), 3- most or all the time (5-7 days).

During the past week:

1. I was bothered by thing that usually don't bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues even with help from me family or friends.
4. I felt that I was just as good as other people. (r)
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort.
8. I felt hopeful about the future. (r)
9. I thought my life had been a failure.
10. I felt tearful.
11. My sleep was restless.
12. I was happy. (r)
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life. (r)
17. I had crying spells.
18. I felt sad.
19. I felt that people dislike me.
20. I could not get “going.”

APPENDIX H

Thought Suppression: White Bear Thought Suppression Inventory

Please take a few moments to think about the unwanted sexual experience you reported. As you read through the following items, please answer based on thoughts you have about the incident.

Response options: 1- strongly disagree to 5- strongly agree

1. There are things I prefer not to think about.
2. Sometimes I wonder why I have the thoughts I do.
3. I have thoughts that I cannot stop.
4. There are images that come to mind that I cannot erase.
5. My thoughts frequently return to one idea.
6. I wish I could stop thinking of certain things.
7. Sometimes my mind races so fast I wish I could stop it.
8. I always try to put problems out of mind.
9. There are thoughts that keep jumping into my head.
10. Sometimes I stay busy just to keep thoughts from intruding on my mind.
11. There are things that I try not to think about.
12. Sometimes I really wish I could stop thinking.
13. I often do things to distract myself from my thoughts.
14. I have thoughts that I try to avoid.
15. There are many thoughts that I have that I don't tell.

APPENDIX I

Physical Health Symptoms: Patient Health Questionnaire

During the last 4 weeks, how much have you been bothered by any of the following problems?

Response options: 0- not at all bothered, 1- mildly, it did not bother me much, 2- moderately, it was very unpleasant but I could stand it, 3- severely, I could barely stand it

1. Stomach pain
2. Back pain
3. Pain in your arms, legs, or joints (knees, hips, etc.)
4. Feeling tired or having little energy
5. Trouble falling or staying asleep, or sleeping too much
6. Menstrual cramps or other problems with your periods
7. Pain or problems during sexual intercourse
8. Headaches
9. Chest pain
10. Dizziness
11. Fainting spells
12. Feeling your heart pound or race
13. Shortness of breath
14. Constipation, loose bowels, or diarrhea
15. Nausea, gas, or indigestion

APPENDIX J

Hazardous Drinking: Brief Young Adult Alcohol Consequences Questionnaire

For the next set of questions please think about the past 12 months. Indicate whether any of the following things have occurred.

Response options: 0- no, 1- yes

1. While drinking, I have said or done embarrassing things.
2. I have had a hangover (headache, sick stomach) the morning after I had been drinking.
3. I have felt very sick to my stomach or thrown up after drinking.
4. I often have ended up drinking on nights when I had planned not to drink.
5. I have taken foolish risks when I had planned not to drink.
6. I have passed out from drinking.
7. I have found that I needed larger amounts of alcohol to feel any effect, or that I could no longer get high or drunk on the amount that used to get me high or drunk.
8. When drinking, I have done impulsive things I regretted later.
9. I've not been able to remember large stretches of time while drinking heavily.
10. I have driven a car when I knew I had too much to drink to drive safely.
11. I have not gone to work or missed classes at school because of drinking, a hangover, or illness caused by drinking.
12. My drinking has gotten me into sexual situations I later regretted.
13. I have often found it difficult to limit how much I drink.
14. I have become very rude, obnoxious, or insulting after drinking.
15. I have woken up in an unexpected place after heavy drinking.
16. I have felt badly about myself because of my drinking.
17. I have had less energy or felt tired because of my drinking.
18. The quality of my work or school work has suffered because of my drinking.
19. I have spent too much time drinking.
20. I have neglected my obligations to family, work, or school because of drinking.
21. My drinking has created problems between myself and my boyfriend/ girlfriend/ spouse, parents, or other near relatives.
22. I have been overweight because of drinking.
23. My physical appearance has been harmed by my drinking.
24. I have felt like I needed a drink after I'd gotten up (that is, before breakfast).

APPENDIX K

Disordered Eating: Minnesota Eating Behavior Survey

The next set of questions contains a series of statements that you can use to describe your perceptions about eating and your body. You should read each statement and decide how you feel about it.

Response options: 1- definitely false to 4- definitely true

1. I can eat sweets and starches (like potatoes, pasta and bread) without feeling upset or nervous.
2. I often diet to control my weight.
3. My stomach is too big.
4. I eat when I'm upset about things.
5. I have thought about throwing up (vomiting) to lose weight.
6. Sometimes I stuff myself with food.
7. I think a lot about dieting (or losing weight).
8. My thighs are about the right size.
9. Sometimes I completely stop eating for more than a day to control my weight.
10. I feel terribly guilty if I overeat.
11. I am really afraid of gaining weight.
12. The shape of my body is fine.
13. Sometimes I use laxatives (like Ex-Lax or Correctol) to control my weight.
14. My weight is very important to me.
15. Sometimes I eat lots and lots of food and feel like I can't stop.
16. My butt (behind) is too big.
17. I sometimes use diet pills (like Deatrim, Dietac or Acutrim) to control my weight.
18. I'm always wishing I was thinner.
19. I think a lot about overeating (eating a really large amount of food).
20. Sometimes I have a hard time telling if I'm hungry or not.
21. I exercise to control my weight more than other women my age.
22. My hips are just the right size.
23. Sometimes, when I'm with other people, I won't eat much, but later, when I'm alone, I'll eat a lot.
24. I feel fat or stuffed even after eating a normal meal.
25. If I gain a pound, I worry that I will keep gaining more and more weight.
26. Sometimes I make myself throw up (vomit) to control my weight.
27. Sometimes I eat by myself so that others won't know what I'm eating.
28. When I get upset, I'm afraid that I will start eating.
29. I often weight myself to see if I am gaining weight.

30. I sometimes use medicine that makes me lose water (diuretics like Sunril, Aqua-Ban, Pamprin, or Midol PMS) to control my weight.

Weight Preoccupation subscale: items 1, 2, 7, 10, 11, 14, 24, 25, 29
Body Dissatisfaction subscale: items 3, 8, 12, 16, 18, 22
Binge Eating subscale: items 4, 6, 15, 19, 23, 27, 28
Compensatory Behavior subscale: items 5, 9, 13, 17, 26, 30

APPENDIX L

Experimental Stimuli

We are interested in trying to understand how people use the internet as a platform to share their personal experiences, including disclosure of negative life events. We are asking participants to read blog posts written by people who have experienced a negative event, and answer questions about their reactions to the blog. The story may be upsetting to read, but we hope that you will read it carefully and provide honest answers to the questions.

Condition 1: Sexual Assault Stigma

"I Don't Know What to Do Now"
By Nicole January 15

A few months ago, me and a bunch of my friends were having a girls' night out. Towards the end of the night, the guy I was talking to texted me to see if I wanted to hang out. I had a huge crush on him, so we decided to meet up at a local bar and grill. I was really into him, and it seemed like he was really into me too, and we started making out. Since we were hitting it off, he suggested we go back to his place and hang out a little longer. I wasn't so sure about it, but he told me he would give me a ride home after, so I decided to go along.

