UNDERSTANDING THE IMPACT OF SEXUAL ASSAULT RELATED SOCIAL MEDIA CONTENT ON SURVIVORS: AN EXPLORATORY SEQUENTIAL MIXED METHODS STUDY

By

Morgan E. PettyJohn

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ABSTRACT

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In recent years, hashtag activism movements (i.e., using a common message or phrase to unite user voices to address injustice; Yang & Kaun, 2016) have unfolded across social media (SM) platforms to bring attention to the prevalence and impacts of sexual assault. Specifically, the online #MeToo Movement went viral around the world in 2017, resulting in increased news coverage and public discourse surrounding this topic (Anderson & Toor, 2018). Indeed, nearly half (44%) of women in the United States experience unwanted sexual contact in their lifetime (Smith et al., 2018) and these violations are associated with increased risk for negative mental health outcomes, including depression, anxiety, and posttraumatic stress disorder (PTSD; Mason & Lodrick, 2013). After experiencing interpersonal violence, reminders of the trauma (e.g., words, images) can trigger psychophysiological reactions for survivors, such as emotional dysregulation, physical symptoms (e.g., heart racing), and increases in adverse mental health symptomatology (Mchugo et al., 2001; Moser et al., 2015). Given the popularity of SM among women in the U.S. (78% report usage; Pew Research Center, 2019), survivors of sexual assault are presumably being exposed to trauma related content connected to popular hashtag activism movements while spending time online. However, little is known about how exposure to sexual assault narratives and related discourse in this context could impact the mental health and relationships of survivors.

The present study aims to address this gap in the literature by using an exploratory sequential mixed methods design to better understand survivors' online experiences during this unique cultural moment. The qualitative strand of the study utilized thematic analysis of semi-structured interviews ($n = 12$) to explore the lived experiences of young women survivors (18-34 years old) using SM since initiation of the #MeToo Movement. Survivors described adverse changes in their mental health during periods of intense media coverage relating to sexual assault stories (e.g., Dr. Christine Blasey Ford's Senate testimony). Some survivors also reported negative changes in their personal relationships with people in their life based on how they discussed sexual assault on these platforms. Findings from the qualitative strand were used to inform development of an online, cross-sectional quantitative survey, facilitated through CloudResearch's MTurk toolkit. Multiple regression analyses found general SM use, exposure to sexual assault content, and exposure to unsupportive attitudes (i.e., victim blaming or perpetrator supporting) to be significantly predictive of depression, anxiety, and PTSD symptomatology among young women, both survivors ($n = 312$) and non-victims ($n = 171$). Survivors reported noticing people from their support systems (e.g., family, friends, co-workers) posting unsupportive attitudes about other victims' stories at significantly higher rates than non-victims. Findings from the present study implore clinicians to assess SM use and level of exposure to sexual assault related content among clients, particularly those who have experienced sexual assault. Further, clinicians should stay informed about viral news stories and hashtag activism movements addressing sexual assault and provide space for clients to process this content during times of high saturation on SM platforms.

To the survivors who shared their stories with me, and to survivors whose stories are still untold.

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CHAPTER 1: INTRODUCTION

Sexual assault is a pervasive issue in society with nearly half (44%) of U.S. women experiencing unwanted sexual contact in their lifetime, and 21% experiencing attempted or completed rape more specifically (Smith et al., 2018). In addition to being an egregious social justice issue, this constitutes a significant public health problem as sexual trauma contributes to myriad mental and behavioral health issues including depression, posttraumatic stress disorder (PTSD), substance abuse, and suicidality (Mason & Lodrick, 2013). Receiving social support from friends, family, or intimate partners is a crucial component to trauma recovery. While positive social reactions to a sexual assault disclosure can help buffer harmful outcomes by promoting healthy coping skills, negative social reactions can exacerbate mental health symptomatology and discourage further help-seeking (Ahrens, 2006; Herman, 1997; Ullman & Peter-Hagene, 2014).

Recent movements such as #MeToo and #TimesUp have utilized hashtag activism on social media (SM) to call attention to the prevalence of sexual assault, the lasting negative impacts of this type of trauma, and to demand justice for victims (PettyJohn et al., 2019). This activism has contributed to a remarkable spike in personal disclosures, news coverage, and commentary about sexual assault on SM platforms, making exposure to this type of traumatic content difficult to avoid for many users (Anderson & Toor, 2018). While there is certainly evidence of survivors finding social support in online spaces and feeling a sense of empowerment as a result of these movements, sexual assault content posted on SM is often met with harsh blowback (Schneider & Carpenter, 2019; Zaleski et al., 2016).

Existing literature indicates that exposure to trauma reminders (e.g., news stories about sexual assault) or unsupportive attitudes (e.g., victim blaming or questioning) can exacerbate

adverse mental health outcomes for women who have experienced interpersonal violence (Campbell et al., 2009; Neumeister et al., 2017). Despite the recent increase in exposure potential via hashtag activism and related social movements, literature on the impact of this content for sexual assault survivors in a SM context is lacking. The current study will address this gap by assessing the impact of SM use and related exposure to sexual assault content on the mental and relational health of sexual assault survivors.

Conceptual Framework

The neurobiology of trauma is used as a guiding conceptual framework for the current study. Traumatic experiences are fear inducing events which overwhelm human capacity for normal cognitive processing and challenge one's sense of control, connection with others, and systems of meaning making (Herman, 1997). Research on sexual assault demonstrates that victims experience such intrusive violation as a threat to their survival, and their brains and bodies react accordingly (McCauley et al., 2019). During threatening events, primitive regions of the human brain (i.e., the limbic system) activate a series of evolutionary protective mechanisms to decrease reactivity to pain and increase likelihood of survival (Cuevas et al., 2018; McCauley et al., 2019). The amygdala (the fear center of the brain) is responsible for activating the "fight, flee, or freeze" response, which temporarily redirects energy away from the prefrontal cortex (the region responsible for higher order thinking processes) and changes the function of the hippocampus from its normal process of encoding memories, to helping with production of stress hormones (van der Kolk, 2015). Due to this redirection of brain functioning, traumatic events are often improperly coded as sensory memories (e.g., as somatic sensations or visual images), interfering with the hippocampus' ability to properly appraise future stressors and inform the body how to respond accordingly (van der Kolk, 1994). These types of memories are more

readily activated by stress or reminders of the traumatic experience, even years after the event took place, and often prompt the brain to inappropriately re-activate protective responses (Herman, 1997; van der Kolk, 1994). Though animals are able to restore normative functioning soon after a threat has passed, research has demonstrated that humans often cannot, and therefore can become stuck in a problematic neurobiological response loop tied to their original trauma experience (Kozlowska et al., 2015). While these adaptive reactions are important and necessary to the survival of species in the face of immediate threats, chronic production of stress hormones involved in this process has negative long term psychophysiological consequences (such as anxiety, depression, autoimmune disorders, digestive issues) and can permanently alter the way the brain processes information (van der Kolk, 2015). Due to these potentially harmful effects, it is crucial to understand what type of stimuli (e.g., content on SM) may trigger psychophysiological activation and related emotional distress in survivors of sexual assault, and to develop more effective treatment strategies to help survivors integrate such exposures to trauma reminders in a healthier way.

Literature Review

This review of literature will expand on the significance of exploring *if* and *how* SM content relating to sexual assault impacts the mental and relational health of survivors of sexual assault. First, definitions of key independent variables (i.e., SM, sexual assault) and contemporary social movements (e.g., the #MeToo Movement) will be offered. Literature on how SM broadly impacts the mental health of users will then be reviewed, followed by a summary of the effects of sexual assault on survivor mental health. The role of trauma reminders on the neurobiology of survivors will subsequently be explained, alongside existing research on how mass media platforms impact public mental health by broadcasting traumatic content.

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Finally, findings from these related areas of research will be synthesized to lay the theoretical foundation for the current study.

Definition of Independent Variables and Social Context

Sexual Assault

"Sexual assault" is an umbrella term used to describe an array of sexual violations including rape and unwanted touching, and can occur via myriad tactics including physical force, emotional or psychological coercion, manipulation, threats, or use of substances (RAINN, 2022). Rape refers more specifically to attempted or completed penetration of any type (i.e., vaginal, anal, oral) with a body part or any type of object (Smith et al., 2018). Sexual harassment refers to the creation of a hostile or offensive environment (typically in a workplace or educational setting) through actions such as unwanted sexual advances, manipulation of power dynamics to request sexual favors, or degrading comments about someone based on their sex (EEOC, 2019). All of these behaviors have been conceptualized to exist along a common spectrum, representing symptoms of and tools for perpetuating social power structures which privilege men while oppressing women, gender minorities, and other marginalized groups (Lonsway et al., 2008). Recent social movements (e.g., #MeToo, #TimesUp) have aimed to address sexual assault and sexual harassment to varying degrees. However, the present review will focus on sexual assault (i.e., unwanted *physical* contact of some kind) as addressed through the #MeToo Movement. Additionally, while people of all genders suffer sexual assault, the majority of victims identify as women; therefore, this work will focus on the experiences of women. The terms "victim" and "survivor" will be used interchangeably throughout, given that decisions on self-identification can be emotionally charged and should be left to each individual person.

Social Media

Social media (SM) refers to any type of internet-based platform where users can generate their own content and share it with others (McDonald, 2019). This includes popular websites and phone apps such as Facebook, Twitter, Instagram and YouTube, and extends to blogs and news sites that include comment sections as well. SM has provided a platform for "hashtag activism," referring to the use of hashtags (denoted by the # symbol) to unite users behind a common message or justice movement (Yang & Kaun, 2016). This method allows users on a SM platform to click on a hashtag and be redirected to a collection of *all* messages posted using that tag. Several notable hashtags have gone viral (i.e., gained widespread popularity) in the past five years calling attention to the issue of sexual assault, including #NotOkay, #HowIWillChange, #TimesUp, and most notably, #MeToo (Bonner, 2019; Maas et al., 2018; PettyJohn et al., 2019).

The Viral #MeToo Movement

The Me Too Movement was founded by activist Tarana Burke in 2006, tied to her community based work with young Black girls who experienced sexual abuse (Garcia, 2017). The movement was subsequently brought to global attention in 2017 when actress Alyssa Milano posted a message on the SM platform, Twitter, asking people to respond with their own stories of sexual assault using the hashtag, #MeToo. In response, #MeToo was posted 12 million times on Facebook in the first 24 hours alone, and 19 million times on Twitter throughout the following year (Anderson & Toor, 2018; Renkl, 2017). Milano's initial tweet was posted in reference to Harvey Weinstein's criminal activity and abuse of power; however, subsequent spikes in #MeToo usage were seen in connection to coverage of other high-profile stories as well (e.g., Dr. Christine Blasey Ford's Senate testimony) (Anderson & Toor, 2018).