We got back to his place and started making out some more on his couch. He started trying to take off my pants, but I wasn't ready for that. I told him it was getting late and maybe he should take me home. He just acted like he didn't hear me, and kept kissing me and trying to take off my clothes. He kept telling me how sexy I was to try to get me to have sex. I started doing stuff with him, thinking that if I did, he would leave me alone, but that only made him try harder to get me to have sex. I stopped and told him I wasn't ready for that, but he kept touching me and unbuttoned my pants anyway I was so uncomfortable and shocked about what was happening. At some point my body just froze and I stopped fighting him and we ended up doing it. I felt so gross afterwards. I couldn't believe that we just had sex. I said no over and over again, but he just wouldn't listen.

It's been so hard keeping this to myself, but I feel like people would blame me for it happening. How can I move on with my life and forget this ever happened?

<u>All 4 comments:</u>
Tc813 writes: You went back to his place and led him on… What did you think would happen??

Eq925 writes: How stupid are you… You "froze?"

Lm776 writes: If you're going to be a slut, you gotta accept the consequences. Play stupid games, get stupid prizes!

Ts515 writes: I kind of feel bad for this girl, but at the same time, she sort of brought this on herself.

Condition 2: Nonsexual Crime Stigma

"I Don't Know What to Do Now"
By Nicole January 15, 2017

A few months ago, me and a bunch of my friends were having a girls' night out. Towards the end of the night, the guy I was talking to texted me to see if I wanted to hang out. I had a huge crush on him, so we decided to meet up at a local bar and grill. I was really into him, and it seemed like he was really into me too, and we started making out. Since we were hitting it off, he suggested we go back to his place and hang out a little longer. I wasn't so sure about it, but he told me he would give me a ride home after, so I said OK, but I had to make a quick phone call first.

But when I got back to the table, he was gone... I waited for like 15 minutes and then when it was totally obvious he wasn't coming back, I called one of my friends to give me a ride home. The next day, I noticed an e-mail that said I had to pay an overdraft fee. It turned out that the guy put his entire restaurant tab, including his friends' tabs, on MY debit card. It was a huge bill and used all the money (and more) from my back account. After I found out, I tried calling to confront him, but he gave me a fake phone number. I felt so used and betrayed. What kind of person would pretend to like someone just to steal from them? To make matters worse, my rent and utility bills are due soon and I don't have any money in my back account. I could ask my parents or friends for help, but I'm too embarrassed to tell them why I need the money.

It's been so hard keeping this to myself, but I feel like people would blame me for it happening. How can I move on with my life and forget this ever happened?

All 4 comments:
Tc813 writes: You were too trusting and naive... What did you think would happen??

Eq925 writes: How stupid are you... You left your wallet with some guy you barely knew?

Lm776 writes: If you're going to be a slut, you gotta accept the consequences. Play stupid games, get stupid prizes!

Ts515 writes: I kind of feel bad for this girl, but at the same time, she sort of brought this on herself.

Condition 3: Sexual Assault Support

"I Don't Know What to Do Now"
By Nicole January 15, 2017

A few months ago, me and a bunch of my friends were having a girls' night out. Towards the end of the night, the guy I was talking to texted me to see if I wanted to hang out. I had a huge crush on him, so we decided to meet up at a local bar and grill. I was really into him, and it seemed like he was really into me too, and we started making out. Since we were hitting it off, he suggested we go back to his place and hang out a little longer. I wasn't so sure about it, but he told me he would give me a ride home after, so I decided to go along.

We got back to his place and started making out some more on his couch. He started trying to take off my pants, but I wasn't ready for that. I told him it was getting late and maybe he should take me home. He just acted like he didn't hear me, and kept kissing me and trying to take off my clothes. He kept telling me how sexy I was to try to get me to have sex. I started doing stuff with him, thinking that if I did, he would leave me alone, but that only made him try harder to get me to have sex. I stopped and told him I wasn't ready for that, but he kept touching me and unbuttoned my pants anyway. I was so uncomfortable and shocked about what was happening. At some point my body just froze and I stopped fighting him and we ended up doing it. I felt so gross afterwards. I couldn't believe that we just had sex. I said no over and over again, but he just wouldn't listen.

It's been so hard keeping this to myself, but I feel like people would blame me for it happening. How can I move on with my life and forget this ever happened?

All 4 comments:
Tc813 writes: I believe you and I am so sorry this happened to you.

Eq925 writes: I'm glad you're sharing your story. You're not alone.

Lm776 writes: Please don't blame yourself. You didn't ask for this to happen. It's not your fault.

Ts515 writes: How you're feeling is understandable. I'm here if you need someone to talk to.

Follow-up Questions

One of the things we are trying to understand is how people respond to disclosure of negative life events on the internet. Now, we would like to ask you some questions about your reactions to the blog post you read earlier.

Response options: 1- not at all to 5- very much

1. How stigmatizing, blaming, or negative do you think the comments to the blog post were?

2. If the woman read the comments to her blog post, how upset do you think she would be?

Response options: 1- definitely not to 5- definitely yes

3. Can you relate to the woman's experience in her story?

4. Can you relate to the woman's experience of receiving those types of reactions?

5. What comment would you like to leave this person? _____

APPENDIX M

Pilot Testing of Experimental Stimuli: Follow-up Questions

We are interested in a lot of things. One of the things we are trying to understand is how people respond to disclosure of negative life events on the internet. Now, I would like to ask you a few questions about the blog post you read earlier.

Open-ended questions:

1. Can you tell me what the blog post was about?
2. What was realistic about the blog post?
3. What was unrealistic about the blog post?
4. Could you imagine reading a blog post like that?
5. Can you tell me about the content of the comments to the blog post?
6. What was realistic about the comments?
7. What was unrealistic about the comments?
8. Could you imagine reading comments to a blog post like that?

Response options: 1- not at all to 5- very

9. How did reading the blog post make you feel?
   a. Angry
   b. Sad
   c. Embarrassed
   d. Relieved
   e. Tired
   f. Anxious
   g. Happy
   h. Indifferent

Response options: 1- not at all to 5- very much

10. How stigmatizing, blaming, or negative do you think the comments to the blog post were?
11. If the woman read the comments to her blog post, how upset do you think she would be?

Response options: 1- definitely not to 5- definitely

12. Can you relate to the woman's experience in her story?
13. Can you relate to the woman's experience of receiving those types of reactions?

14. What comment would you like to leave this person? _____

APPENDIX N

Coping Motives to Drink: Drinking Motives Questionnaire- Revised, Coping Motives Subscale

Below are a list of reasons people sometimes give for drinking alcohol. Thinking of all the times you drink, how often would you say that you drink for each of the following reasons?

Response options: 1- never/ almost never to 4- always/ almost always

1. To relax
2. To forget your worries
3. Because it helps when you feel depressed or nervous
4. To cheer up when you're in a bad mood

APPENDIX O

Coping Motives to Eat: Palatable Eating Motives Scale, Coping Motives Subscale

Below is a list of reasons that people sometimes give for eating tasty foods and drinks such as:

- *Sweets like chocolate, donuts, cookies, cake, candy, ice cream, other desserts,*
- *Salty snacks like chips, pretzels, and crackers,*
- *Fast foods like hamburgers, cheeseburgers, pizza, fried chicken, and french fries,*
- *Sugary drinks like soda, sweet tea, milkshakes, and sweet coffee drinks.*

Thinking of all the times you ate these kinds of foods/ drinks, how often would you say that you ate/ drank them for each of the following reasons? Choose the answer that best describes you.