Social Media and Mental Health

SM has become a well-established feature of society over the past decade, particularly as smart phone technology has evolved and made platforms even more readily available via phone apps (Perrin & Kumar, 2019). People use SM platforms for a wide variety of reasons, including basic communication, building social capital, identity development, business endeavors, or creative self-expression (Ngai et al., 2015). Most adults in the U.S. report using SM, with YouTube (81%), Facebook (69%), and Instagram (40%) having the highest engagement overall (Auxier & Anderson, 2021). Users of these platforms tend to visit frequently, with daily visits reported by 70% of individuals on Facebook, 59% on Instagram, and 54% on YouTube (Auxier & Anderson, 2021).

Platform preferences and frequency of use vary greatly by age, with younger generations who grew up in the internet age reporting the most engagement. Young adults (18-29) are the most active across SM platforms, with about half reporting being online "almost constantly" (Perrin & Kumar, 2019). The youngest cohort of adults (18-29) use YouTube (95%), Instagram (71%), Snapchat (65%), TikTok (48%), Twitter (42%), and Reddit (36%) at higher rates than any other cohort (Auxier & Anderson, 2021). Facebook is widely used among this cohort as well (70%), though the 30-49 year cohort (77%) and 50-64 year cohort (73%) are the most prominent users (Auxier & Anderson, 2021). Notably, SM platforms are generally not used in isolation from one another. Most users, particularly young people, develop SM "portfolios," referring to their simultaneous use of multiple sites or apps for varying purposes (Hogan & Strasburger, 2018). Young adults (18-29) report using a median of 4 platforms (out of 8 commonly assessed in SM research) (Smith & Anderson, 2018). This median drops to 3 platforms among 30-49 year olds, 2 for 50-64 year olds, and 1 for individuals 65 or older (Smith & Anderson, 2018).

Research suggests several potential social and mental health benefits can stem from using SM platforms. As stated, these sites are often used as a form of self-expression and communication with family, close friends, and extended peer groups. This type of wide-reaching networking can be particularly important for adolescents and young adults from marginalized communities (e.g., the LGBTQ+ population) to find acceptance, support, and combat loneliness (Hogan & Strasburger, 2018). Such platforms can facilitate healthy coping strategies as well, with users being able to access resources and educational information about issues they may be facing in a way that is less stigmatized and anonymous (Elmquist & McLaughlin, 2018).

Despite such benefits, research has identified associations between SM and several problematic mental health outcomes as well. Many risks to user well-being exist in online spaces, including exposure to cyberbullying (an experience tied to higher rates of attempted suicide compared to "traditional" bullying) and encouragement of maladaptive coping skills or behaviors (e.g., cutting, eating disorders, substance use, risky sexual behaviors) (Elmquist & McLaughlin, 2018; Hogan & Strasburger, 2018; Moreno et al., 2018). Constant self-comparison to others through SM platforms can be detrimental as well, especially among users who may have a negative self-perception or do not have the capacity to appropriately label certain types of content (e.g., beauty standards) as unrealistic (Elmquist & McLaughlin, 2018; Moreno et al., 2018).

Many studies have found more time spent on SM to be positively correlated with anxiety and depressive symptoms (Goodwin et al., 2015; Keles et al., 2020; Lin et al., 2016; Vannucci et al., 2017; Woods & Scott, 2016). One study has identified the concurrent use of *multiple* platforms to be associated with increased anxiety and depression as well, even when controlling for the amount of time spent online (Primack et al., 2017). Qualitative interviews with

adolescents demonstrate that teen users are often aware of the negative impacts SM can have on

their mood and anxiety levels, and identify this as a notable problem facing young people

(O'Reilly et al., 2018).

Introducing more nuance to the association between SM and user outcomes, emerging

research suggests that differences in type of user engagement (i.e., passive vs. active) may

mediate outcomes. Studies have found that while passive users (e.g., users who scroll through

SM without directly posting or engaging with others) report a positive correlation between

depressive symptoms and time online, active users (e.g., users who post their own content or

engage with others) reported a negative correlation between these variables (Escobar-Viera et al.,

2018; Thorisdottir et al., 2019). Similar trends have been identified in relation to anxiety

symptoms among users as well (Thorisdottir et al., 2019). This suggests that community building

in online spaces can support positive mental health outcomes and help buffer risks associated

with SM use.

While a robust foundation of knowledge has been established looking at correlations

between anxiety, depression, and SM use, it is important to note that all the aforementioned

studies utilized cross-sectional survey designs. This means that questions remain as to the

directionality of these associations (e.g., does SM use contribute to higher psychopathology, or

are people with existing mental health issues more likely to use these platforms). Regardless of

this limitation, current literature highlights the importance of mental health clinicians assessing

SM use alongside clients' symptomatology as they appear to relate to one another.

Incidence of PTSD related to SM use has yet to be studied as extensively as anxiety and

depression. Ranney and colleagues (2016) conducted a cross-sectional survey ($n = 353$) on

mental health, violence exposure, and risk behaviors with adolescents seeking emergency care,

and found cyberbullying victimization (reported by 47% of the sample) to be positively

correlated with PTSD symptoms (AOR = 2.0, [1.1-3.6]). This association was even more

pronounced when participants reported physical peer violence in conjunction with cyberbullying

(Ranney et al., 2016). McHugh and colleagues (2018) utilized a longitudinal (two month) daily

diary study with adolescents, assessing four common risky online experiences in relation to

PTSD symptomatology, and found similar results. Three of the online experiences (exposure to

explicit content, cyberbullying, and sexual solicitations) were positively correlated to PTSD

symptomatology among participants over time (McHugh et al., 2018). More specifically, explicit

content exposure and cyberbullying led to significantly higher levels of psychological arousal,

while sexual solicitation contributed to significantly higher levels of intrusion symptoms

(McHugh et al., 2018). Consistency in these findings and the methodological strength of the

repeated measures diary study highlight the importance of continuing to build our understanding

of the association between PTSD symptomatology and SM use.

Sexual Assault and Mental Health

Rates of sexual assault continue to hold steady despite increased research efforts and

public awareness campaigns over the last few decades (McCauley et al., 2019). In the U.S.,

approximately 44% of cis-gender women, 25% of cis-gender men, and 50% of trans individuals

experience some form of unwanted sexual contact in their lifetime (Smith et al., 2018; Stotzer,

2009). Rates of sexual assault are even higher among marginalized groups such as sexual

minorities (lesbian, gay, bisexual individuals), people with disabilities, poor women, people of

color, and Native American women (Armstrong et al., 2018; Cantor et al., 2015; Rothman et al.,

2011). These prevalence rates are disturbing as this type of trauma represents a violation of the

basic human right of bodily autonomy and produces significant disparities in the mental and behavioral health of survivors (Campbell et al., 2009).

Psychological Sequalae of Sexual Assault

The neurobiology of trauma helps explain the extreme acute and long-term negative impacts many survivors experience after sexual assault. As previously stated, primitive regions of the brain activate a cascade of body defense responses during sexual assault, including fight or flight (active responses to a threat), or freeze (an attentive state of immobility which allows the threat to be further assessed) (Kozlowska et al., 2015). Tonic immobility, the temporary physical inability to move or speak when faced with a threat, is another neurobiological defense response commonly experienced by victims during sexual assault (Möller et al., 2017). Cognitively, victims often dissociate (i.e., disconnect from reality) during an attack to help them physically and psychologically endure the trauma (Mason & Lodrick, 2013). Though these adaptive responses to threat represent important survival mechanisms in the moment, they can also have longstanding negative consequences for survivors. In example, experiencing tonic immobility or peritraumatic dissociation are associated with significantly higher odds of developing PTSD and/or severe depression (de Kleine et al., 2018; Möller et al., 2017). Additionally, due to the redirection of hippocampal functioning during sexual assault, memories surrounding the event are often stored in a disjointed, maladaptive way which can impair the limbic (fear response) system in the brain and increase risk for developing PTSD (Mason & Lodrick, 2013).

Posttraumatic stress disorder (PTSD) is a debilitating disorder characterized by re-experiencing the traumatic event (e.g., flashbacks, nightmares), avoidance (e.g., of people, places, or things that remind you of the event), negative cognitions and mood (e.g., depression, irritability) and impairment in arousal (e.g., exaggerated startle response, sleep disturbances)

(American Psychiatric Association, 2013). Sexual assault is the type of violent trauma most likely to result in PTSD, with between 17-65% of women survivors developing this disorder after an assault (Campbell et al., 2009; Hapke et al., 2006; Kilpatrick et al., 1987; Shakespeare-Finch & Armstrong, 2009). The intrusive nature of sexual assault is thought to contribute to greater peritraumatic distress in victims (e.g., negative cognitions/emotions, dissociation) which, as stated, confers a greater neurobiological risk of developing PTSD (Hapke et al., 2006; Shakespeare-Finch & Armstrong, 2009). Depression often co-occurs with PTSD among sexual assault survivors as well (approximately 50% overlap); in fact, latent profile analyses suggest that symptoms of these disorders tend to be positively correlated in severity, failing to distinguish between unique subgroups of survivors with PTSD or depression diagnoses (Au et al., 2013; Scioli-Salter et al., 2016). In addition to mental and behavioral health impacts, PTSD is also associated with a host of physical health complications, indicated by increased healthcare access, more severe somatic symptoms and medical diagnoses, and increased morbidity (Eadie et al., 2008).

Beyond symptoms of PTSD and depression, sexual assault victims also have high rates of anxiety, substance abuse, self-harm and suicidality (Mason & Lodrick, 2013). While roughly one in five (18%) people deal with anxiety-related disorders in the general U.S. population, an overwhelming majority of survivors (73-82%) experience fear and/or anxiety following an assault (Campbell et al., 2009; Packard et al., 2016). These symptoms may stem from victims' cognitive attributions that the world or trusted relationships are no longer safe, and/or over functioning of the brain's stress response system (i.e., HPA axis) following neurobiological activation during the trauma (Packard et al., 2016). A systematic review of research in the violence field has identified alcohol abuse among 13-49% of survivors, and even higher rates of

illicit substance use (28-61%; Campbell et al., 2009). Unfortunately, suicidality is prevalent among victims as well, with 23-44% reporting ideation, while 2-19% report a history of attempts (Campbell et al., 2009). The interactions and co-morbidity of mental health sequelae following sexual assault makes recovery particularly challenging for survivors, and for clinicians whom they may seek out for treatment.

Impact of Support Systems on Survivor Mental Health

Social support systems play an important role in determining survivor outcomes. The majority of victims (65-92%) share their trauma experience with at least one person, with three disclosures being the average (Ahrens et al., 2009). Survivors are much more likely to report an assault experience to informal support networks (i.e., family, friends, romantic partners) than to formal support systems (e.g., police, hospitals) (Ahrens et al., 2007). The decision to make any type of disclosure can be taxing for survivors, as they must first understand and label what has happened to them, and then weigh the risks and benefits of coming forward (Ahrens et al., 2007). Research suggests that victims who experience greater distress from trauma related symptoms are more likely to disclose to friends, family, and formal care systems in order to seek help and obtain support (Starzynski et al., 2005).