Response options: 1- never/ almost never to 4- always/ almost always

1. To relax
2. To forget your worries
3. Because it helps when you feel depressed or nervous
4. To cheer up when you're in a bad mood

APPENDIX P

Alcohol Craving: Alcohol Urge Questionnaire

Listed below are questions that ask about your feelings about drinking. The words "drinking" and "have a drink" refer to having a drink containing alcohol, such as beer, wine, or liquor. Please indicate how much you agree or disagree with each of the following statements. We are interested in how you are thinking or feeling right now, at this very moment.

Response options: 1- strongly disagree to 7- strongly agree

1. All I want to do now is have a drink.
2. I do not need to have a drink right now. (r)
3. It would be difficult to turn down a drink this minute.
4. Having a drink now would make things seem just perfect.
5. I want a drink so bad I can almost taste it.
6. Nothing would be better than having a drink right now.
7. If I had the chance to have a drink, I don't think I would drink it. (r)
8. I crave a drink right now.

APPENDIX Q

Food Craving: General Food Cravings Questionnaire- State

Listed below are questions that ask about your feelings about eating tasty foods. Please indicate how much you agree or disagree with each of the following statements. We are interested in how you are thinking or feeling right now, at this very moment.

Response options: 1- strongly disagree to 5- strongly agree

1. I'm craving tasty food.
2. I have an urge for tasty food.
3. I have an intense desire to eat something tasty.
4. My desire to eat something tasty seems overpowering.
5. I know I'm going to keep on thinking about tasty food until I actually have it.
6. If I had something tasty to eat, I could not stop eating it.
7. If I were to eat what I'm desiring, I am sure my mood would improve.
8. Eating something tasty would feel wonderful.
9. Eating something tasty would make things just perfect.

Intense Desire to Eat subscale: items 1-3
Obsessive Preoccupation with Food/ Lack of Control over Eating subscale: items 4-6
Anticipation of Positive Reinforcement that May Result from Eating subscale: items 7-9

APPENDIX R

Eating Intentions

Below are images of a variety of foods. For each of these items, please indicate the quantity you would want to consume right now.

Response options: 0/ I do not want this item, 1, 2, 3, 4, 5 or more servings

APPENDIX S

Drinking Intentions

Below are images of a variety of beverages. For each type of beverage, please indicate the quantity/ number of drinks you would want to consume right now.

Response options: 0/ I do not want this item, 1, 2, 3, 4, 5 or more servings

APPENDIX T

Positive and Negative Affect Scale

This scale consists of a number of words that describe different feelings and emotions. Indicate to what extent you feel this way right now, that is, at the present moment.

Response Options: 1- very slightly or not at all to 5- extremely

1. Interested
2. Distressed
3. Excited
4. Upset
5. Strong
6. Guilty
7. Scared
8. Hostile
9. Enthusiastic
10. Proud
11. Irritable
12. Alert
13. Ashamed
14. Inspired
15. Nervous
16. Determined
17. Attentive
18. Jittery
19. Active
20. Afraid
21. Angry

Negative affect: items 2, 4, 6, 7, 8, 11, 13, 15, 18, 20, 21
Positive affect: items 1, 3, 5, 9, 10, 12, 14, 16, 17, 19

REFERENCES

Abbey, A., BeShears, R., Clinton-Sherrod, A.M., & McAuslan, P. (2004). Similarities and differences in women's sexual assault experiences based on tactics used by the perpetrator. *Psychology of Women Quarterly*, *28*(4), 323-332.

Abbey, A., & Jacques-Tiura, A.J. (2011). Sexual assault perpetrators' tactics: Associations with their personal characteristics and aspects of the incident. *Journal of Interpersonal Violence*, *26*(14), 2866-2889.

Abbey, A., Parkhill, M.R., & Koss, M.P. (2005). The effects of frame of reference on responses to questions about sexual assault victimization and perpetration. *Psychology of Women Quarterly, 29,* 364-373.

Abbey, A., Ross, L.T., McDuffie, D., & McAuslan, P. (1996). Alcohol and dating risk factors for sexual assault among college women. *Psychology of Women Quarterly, 20,* 147-169.

Abramowitz, J.S., Tolin, D.F., & Street, G.P. (2001). Paradoxical effects of thought suppression: A meta-analysis of controlled studies. *Clinical Psychology Review*, *21*(5), 683-703.

Acierno, R., Brady, K., Gray, M., Kilpatrick, D.G., Resnick, H., & Best, C. (2002). Psychopathology following interpersonal violence: A comparison of risk factors in older and younger adults. *Journal of Clinical Geropsychology, 8*(1), 13-23.

Addison, C.C., Campbell-Jenkins, B.W., Sarpong, D.F., Kibler, J., Singh, M., Dubbert, P., ... & Taylor, H. (2007). Psychometric evaluation of a Coping Strategies Inventory Short-Form (CSI-SF) in the Jackson Heart Study cohort. *International Journal of Environmental Research and Public Health*, *4*(4), 289-295.

Ahrens, C.E. (2006). Being silenced: The impact of negative social reactions on the disclosure of rape. *American Journal of Community Psychology, 38*, 263–274.

American College Health Association (ACHA; 2007). Position statement on preventing sexual violence on college and university campuses. Retrieved from http://www.acha.org/ info_resources/ACHA_SexualViolence_Statement07.pdf.

Amstadter, A.B., & Vernon, L.L. (2008). A preliminary examination of thought suppression, emotion regulation, and coping in a trauma exposed sample. *Journal of Aggression, Maltreatment & Trauma*, *17*(3), 279–295.

Anderson, D.A., Simmons, A.M., Martens, M.P., Ferrier, A.G., & Sheehy, M.J. (2006). The relationship between disordered eating behavior and drinking motives in college-age women. *Eating Behaviors*, *7*(4), 419-422.

Au, T.M., Dickstein, B.D., Comer, J.S., Salters-Pedneault, K.S., & Litz, B.T. (2013). Co-occurring posttraumatic stress and depression symptoms after sexual assault: A latent profile analysis. *Journal of Affective Disorders, 149*, 209-216.

Black, M.C., Basile, K.C., Breiding, M.J., Smith, S.G., Walters, M.L., Merrick, M.T., ... Stevens, M.R. (2011). The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Summary Report. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

Bohn, M.J., Krahn, D.D., & Staehler, B.A. (1995). Development and initial validation of a measure of drinking urges in abstinent alcoholics. *Alcoholism: Clinical and Experimental Research*, *19*(3), 600-606.

Borja, S.E., Callahan, J.L., & Long, P.J. (2006). Positive and negative adjustment and social support of sexual assault survivors. *Journal of Traumatic Stress*, *19*(6), 905-914.

Brewerton, T.D. (2007). Eating disorders, trauma, and comorbidity: Focus on PTSD. *Eating Disorders*, *15*(4), 285-304.

Brewin, C.R., Andrews, B., & Valentine, J.D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology, 68*(5), 748-766.