The response survivors receive upon their first disclosure is crucial, as that reaction (e.g., positive or negative) often influences whether or not they continue to seek help or choose to cope with the assault on their own (Campbell et al., 2009). In reality, survivors often receive a mix of both positive (74-97%) and negative (80-98%) responses to disclosures (Ahrens et al., 2009). Positive reactions are generally characterized by listening, validating, and offering emotional or tangible support for the survivor, while negative reactions can include questioning or blaming the victim, treating them differently, or centering their own (the support person's) feelings (Ullman,

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2000). While positive reactions from support systems can help facilitate recovery, negative reactions generally have a stronger effect on recovery by exacerbating survivors' symptoms of anxiety, depression, and PTSD (Campbell et al., 2009; Ullman & Peter-Hagene, 2014).

In addition to mental health outcomes, the process of disclosure and responses received from support people can impact the quality of existing relationships as well. Support persons often experience their own emotional distress when a survivor discloses their assault experience, which can affect the response or help they offer (Banyard et al., 2010). While Ahrens and Aldana (2012) found that most survivors identified personal relationships as growing closer (47%) or staying the same (27%) following a disclosure, nearly a quarter (24%) reported subsequent deterioration of the relationship. Losing or perceiving the quality of existing relationships to diminish while trying to cope with an interpersonal trauma like sexual assault can be particularly jarring for survivors, as attachment and safe connections with others is an important component of recovery (Herman, 1997).

Trauma Reminders and Mental Health

Neurobiological responses to trauma are not *solely* activated during traumatic experiences but can be similarly triggered for victims well after traumatic incidents, even in the absence of an actual threat. Reminders of a traumatic event can cause emotional dysregulation in people with trauma histories by activating the fear circuitry in the brain (Moser et al., 2015; Rothbaum & Mellman, 2001). When normal hippocampal functioning (i.e., storing explicit memories that can be intentionally recalled) is impaired during a traumatic experience, memories are often stored in an implicit, sensory way (Turnbull, 2006). These implicit memories are not properly integrated into victims' cognitive structures, and therefore cannot be controlled and managed in the same way as "normal" memories. This means that sensory stimuli (e.g., sights, sounds, smells) can

activate an emotional and physiological response similar to what was experienced during the trauma. While these adaptive responses represent the brain's attempt to protect itself from further harm, they inhibit normal functioning and can cause physical harm by releasing excess stress hormones which wear down the body (van der Kolk, 2015).

Though trauma reminders can be distressing for survivors in the moment and can lead to long term health problems if not properly managed, they also serve an important function in helping people recover from a traumatic experience (Turnbull, 2006). Two of the most widely accepted treatments for PTSD (Trauma-Focused Cognitive Behavioral Therapy and Exposure Therapy) promote healing by having clients reconstruct their trauma narratives (i.e., recalling what happened, including what emotions and sensations they experienced) and repeatedly re-visiting them in a safe space (Protopopescu et al., 2005; Seidler & Wagner, 2006). The goal is for clients to gain mastery over these experiences by organizing their memories in a more explicit way, making them less likely to pop up intrusively outside of their control. This type of prolonged, controlled exposure gradually decreases the brain's fear response by learning to sit through trauma related anxiety and begin to distinguish threatening events from neutral stimuli (Rothbaum & Mellman, 2001). In this context, being reminded of and reliving trauma experiences is considered productive; however, it is important to re-emphasize that *brief* exposures to trauma reminders may actually reinforce problematic fear circuitry in the brain, making symptoms worse. Rothbaum and Mellman (2001) explain this distinction using the following metaphor: if a child bitten by a dog has safe, strategic, gradual exposure to dog related stimuli, they are likely to habituate and learn to properly manage their trauma response. In contrast, if the child is placed in an uncontrolled situation with a dog and quickly removed while they are still having an active fear response, they have not learned to emotionally regulate

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themselves, and may in fact be strengthened in their belief that dogs are dangerous and should be

avoided. It is therefore crucial to understand how people with trauma backgrounds are exposed

to trauma reminders in their daily lives outside the supervision of a therapist (e.g., while scrolling

through SM), and what impact this has on their mental health.

Trauma Reminders in Neuroscience Research

Neuroscience research on PTSD has long used trauma reminders such as

scripted narratives, sounds, and images as tools for activating and studying trauma responses in

various brain structures. Most of this early research was conducted with Vietnam veterans using

FMRI and PET scans (Bremner et al., 1999; Liberzon et al., 1999; Pitman et al., 1990; Shin et

al., 2004). When exposed to trauma reminders, veterans with PTSD demonstrated distinct trauma

response patterns compared to controls, showing increases in symptomatology and

psychophysiological activation. According to this work, exposure to trauma reminders can elicit

an increase in blood flow to the amygdala (the fear center of the brain), and decreased activation

in the medial prefrontal cortex (an area responsible for emotion regulation, and thought to help

with moderating amygdala activation) (Bremner et al., 1999; Shin et al., 2004). Physiological

reactivity were observed in these studies as well, with veterans showing increases in heart rate,

skin conductance, and electromyographic responses in the muscles (Liberzon et al., 1999; Pitman

et al., 1990; Shin et al., 2004). These responses demonstrate the physical toll which stress

hormones relating to traumatic experiences can have on the body, even in the absence of a

present threat. Trauma reminders also caused significantly higher levels of reported emotional

distress in PTSD patients compared to controls (Bremner et al., 1999; Liberzon et al., 1999;

Pitman et al., 1990; Shin et al., 2004). This highlights that neurophysiological responses to

trauma reminders do not solely operate outside victims' conscious awareness but can have a meaningful impact on their cognitive and emotional state as well.

Impacts of Trauma Reminders on Survivors of Gender-Based Violence

Building on the initial research done with Vietnam veterans, similar findings have been identified among victims of gender-based violence. Several studies examining psychophysiological reactions have been conducted with women victims of childhood sexual abuse using scripted narratives of *personal* trauma reminders (Elzinga et al., 2003; Mchugo et al., 2001; Orr et al., 1998; Shin et al., 1999). When comparing survivors with and without PTSD diagnoses, distinct patterns of brain activation were identified. Survivors with PTSD showed increased blood flow to regions of the brain associated with trauma reactivity (Shin et al., 1999). When exposed to their own trauma scripts, the PTSD group produced significantly higher levels of cortisol (stress hormone), which was strongly correlated with re-experiencing and arousal symptoms (Elzinga et al., 2003). Symptom severity was positively correlated with physiological arousal and negative emotional response to traumatic content among survivors with PTSD (Mchugo et al., 2001; Orr et al., 1998). Though most of the negative effects were more extreme in survivors with an official diagnosis, Elzinga and colleagues (2003) found posttraumatic stress symptoms, dissociation, anxiety, and subjective emotional distress were also reported by trauma victims *without* current PTSD diagnoses. Heart rates of *all* survivors were also shown to increase when exposed to auditory trauma reminders, with significant differences between those with and without PTSD (Mchugo et al., 2001; Orr et al., 1998).

Notably, Mchugo and colleagues (2001) identified that physiological and emotional distress brought about by the trauma reminder carried on past the end of the narrative and impacted participants during subsequent tasks as well. Elzinga and colleagues (2003) also

identified aftereffects, finding that participants with PTSD continued to produce significantly higher levels of cortisol than controls shortly after the trigger ended. This is important to understand that exposure to trauma reminders does not only impact victims acutely but may linger, affecting other parts of their daily functioning as well.

More recent studies on women survivors of interpersonal violence (i.e., sexual or physical abuse) with diagnoses for PTSD (IPV-PTSD) found similar patterns in neural activation of the brain's fear system when exposed to trauma related words, images, and film (Moser et al., 2015; Neumeister et al., 2017; Protopopescu et al., 2005). Using trauma related words as a trigger (e.g., rape, force, assault), Protopopescu and colleagues (2005) found immediate exaggerated activity in the amygdala among survivors, with the level of activation being positively correlated to PTSD symptomatology. Similar results were found when using images depicting IPV scenes as stimuli (Neumeister et al., 2017). In line with findings from the studies with veterans, women with IPV-PTSD exposed to images of trauma reminders reported feeling more anxious, unpleasant, and hyper-aroused compared to controls.

Moser and colleagues (2015) utilized brief films showing neutral, menacing, and prosocial (i.e., romantic) scenes of men and women interacting to compare participants with IPV-PTSD to controls. When viewing the menacing scenes versus prosocial scenes, IPV-PTSD participants had greater activation of brain regions associated with negatively biased emotions, pain sensitivity, and flashbacks. In line with the veteran research, decreased activation in the medial prefrontal cortex was identified in response to menacing stimuli. Interestingly, despite clear neurological differences between groups, no differences were identified between IPV-PTSD and control participants in reported subjective distress related to the trauma reminders. This suggests that women in general may find exposure to this type of content emotionally

distressing, and/or that for some survivors with PTSD diagnoses, these neurobiological processes may occur somewhat outside of their conscious awareness (i.e., by not creating significant differences in reported emotional distress).

Taken together, these studies offer valuable insight to the detrimental psychophysiological impacts which trauma reminders can have on women who have experienced interpersonal violence. However, the generalizability of these studies is limited by the fact that they were all conducted in laboratories. Exposure to staged trauma reminders while connected to wires and being observed by researchers does not mimic the day to day lived experiences of trauma survivors. Further research assessing the emotional reactions and mental health symptomatology of survivors in response to trauma reminders in the "real world" will help clarify what this common experience may look like.

One potential strength to generalizability in these studies is that, while much of the earlier research in the field used participants' personal trauma narratives to trigger a response, several recent studies used *generic* trauma related content (e.g., generic images of men and women fighting, general words like "force") and elicited similar reactions from survivors. This suggests that exposure to sexual assault related content which survivors see day to day, including on SM platforms, could produce a negative trauma reaction, even if it is not an exact narrative of their own trauma experience.

Traumatic Content in Mass Media and Mental Health

The media acts as an important sharer of information, especially in moments of crisis. People often seek out information following disasters to relieve their own anxiety, especially for individuals who have faced traumatic events themselves (Berger & Calabrese, 1975). Mass trauma events with extensive media coverage can initiate a problematic cycle of consumption