Brochu, P.M., & Dovidio, J.F. (2014). Would you like fries (380 calories) with that? Menu labeling mitigates the impact of weight-based stereotype threat on food choice. *Social Psychological and Personality Science*, *5*(4), 414-421.

Brown, A.L., Testa, M., & Messman-Moore, T.L. (2009). Psychological consequences of sexual victimization resulting from force, incapacitation, or verbal coercion. *Violence Against Women*, *15*(8), 898–919.

Burgess, E.E., Turan, B., Lokken, K.L., Morse, A., & Boggiano, M.M. (2014). Profiling motives behind hedonic eating. Preliminary validation of the Palatable Eating Motives Scale. *Appetite*, *72*, 66-72.

Campbell, R., Dworkin, E., & Cabral, G. (2009). An ecological model of the impact of sexual assault on women's mental health. *Trauma, Violence, and Abuse, 10*(3), 225-246.

Campbell, R., Greeson, M.R., Raja, Bybee, D., & Raja, S. (2008). The co-occurrence of

childhood sexual abuse, adult sexual assault, intimate partner violence, and sexual harassment: A mediational model of posttraumatic stress disorder and physical health outcomes. *Journal of Consulting and Clinical Psychology, 76*(2), 194-207.

Campbell, J., & Soeken, K. (1999). Forced sex and intimate partner violence: Effects on women's health. *Violence Against Women*, *5*(9), 1017–1035.

Cappell, H., & Greeley, J. (1987). Alcohol and tension reduction: An update on research and theory. In H.T. Blane & K.E. Leonard (Eds.). *Psychological theories of drinking and alcoholism* (pp. 15-54). New York: Guilford Press.

Cole, S.W., Kemeny, M.E., Taylor, S.E., Visscher, B.R., & Fahey, J.L. (1996). Accelerated course of human immunodeficiency virus infection in gay men who conceal their homosexual identity. *Psychosomatic Medicine*, *58*(3), 219-231.

Collins, B., Fischer, S., Stojek, M., & Becker, K. (2014). The relationship of thought suppression and recent rape to disordered eating in emerging adulthood. *Journal of Adolescence*, *37*(2), 113–121.

Compas, B.E., Connor-Smith, J.K., Saltzman, H., Thomsen, A.H., & Wadsworth, M.E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin*, *127*(1), 87-127.

Conger, J.J. (1956). Reinforcement theory and the dynamics of alcoholism. *Quarterly Journal of Studies on Alcohol, 17,* 296-305.

Cooper, M.L. (1994). Motivations for alcohol use among adolescents: Development and validation of a four-factor model. *Psychological assessment*, *6*(2), 117-128.

Cooper, M.L., Frone, M.R., Russell, M., & Mudar, P. (1995). Drinking to regulate

positive and negative emotions: A motivation model of alcohol use. *Journal of Personality and Social Psychology, 69*(5), 990-1005.

Dansky, B.S., Brewerton, T.D., Kilpatrick, D.G., & O'Neil, P.M. (1997). The National Women's Study: relationship of victimization and posttraumatic stress disorder to bulimia nervosa. *International Journal of Eating Disorders*,*21*(3), 213-228.

Deitz, M.F., Williams, S.L., Rife, S.C., & Cantrell, P. (2015). Examining cultural, social, and self-related aspects of stigma in relation to sexual assault and trauma symptoms. *Violence Against Women*, *21*(5), 598–615.

Demaris, A., & Kaukinen, C. (2005). Violent victimization and women's mental and physical health: Evidence from a national sample. *Journal of Research in Crime and Delinquency, 42*(4), 384-411.

Drossman, D.A., Talley, N.J., Leserman, J., Olden, K.W., & Barreiro, M.A. (1995). Sexual and physical abuse and gastrointestinal illness: Review and recommendations. *Annals of Internal Medicine, 123,* 782-794.

Dubosc, A., Capitaine, M., Franko, D.L., Bui, E., Brunet, A., Chabrol, H., & Rodgers, R.F. (2012). Early adult sexual assault and disordered eating: The mediating role of posttraumatic stress symptoms. *Journal of Traumatic Stress*, *25*(1), 50-56.

Dutton, M.A., Green, B.L., Kaltman, S.I., Roesch, D.M., Zeffiro, T.A., & Krause, E.D. (2006). Intimate partner violence, PTSD, and adverse health outcomes. *Journal of Interpersonal Violence, 21*, 955–968.

Eadie, E.M., Runtz, M.G., & Spencers-Rodgers, J. (2008). Posttraumatic stress symptoms as a mediator between sexual assault and adverse health outcomes in undergraduate women. *Journal of Traumatic Stress, 21*(6), 540-547.

Easteal, P., Holland, K., & Judd, K. (2015). Enduring themes and silences in media portrayals of violence against women. *Women's Studies International Forum*, *48*, 103-113.

Faravelli, C., Giugni, A., Salvatori, S., & Ricca, V. (2004). Psychopathology after rape. *American Journal of Psychiatry*, *161*(8), 1483-1485.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.G. (2009). Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149-1160.

Fergusson, D.M., Swain-Campbell, N.R., & Horwood, L.J. (2002). Does sexual violence contribute to elevated rates of anxiety and depression in females? *Psychological Medicine*, *32*(6), 991–996.

Foa, E.B., & Riggs, D.S. (1993). Post-traumatic stress disorder in rape victims. *American Psychiatric Press Review of Psychiatry*, *12*, 273-303.

Folkman, S., & Moskowitz, J.T. (2004). Coping: Pitfalls and promise. *Annual Review of Psychology, 55*, 745-774.

Foynes, M.M., & Freyd, J.J. (2011). The impact of skills training on responses to the disclosure of mistreatment. *Psychology of Violence*, *1*(1), 66-77.

Frank, E., & Stewart, B.D. (1984). Depressive symptoms in rape victims: A revisit. *Journal of Affective Disorders*, *7*(1), 77-85.

Frazier, P.A. (1990). Victim attributions and post-rape trauma. *Journal of Personality and Social Psychology, 59*, 298-304.

Frazier, P.A. (2003). Perceived control and distress following sexual assault: A longitudinal test of a new model. *Journal of Personality and Social Psychology, 84*, 1257–1269.

Frazier, P.A., Mortensen, H., & Steward, J. (2005). Coping strategies as mediators of the relations among perceived control and distress in sexual assault survivors. *Journal of Counseling Psychology*, *52*(3), 267-278.

Frost, D.M., Parsons, J.T., & Nanín, J.E. (2007). Stigma, concealment and symptoms of depression as explanations for sexually transmitted infections among gay men. *Journal of Health Psychology*, *12*(4), 636-640.

Ghaderi, A., & Scott, B. (2000). Coping in dieting and eating disorders: A population-based study. *The Journal of Nervous and Mental Disease*, *188*(5), 273-279.

Gibson, L.E., & Leitenberg, H. (2001). The impact of child sexual abuse and stigma on methods of coping with sexual assault among undergraduate women. *Child Abuse and Neglect*, *25*(10), 1343–1361.

Gidycz, C.A., Coble, C.N., Latham, L., & Layman, M.J. (1993). Sexual assault experience in adulthood and prior victimization experiences. *Psychology of Women Quarterly*, *17*(2), 151-168.

Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity.* Englewood Cliffs, NJ: Prentice Hall.

Gold, D.B., & Wegner, D.M. (1995). Origins of ruminative thought: Trauma, incompleteness, nondisclosure, and suppression. *Journal of Applied Social Psychology*, *25*(14), 1245-1261.

Golding, J. M. (1994). Sexual assault history and physical health in randomly selected

Los Angeles women. *Health Psychology*, *13*(2), 130-138.

Golding, J.M. (1999). Sexual-assault history and long-term physical health problems: Evidence from clinical and population epidemiology. *Current Directions in Psychological Science, 8*(6), 191-194.

Golding, J.M., Cooper, M.L., & George, L.K. (1997). Sexual assault history and health perceptions: Seven general population studies. *Health Psychology, 16*(5), 417-425.

Grayson, C.E., & Nolen-Hoeksema, S. (2005). Motives to drink as mediators between childhood sexual assault and alcohol problems in adult women. *Journal of Traumatic Stress*, *18*(2), 137-145.

Griffin, M.G., Resnick, P.A., Waldrop, A.E., & Mechanic, M.B. (2003). Participation in trauma research: Is there evidence of harm? *Journal of Traumatic Stress, 16*(3), 221-227.

Hatzenbuehler, M.L., Nolen-Hoeksema, S., & Dovidio, J. (2009). How does stigma "get under the skin"?: the mediating role of emotion regulation. *Psychological Science*, *20*(10), 1282–9.

Hayes, A.F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach.* New York, NY: Guilford Publications.

Hayes, A.F. (2015). Hacking PROCESS to estimate a simple moderation model with a three category moderator. *Unpublished white paper, Department of Psychology, Ohio State University, Columbus, OH.*

Heatherton, T.F., & Baumeister, R.F. (1991). Binge eating as escape from self-awareness. *Psychological Bulletin*, *110*(1), 86-108.

Holzer, S.R., Uppala, S., Wonderlich, S.A., Crosby, R.D., & Simonich, H. (2008). Mediational significance of PTSD in the relationship of sexual trauma and eating disorders. *Child Abuse & Neglect*, *32*(5), 561-566.

Horowitz, M.J. (1986). Stress-response syndromes: A review of posttraumatic and adjustment disorders. *Psychiatric Services*, *37*(3), 241-249.

Hoyt, M.A., Nemeroff, C.J., & Huebner, D.M. (2006). The effects of HIV-related thought suppression on risk behavior: Cognitive escape in men who have sex with men. *Health Psychology*, *25*(4), 455.

Humphrey, J.A., & White, J.W. (2000). Women's vulnerability to sexual assault from adolescence to young adulthood. *Journal of Adolescent Health, 27*(6), 419-424.

Interian, A., Allen, L.A., Gara, M.A., Escobar, J.I., & Díaz-Martínez, A.M. (2006). Somatic complaints in primary care: further examining the validity of the Patient Health Questionnaire (PHQ-15). *Psychosomatics*, *47*(5), 392-398.

Jacques-Tiura, A.J., Tkatch, R., Abbey, A., & Wegner, R. (2010). Disclosure of sexual assault: Characteristics and implications for posttraumatic stress symptoms among African American and Caucasian survivors. *Journal of Trauma & Dissociation*, *11*(2), 174-192.

Johnson, S.M., Murphy, M.J., & Gidycz, C.A. (2017). Reliability and validity of the Sexual Experiences Survey—Short Forms Victimization and Perpeptration. *Violence and Victims, 32*(1), 78-92.

Juergensen, J., & Demaree, H.A. (2015). Approach-motivated positive affect and emotion regulation alter global–local focus and food choice. *Motivation and Emotion*, *39*(4), 580-588.

Kahler, C.W., Strong, D.R., & Read, J.P. (2005). Toward efficient and comprehensive measurement of the alcohol problems continuum in college students: The Brief Young Adult Alcohol Consequences Questionnaire. *Alcoholism: Clinical and Experimental Research*, *29*(7), 1180-1189.

Kalof, L. (2000). Ethnic differences in female sexual victimization. *Sexuality and Culture*, *4*(4), 75-98.

Kashdan, T.B., Barrios, V., Forsyth, J.P., & Steger, M.F. (2006). Experiential avoidance as a generalized psychological vulnerability: Comparisons with coping and emotion regulation strategies. *Behaviour Research and Therapy*, *44*(9), 1301-1320.

Kaysen, D., Neighbors, C. Martell, J., Fossos, N., & Larimer, M. (2006). Incapacitated rape and alcohol use: A prospective analysis. *Addictive Behaviors, 31,* 1820-1832.

Keefe, F.J., Lumley, M., Anderson, T., Lynch, T.R., Studts, J.L., & Carson, K.L. (2001). Pain and emotion: New research directions. *Journal of Clinical Psychology*, *57*(4), 587–607.

Kelly, A.E. (1999). Revealing personal secrets. *Current Directions in Psychological Science*, *8*(4), 105–109.

Kelly, A.E., & McKillop, K.J. (1996). Consequences of revealing personal secrets. *Psychological Bulletin, 120,* 450-465.

Kennedy, A.C., Adams, A., Bybee, D., Campbell, R., Kubiak, S.P., & Sullivan, C. (2012). A model of sexually and physically victimized women's process of attaining effective formal help over time: The role of social location, context, and intervention. *American Journal of Community Psychology*, *50*(1-2), 217-228.

Kessler, R.C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C.B. (1995).

Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry, 52,* 1048-1060.

Kilpatrick, D.G., Acierno, R., Resnick, H.S., Saunders, B.E., & Best, C.L. (1997). A 2-year longitudinal analysis of the relationships between violent assault and substance use in women. *Journal of consulting and clinical psychology*, *65*(5), 834.

Kilpatrick, D G., Edmunds, C.N., & Seymour, A.K. (1992). *Rape in America: A report to the nation.* Arlington, VA: National Victim Center.

Kilpatrick, D.G., Resick, P.A., & Veronen, L.J. (1981). Effects of a rape-experience: A longitudinal study. *Journal of Social Issues, 37*(4), 105-120.

Kilpatrick, D.G., Veronen, L.J., & Resick, R.A. (1979). The aftermath of rape: Recent empirical findings. *American Journal of Orthopsychiatry, 49*, 658-669.

Kimberling, R. & Calhoun, K.S. (1994). Somatic symptoms, social support, and treatment seeking sexual assault victims. *Journal of Consulting and Clinical Psychology, 62,* 333-340.

Kimberling, R., Street, A.E., Pavao, J., Smith, M.W., Cronkite, R.C., Holmes, T.H., Frayne, S. M. (2010). Military-related sexual trauma among Veterans Health Administration patients returning from Afghanistan and Iraq. *American Journal of Public Health, 100*(8), 1409–1412.

Kline, R.B. (2015). *Principles and practice of structural equation modeling*. Guilford publications.

Kohn, J.L., Rholes, W.S., & Schmeichel, B.J. (2012). Self-regulatory depletion and attachment avoidance: Increasing the accessibility of negative attachment-related memories. *Journal of Experimental Social Psychology*, *48*(1), 375-378.

Koss, M.P., Abbey, A., Campbell, R., Cook, S., Norris, J., Testa, M., … White. J. (2007). Revising the SES: A collaborative process to improve assessment of sexual aggression and victimization. *Psychology of Women Quarterly, 31,* 357-370.