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among viewers by triggering distress, which in turn prompts individuals to seek out *more* media about the event in an effort to ease their anxieties (Thompson et al., 2019). Existing literature suggests media have the potential to foster vicarious traumatization (development of symptoms through hearing other people's trauma narratives) among viewers in the general public (Liu & Liu, 2020). Indeed, over the past few decades, researchers have been increasingly interested in the impact that media coverage of large-scale traumatic events has on the public. Most of the existing literature has focused on the Oklahoma City Bombing in 1995, the September 11th terrorist attacks in 2001, and the Boston Marathon Bombing in 2013. All identified studies examining these events found that media exposure significantly increased risk of developing posttraumatic symptoms (Jones et al., 2016; Pfefferbaum et al., 2014; Thompson et al., 2019). Ahern and colleagues (2004) identified that people watching the most TV coverage on 9/11 were 66% more likely to have probable PTSD than those with minimal watching habits. Research on the Boston Marathon Bombing found that six or more daily hours viewing trauma content in the week following the event was more strongly associated to acute stress symptoms than direct exposure (Holman et al., 2014). More recently, media consumption about the COVID-19 pandemic was tied to increased levels of anxiety among Chinese citizens (Liu & Liu, 2020). Findings from each of these studies support the notion of a dose-response mechanism, suggesting a positive association between amount of time spent viewing traumatic content in the media and the likelihood of developing mental health problems (Bernstein et al., 2007).

The aforementioned media research sampled the general population, yielding a mix of participants with and without direct exposure to the traumatic events being studied. Given what is known about visual stimuli's ability to activate fear circuitry in the brain, viewing traumatic content in the media may be even more harmful to trauma survivors by prolonging the acute

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phase of trauma recovery, encouraging ruminative thinking, and impacting problematic threat appraisals (Holman et al., 2014). Indeed, some research has identified that people with a history of exposure to similar traumatic events (e.g., violence or other terrorist attacks) may be more vulnerable to the negative effects of such media coverage (Ahern et al., 2002; Holman et al., 2014). While a solid foundation of scholarship has been laid examining traumatic content in the media, several notable gaps remain in terms of methods used and other types of widespread trauma being left out of the conversation.

Exposure to Sexual Assault Trauma Reminders via Social Media: A Gap in the Literature

Taken together, these areas of research highlight the need for examining the intersection of SM use and exposure to traumatic content for survivors of sexual assault, particularly in the context of contemporary online social movements like #MeToo. The following sections will highlight gaps in the existing literature and underscore how the current study aims to address them.

Social Media as an Underexplored Context

Most existing media studies looking at traumatic content exposure have focused on television. A review of the extant literature in 2014 found that 97% of studies examining adult outcomes looked at television viewing, while only 8% considered internet usage (Pfefferbaum et al., 2014). Emerging literature supports the notion that SM can have similar effects on users consuming traumatic content via such platforms. A study examining coverage of Super Typhoon Haiyan found that trauma symptoms and psychological distress were associated with exposure via *SM*, but not *traditional media* (i.e., television, newspaper, radio) (Goodwin et al., 2015). Research among Chinese citizens during the early stage of the COVID-19 outbreak found SM use to be associated with anxiety, depression, and secondary traumatic stress among users (Gao

et al., 2020; Zhong et al., 2021). A study on general trends in media use following a disaster found that SM use was associated with younger users and those with a background of direct trauma exposure (Jones et al., 2016). These researchers suggest that SM has a more direct impact on personal risk assessment and may contribute to emotional contagion in response to a traumatic incident, with potentially greater risk to younger, more traumatized populations.

The lack of information on SM and traumatic content is a notable gap given population trends regarding types of media use. While television is still the largest source of news for most people, its use has declined from 57% to 49% in recent years (Shearer, 2018). News consumption relating to current events is happening more frequently on SM, with nearly half (48%) of U.S. adults getting news from SM "often" or "sometimes" (Walker & Matsa, 2021). News consumption varies across platforms, with 55% of Twitter users, 47% of Facebook users, and 39% of Reddit users reporting regularly getting news on the site (Walker & Matsa, 2021). Half of SM users report actively *sharing* news information to their friend networks on such platforms (Weeks et al., 2017). Users are often exposed to news content on SM platforms even when they do not intentionally seek it out (a concept referred to as 'incidental news exposure') (Ahmadi & Wohn, 2018). In fact, 63% of Instagram users, 62% of Facebook users, and 58% of YouTube users have reported unintentionally coming across news information while doing other things online (Gottfried & Shearer, 2016). This suggests that even if users are not intentionally seeking out news stories involving traumatic content, they may be incidentally exposed during their normal daily routines.

#MeToo Movement as a Source of Traumatic Content Exposure for Survivors

Most research on traumatic content exposure in the media has focused on single incident events (e.g., terror attacks, natural disasters) due to their widespread communal impact, traumatic

nature, and the intensity of the media coverage. Though less explicitly graphic in nature and acute in its impact, the #MeToo Movement could be characterized in a similar way. Commentary and news stories relating to sexual assault became pervasive across SM platforms in the year after going viral, with 65% of U.S. adults reporting exposure to sexual harassment or assault content, including 29% stating it was a great deal of what they saw on SM (Anderson & Toor, 2018). Given that 44% percent of women in the U.S. have experienced sexual assault, and 78% of women report using SM (Pew Research Center, 2019; Smith et al., 2018), it should be presumed that survivors have encountered trauma related content via SM over the past couple years, either incidentally or by intentionally following the content.

Exposure to sexual assault related content (e.g., words, images, videos) via SM may impact survivors by triggering trauma circuitry in the brain and activating an adverse psychophysiological response, similar to what has been observed over decades of neuroscience research with trauma survivors (Moser et al., 2015; Neumeister et al., 2017; Protopopescu, 2005). Beyond triggering a neurobiological trauma response, SM may also harm survivors through viewing negative social commentary about sexual assault, leading to increased self-blame and possibly hindering their willingness to seek support from others.