Koss, M.P., & Figueredo, A.J. (2004). Change in cognitive mediators of rape's impact on psychosocial health across 2 years of recovery. *Journal of Consulting and Clinical Psychology*, *72*(6), 1063–1072.

Koss, M.P., Figueredo, A.J., & Prince, R.J. (2002). Cognitive mediation of rape's mental, physical, and social health impact: Tests of four models in cross-sectional data. *Journal of Consulting and Clinical Psychology, 70*(4), 926-941.

Koss, M., Gidycz, C.A., & Wisniewski, N. (1987). The scope of rape: Incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *Journal of Consulting and Clinical Psychology, 55,* 162-170.

Kroenke, K., Spitzer, R.L., Williams, J.B., & Löwe, B. (2010). The patient health questionnaire somatic, anxiety, and depressive symptom scales: A systematic review. *General Hospital Psychiatry*, *32*(4), 345-359.

Lane, J. D., & Wegner, D. M. (1995). The cognitive consequences of secrecy. *Journal of Personality and Social Psychology*, *69*(2), 237-253.

Larson, D.G., & Chastain, R.L. (1990). Self-concealment: Conceptualization, measurement, and health implications. *Journal of Social and Clinical psychology*, *9*(4), 439-455.

Laws, A., & Golding, J.M. (1996). Sexual assault history and eating disorder symptoms among White, Hispanic, and African-American women and men. *American Journal of Public Health*, *86*(4), 579–582.

Lazarus, R.S. (1966). *Psychological stress and the coping process.* New York: McGraw-Hill.

Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.

Li, J.Y., Kim, S.H., & O'Boyle, J. (2017). "I believe what I see": College students' use of media, issue engagement, and perceived responsibility regarding campus sexual assault. *Journal of Health Communication*, *22*(9), 772-782.

Lindgren, K.P., Neighbors, C., Blayney, J.A., Mullins, P.M., & Kaysen, D. (2012). Do drinking motives mediate the association between sexual assault and problem drinking? *Addictive Behaviors*, *37*(3), 323-326.

Link, B.G., Struening, E.L., Neese-Todd, S., Asmussen, S., & Phelan, J.C. (2001). Stigma as a barrier to recovery: The consequences of stigma for the self-esteem of people with mental illnesses. *Psychiatric Services*, *52*(12), 1621-1626.

Littleton, H.L. (2010). The impact of social support and negative disclosure reactions on sexual assault victims: A cross-sectional and longitudinal investigation. *Journal of Trauma & Dissociation*, *11*(2), 210-227.

Littleton, H., Horsley, S., John, S., & Nelson, D V. (2007). Trauma coping strategies and psychological distress: A meta-analysis. *Journal of Traumatic Stress, 20*, 977–988.

Lumley, M.A., Cohen, J.L., Borszcz, G.S., Cano, A., Radcliffe, A.M., Porter, L.S., … Keefe, F.J. (2011). Pain and emotion: A biopsychosocial review of recent research. *Journal of Clinical Psychology*, *67*(9), 942–968.

Maas, J., de Ridder, D.T., de Vet, E., & De Wit, J.B. (2012). Do distant foods decrease intake? The effect of food accessibility on consumption. *Psychology & Health*, *27*(2), 59-73.

Mackey, T., Sereika, S.M., Weissfeld, L.A., Hacker, S.S., Zender, J.F., & Heard, S.L. (1992). Factors associated with long-term depressive symptoms of sexual assault victims. *Archives of Psychiatric Nursing, 5*(1), 10-25.

MacKillop, J. (2006). Factor structure of the alcohol urge questionnaire under neutral conditions and during a cue-elicited urge state. *Alcoholism: Clinical and Experimental Research*, *30*(8), 1315-1321.

MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, *1*(2), 130-149.

Major, B., Eliezer, D., & Rieck, H. (2012). The psychological weight of weight stigma. *Social Psychological and Personality Science, 3*(6), 651–658.

Major, B., & Gramzow, R.H. (1999). Abortion as stigma: Cognitive and emotional implications of concealment, *Journal or Personality and Social Psychology, 77*(4), 735–745.

Major, B., Hunger, J.M., Bunyan, D.P., & Miller, C.T. (2014). The ironic effects of weight stigma. *Journal of Experimental Social Psychology*, *51*, 74-80.

Martin, P.Y., & Powell, R.M. (1994). Accounting for the “second assault”: Legal organizations’ framing of rape victims. *Law and Social Inquiry, 19,* 853-890.

Marx, B.P., Nichols-Anderson, C.N., Messman-Moore, T.L., Miranda, R., & Porter, C. (2000). Alcohol consumption, outcome expectancies , and victimization status

among female college students. *Journal of Applied Social Psychology, 30*(5), 1056–1070.

Massad, P.M., & Hulsey, T.L. (2006). Causal attributions in posttraumatic stress disorder: Implications for clinical research and practice. *Psychotherapy: Theory, Research, Practice, Training*, *43*(2), 201-215.

Meyer, C.B., & Taylor, S.E. (1986). Adjustment to rape. *Journal of Personality and Social Psychology*, *50*(6), 1226.

Miller, A.K., Canales, E.J., Amacker, A.M., Backstrom, T.L., & Gidycz, C.A. (2011). Stigma-threat motivated nondisclosure of sexual assault and sexual revictimization: A prospective analysis. *Psychology of Women Quarterly*, *35*(1), 119-128.

Miller, C.T., & Kaiser, C.R. (2001). A theoretical perspective on coping with stigma. *Journal of Social Issues*, *57*(1), 73–92.

Miller, C.T. (2006). Social psychological perspectives on coping with stressors related to stigma. In S. Levin & C. van Laar (Eds.), *Stigma and Group Inequality: Social Psychological Perspectives* (21-44). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

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

Najdowski, C.J., & Ullman, S.E. (2009a). Prospective effects of sexual victimization on PTSD and problem drinking. *Addictive Behaviors, 34,* 965-968.

Najdowski, C.J., & Ullman, S.E. (2009b). PTSD symptoms and self-rated recovery

among adult sexual assault survivors: The effects of traumatic life events and psychosocial variables. *Psychology of Women Quarterly, 33,* 43-53.

Neville, H.A., & Heppner, M.J. (1999). Contextualizing rape: Reviewing sequelae and proposing a culturally inclusive ecological model of sexual assault recovery. *Applied and Preventive Psychology, 8,* 41-62.

Nguyen, H.V, Kaysen, D., Dillworth, T.M., Brajcich, M., & Larimer, M.E. (2010). Incapacitated rape and alcohol use in White and Asian American college women. *Violence Against Women*, *16*, 919–933.

Nijs, I.M., Franken, I.H., & Muris, P. (2007). The modified Trait and State Food-Cravings Questionnaires: development and validation of a general index of food craving. *Appetite*, *49*(1), 38-46.

Nixon, R.D., Cain, N., Nehmy, T., & Seymour, M. (2009). The influence of thought suppression and cognitive load on intrusions and memory processes following an analogue stressor. *Behavior Therapy*, *40*(4), 368-379.

Paras, M.L., Murad, M.H., Chen, L.P., Goranson, E.N., Sattler, A.L., Colbenson, K.M., ... & Zirakzadeh, A. (2009). Sexual abuse and lifetime diagnosis of somatic disorders: A systematic review and meta-analysis. *JAMA*, *302*(5), 550-561.

Pegram, S.E., & Abbey, A. (2016). Associations between sexual assault severity and psychological and physical health outcomes: Similarities and differences among African American and Caucasian survivors. *Journal of Interpersonal Violence.* Advance online publication.

Pegram, S.E., Lumley, M.A., Jasinski, M.J., & Burns, J.W. (2017). Psychological trauma exposure and pain-related outcomes among people with chronic low back pain:

Moderated mediation by thought suppression and social constraints. *Annals of Behavioral Medicine, 51*(2), 316-320.

Pennebaker, J.W. (1995). *Emotion, disclosure, & health*. Washington, DC: American Psychological Association.

Pennebaker, J.W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science, 8,* 162-166.

Pennebaker, J.W., & Beall, S.K. (1986). Confronting a traumatic event: Toward an understanding of inhibition and disease. *Journal of Abnormal Psychology*, *95*(3), 274.

Pennebaker, J.W., & Susman, J.R. (1988). Disclosure of traumas and psychosomatic processes. *Social Science & Medicine*, *26*(3), 327-332.

Petrie, K.J., Booth, R.J., & Pennebaker, J.W. (1998). The immunological effects of thought suppression. *Journal of Personality and Social Psychology*, *75*(5), 1264-1272.

Petrie, K.J., Booth, R.J., Pennebaker, J.W., Davison, K.P., & Thomas, M.G. (1995). Disclosure of trauma and immune response to a hepatitis B vaccination program. *Journal of Consulting and Clinical Psychology*, *63*(5), 787-792.

Planty, M., Langton, L., Krebs, C., Berzofsky, M. & Smiley-McDonald, H. (2013). Female victims of sexual violence, 1994-2010. *Special Report.(No. NCJ 240655). Washington, DC: Bureau of Justice Statistics. US Department of Justice*.

Plichta, S.B., & Falik, M. (2001). Prevalence of violence and its implications for women's health. *Women's Health Issues, 11*(3), 244-258.

Preacher, K.J., & Coffman, D.L. (2006, May). Computing power and minimum sample size for RMSEA [Computer software]. Available from http://quantpsy.org/.

Quinn, D. M., & Earnshaw, V. A. (2013). Concealable stigmatized identities and psychological well-being. *Social and Personality Psychology Compass*, *7*(1), 40–51.

Quinn, D.M., Williams, M.K., Quintana, F., Gaskins, J.L., Overstreet, N.M., Pishori, A., … Chaudoir, S.R. (2014). Examining effects of anticipated stigma, centrality, salience, internalization, and outness on psychological distress for people with concealable stigmatized identities. *PLoS ONE*, *9*(5).

Rabenhorst, M.M. (2006). Sexual assault survivors' reactions to a thought suppression paradigm. *Violence and Victims, 21*(4), 473-481.

Radloff, L.S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, *1*(3), 385-401.

Read, J.P., Kahler, C.W., Strong, D.R., & Colder, C.R. (2006). Development and preliminary validation of the young adult alcohol consequences questionnaire. *Journal of Studies on Alcohol*, *67*(1), 169-177.

Relyea, M., & Ullman, S.E. (2015). Unsupported or turned against: Understanding how two types of negative social reactions to sexual assault relate to postassault outcomes. *Psychology of Women Quarterly*, *39*(1), 37-52.

Resick, R.A. (1993). The psychological impact of rape. *Journal of Interpersonal Violence, 8*, 223-255.

Roemer, L., Litz, B.T., Orsillo, S.M., & Wagner, A.W. (2001). A preliminary investigation of the role of strategic withholding of emotions in PTSD. *Journal of Traumatic Stress*, *14*(1), 149-156.

Roemer, L., & Salters, K. (2004). A preliminary study of the effects of directed suppression of rape-related material among rape survivors using unobtrusive measures. *Behavioural and Cognitive Psychotherapy*, *32*(02), 149-164.

Rost, K.M., Dickinson, W.P., Dickinson, L.M., & Smith, R.C. (2006). Multisomatoform disorder: agreement between patient and physician report of criterion symptom explanation. *CNS Spectrums*, *11*(05), 383-389.

Rothbaum, B., Foa, E., Murdock, T., Riggs, D., & Walsh, W. (1992) A prospective examination of post-traumatic stress disorder in rape victims. *Journal of Traumatic Stress, 5,* 455-475.

Schmidt, G.B. (2015). Fifty days an MTurk Worker: The social and motivational context for Amazon Mechanical Turk Workers. *Industrial and Organizational Psychology*, *8*(02), 165-171.

Schvey, N.A., Puhl, R.M., & Brownell, K.D. (2011). The impact of weight stigma on caloric consumption. *Obesity*, *19*(10), 1957-1962.

Schvey, N.A., Puhl, R.M., & Brownell, K.D. (2014). The stress of stigma: Exploring the effect of weight stigma on cortisol reactivity. *Psychosomatic Medicine*, *76*(2), 156-162.

Seacat, J.D., & Mickelson, K.D. (2009). Stereotype threat and the exercise/ dietary health intentions of overweight women. *Journal of Health Psychology*, *14*(4), 556-567.

Sherwood, N.E., Crowther, J.H., Wills, L., & Ben-Porath, Y. S. (2000). The perceived function of eating for bulimic, subclinical bulimic, and non-eating disordered women. *Behavior Therapy*, *31*(4), 777-793.

Slavin-Spenny, O.M., Cohen, J.L., Oberleitner, L.M., & Lumley, M.A. (2011). The effects of different methods of emotional disclosure: Differentiating post-traumatic growth from stress symptoms. *Journal of Clinical Psychology*, *67*(10), 993-1007.

Sigurvinsdottir, R., & Ullman, S.E. (2015). Social reactions, self-blame, and problem drinking in adult sexual assault survivors. *Psychology of Violence*, *5*(2), 192-198.

Silver, R.E., & Wortman, C.B. (1980). Coping with undesirable life-events. In J. Garber & M.P. Seligman (Eds.), *Human helplessness: Theory and applications* (pp. 279-340). New-York: Academic Press.

Smart, L., & Wegner, D.M. (1999). Covering up what can't be seen: Concealable stigma and mental control. *Journal of Personality and Social Psychology*, *77*(3), 474-486.

Smyth, J.M., Heron, K.E., Wonderlich, S.A., Crosby, R.D., & Thompson, K.M. (2008). The influence of reported trauma and adverse events on eating disturbance in young adults. *International Journal of Eating Disorders*, *41*(3), 195-202.

Spiegel, D., Kraemer, H., Bloom, J., & Gottheil, E. (1989). Effect of psychosocial treatment on survival of patients with metastatic breast cancer. *The Lancet*, *334*(8668), 888-891.

Starzynski, L.L., Ullman, S.E., Filipas, H.H., Townsend, S.M. (2005). Correlates of women's sexual assault disclosure to informal and formal support sources. *Violence and Victims, 20*(4), 417-432.

Symonds, M. (1980). The "second injury" to victims. *Evaluation and change*,*7*(1), 36-38.

Tabachnick, B.G., & Fidell, L.S. (2012). *Using multivariate statistics, 6th ed.* Boston: Allyn and Bacon.

Testa, M., VanZile-Tamsen, C., Livingston, J.A., & Koss, M.P. (2004). Assessing

women's experiences of sexual aggression using the sexual experiences survey: Evidence for validity and implications for research. *Psychology of Women Quarterly, 28,* 256-265.

Tobin, D.L., Holroyd, K.A., Reynolds, R.V., & Wigal, J.K. (1989). The hierarchical factor structure of the Coping Strategies Inventory. *Cognitive Therapy and Research*, *13*(4), 343-361.

Turchik, J.A, & Hassija, C.M. (2014). Female sexual victimization among college students: Assault severity, health risk behaviors, and sexual functioning. *Journal of Interpersonal Violence*, *29*(13), 2439–2457.

Ullman, S.E. (1996). Social reactions, coping strategies, and self-blame attributions in adjustment to sexual assault. *Psychology of Women Quarterly*, *20*(4), 505-526.

Ullman, S.E. (1999). Social support and recovery from sexual assault: A review. *Aggression and Violent Behavior, 3,* 343-358.

Ullman, S.E. (2000). Psychometric characteristics of the Social Reactions Questionnaire. *Psychology of Women Quarterly*, *24*(3), 257-271.

Ullman, S. E., & Brecklin, L. R. (2002). Sexual assault history, PTSD, and mental health service seeking in a national sample of women. *Journal of Community Psychology*, *30*(3), 261-279.

Ullman, S.E., & Brecklin, L.R. (2003). Sexual assault history and health-related outcomes in a national sample of women. *Psychology of Women Quarterly, 27,* 46-57.

Ullman, S.E., & Filipas, H.H. (2001). Predictors of PTSD symptom severity and social reactions in sexual assault victims. *Journal of Traumatic Stress, 14*(2), 369-389.

Ullman, S.E., Filipas, H.H., Townsend, S.M., & Starzynski, L.L. (2005). Trauma exposure, posttraumatic stress disorder and problem drinking in sexual assault survivors. *Journal of Studies on Alcohol, 66*(5), 610-619.

Ullman, S.E., Filipas, H.H., Townsend, S.M., & Starzynski, L.L. (2007). Psychosocial correlates of PTSD symptom severity in sexual assault survivors. *Journal of Traumatic Stress*, *20*(5), 821-831.

Ullman, S.E., & Najdowski, C.J. (2009). Correlates of serious suicidal ideation and attempts in female adult sexual assault survivors. *Suicide and Life-Threatening Behavior*, *39*(1), 47–57.

Ullman, S.E., Townsend, S.M., Filipas, H.H., & Starzynski, L.L. (2007). Structural models of the relations of assault severity, social support, avoidance coping, self-blame, and PTSD among sexual assault survivors. *Psychology of Women Quarterly, 31,* 23-37.

von Ranson, K.M., Klump, K.L., Iacono, W.G., & McGue, M. (2005). The Minnesota Eating Behavior Survey: A brief measure of disordered eating attitudes and behaviors. *Eating Behaviors*, *6*(4), 373-392.

Walker, E.A., Keegan, D., Gardner, G., Sullivan, M., Berstein, D., & Katon, W.J. (1997). Psychosocial factors in fibromyalgia compared with rheumatoid arthritis: II. Sexual, physical, and emotional abuse and neglect. *Psychosomatic Medicine, 59,* 572-577.

Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063-1070.

Wegner, D.M., Schneider, D.J., Carter, S.R., & White, T.L. (1987). Paradoxical effects of thought suppression. *Journal of Personality and Social Psychology*, *53*(1), 5-13.

Wegner, D.M., & Zanakos, S. (1994). Chronic thought suppression. *Journal of Personality*, *62*(4), 615-640.

Wenzlaff, R.M., & Wegner, D.M. (2000). Thought suppression. *Annual Review of Psychology*, *51*(1), 59-91.

The White House. (2014). *The first report of the White House task force to protect students from sexual assault.* Retrieved from https://www.whitehouse.gov/sites/default/files/docs/ report_0.pdf.

Williams, L.J. & O'Boyle, J. (2008). Measurement models for linking latent variables and indicators: A review of human resource management research using parcels. *Human Resource Management Review, 18,* 233-242.

Woods, A.B., Page, G.G., O'Campo, P., Pugh, L.C., Ford, D., & Campbell, J.C. (2005). The mediation effect of posttraumatic stress disorder symptoms on the relationship of intimate partner violence and IFN? levels. *American Journal of Community Psychology, 36*, 159–174.

Zakowski, S.G., Ramati, A., Morton, C, Johnson, P., & Flanigan, R. (2004). Written emotional disclosure buffers the effects of social constraints on distress among cancer patients. *Health Psychology, 23*(6), 555-563.

Zeidner, M., & Endler, N.S. (1996). Handbook of coping. *Theory, research, applications*, 600-606.

Zinzow, H.M., Amstadter, A.B., McCauley, J.L., Ruggiero, K.J., Resnick, H.S., &

Kilpatrick, D.G. (2011). Self-rated health in relation to rape and mental health disorders in a national sample of college women. *Journal of American College Health, 59*(7), 588-594.

Zoellner, L.A., Goodwin, M.L., & Foa, E.B. (2000). PTSD severity and health perceptions in female victims of sexual assault. *Journal of Traumatic Stress, 13*(4), 635-649.

ABSTRACT

SEXUAL ASSAULT STIGMATIZATION, SECRECY, AND AVOIDANCE: IMPLICATIONS FOR HEALTH-INJURIOUS PROCESSES AND OUTCOMES

by

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Previous research shows that women often experience stigmatization following sexual assault; however, few studies have investigated mechanisms through which stigmatization adversely affects health. In Study 1, women (*N* = 974) completed an online survey which assessed their history of sexual assault, stigmatization, recovery processes, and health outcomes. Results partially supported theoretical models whereby sexual assault survivors' stigmatizing social reactions and internalized stigmatization indirectly contributed to physical health symptoms, hazardous drinking, and disordered eating through effects on secrecy, avoidance coping, thought suppression, and depressive symptoms. In Study 2, sexual assault survivors (*N* = 400) completed an online experimental study and were exposed to a stigmatization manipulation. The sexual assault stigma condition, as compared to a control and a support condition, elicited higher levels of negative affect following the manipulation. Experimental condition interacted with survivors' usual coping motives to predict drinking and eating outcomes. Sexual assault stigma predicted more alcohol craving and drinking intentions among women who reported more drink to cope motives. In addition, sexual assault stigma predicted more

unhealthy eating intentions among women who reported more eating to cope motives. Findings from these studies demonstrate the importance of stigmatization in shaping survivors' coping and recovery and have implications for clinical treatment and intervention efforts. Assessing and intervening in stigmatization is particularly important for preventing deleterious health consequences of sexual assault.

AUTOBIOGRAPHICAL STATEMENT

Sheri E. Pegram graduated from Virginia Polytechnic Institute and State University in 2010 with a Bachelor of Science in Psychology. She completed her doctorate at Wayne State University in social psychology with a minor in quantitative methods. Her research interests include understanding social and emotional mechanisms through which sexual assault victimization leads to mental and physical health problems as well as risky health behaviors. She is also interested in understanding personality, attitudinal, and contextual factors that contribute to sexual assault perpetration.