As previously stated, receiving negative reactions from support systems after disclosing a sexual assault increases victims' risk of developing depression and PTSD (Campbell et al., 2009). The #MeToo Movement was intended to be an empowering form of collective action to improve survivor well-being, and there is certainly evidence of some people finding support in online spaces (Stanton et al., 2017; Zaleski et al., 2016). However, disclosures or news stories about sexual assault posted on SM are often met with unsupportive attitudes and harsh blowback. Indeed, SM has been found to perpetuate rape culture ideals through the use of jokes about

people's gender, race, sexual orientation, or sexual activities, and by providing a space for some men to promote continued violence against women (PettyJohn et al., 2019; Stubbs-Richardson et al., 2018).

Victim blaming is pervasive across SM platforms, including news sites with interactive components such as comment sections or discussion boards. An analysis of comment sections from online news stories covering sexual assault on both periodicals' websites and their Facebook content found that more than a quarter (26%), the largest category, engaged in explicit victim blaming and questioning (Zaleski et al., 2016). This included things such as telling the survivor how they should have acted, claiming accusations were false or "made up," or that their story was unbelievable because of time passed (Zaleski et al., 2016). Larger news organizations (i.e., national compared to local outlets) are more frequently cited for using victim blaming language in their own headlines (Armstrong et al., 2016). This is concerning given national news organizations' role in shaping social and political discourse; indeed, research demonstrates that the media plays a significant role in influencing how important certain issues are (e.g., sexual assault) and who is perceived as responsible (Li et al., 2017). Additionally, an examination of sexual assault discussions on Twitter found that tweets endorsing victim blaming attitudes were retweeted (i.e., shared) more frequently, and those users' accounts had significantly more followers than accounts that expressed support for victims (Stubbs-Richardson et al., 2018). Viewing such negative responses during daily SM use could prompt self-blame and in turn, increase trauma related symptoms among survivors (Schneider & Carpenter, 2019).

While being exposed to unsupportive attitudes from strangers is harmful enough, there is also the potentially more detrimental risk that people in survivors' support systems may engage in such rhetoric as well. One of the purposes and benefits of SM is allowing connection between

friends and family, some of whom may be physically distant or may not get to regularly interact. In the post-#MeToo era, where news about sexual assault is often shared and discussed on SM, a potential downside to these connections could be survivors witnessing unsupportive commentary about sexual assault from trusted loved ones. Exposure to this type of content from friends and family, which they might not be exposed to in an offline setting, could inadvertently deter survivors from disclosing or seeking help from their support networks, complicating their recovery process. In the current age, SM represents a very real extension of people's social support systems, and therefore must be considered as a space where survivor well-being can either be supported or thwarted depending on what they see (Schneider & Carpenter, 2019).

Summary

Sexual assault survivors are at high risk for developing mental health issues, including PTSD, depression, and anxiety, due to the highly personal nature of the trauma. Trauma reminders, such as images, sounds, or words relating to the event, can activate neurobiological stress responses and have severe and detrimental impacts on victims' well-being, especially among those who endorse symptoms of posttraumatic stress. The #MeToo Movement, which went viral in 2017 and has sustained momentum as a social movement in the years since, has inundated SM with sexual assault related content, presumably exposing many survivors to reminders of their trauma. Though existing evidence demonstrates a link between exposure to traumatic content on television and negative mental health outcomes, less is known about exposure to trauma reminders via SM, or how sexual assault survivors are specifically impacted. Given the prevalence of sexual assault in the U.S. and ongoing social movements promoting public discourse on the topic, it is crucial for the field to begin exploring this issue. The current

mixed-methods study is timely and necessary to begin laying the groundwork for this area of

inquiry, and to help inform clinical work with this population.

CHAPTER 2: EXPLORATORY SEQUENTIAL MIXED METHODS

Mixed methods utilize both quantitative and qualitative approaches to collect, analyze, and integrate data (Creswell & Plano Clark, 2007). This approach emerged in the 1980's as the third methodological paradigm to provide strengths, and supplement weaknesses, from traditional qualitative and quantitative methods taken individually (Creswell & Plano Clark, 2011). Since that time, researchers have purported mixed methods to be particularly useful for studying complex, real-world issues which could not be adequately addressed using only one method of inquiry (Campbell et al., 2012). In this vein, Johnson and colleagues (2007) state that mixed methods honor the importance of qualitative and quantitative approaches while providing "breadth and depth of understanding and corroboration" that offers more "informative, complete, balanced, and useful research results" (p. 123, 129). Citing a pragmatist paradigm, mixed methods often prioritize the research questions in study design, placing value on both objective and subjective knowledge, and privileging "what works" in context (Creswell & Plano Clark, 2011). As a result, there are a great diversity of mixed methods designs for researchers to explore; however, four basic designs (convergent parallel design, explanatory sequential design, exploratory sequential design, and embedded design) exist as prototypes for establishing rigorous and valid science (Creswell & Plano Clark, 2011). Each of these models represents different ways that the qualitative and quantitative strands of inquiry interact (i.e., are they independent or concurrent), are prioritized (i.e., is one method privileged over the other), are timed (i.e., does one precede the other), and at what stage they are mixed (e.g., during interpretation, data analysis, etc.) (Creswell & Plano Clark, 2011).

Study Design

The present study utilizes exploratory sequential mixed methods to establish foundational knowledge about the impact of exposure to trauma related content via social media (SM) on the mental and relational health of sexual assault survivors. Exploratory sequential mixed methods are well suited to areas of research which are novel or underexplored in the literature, where appropriate measures or instruments are not developed, where relevant variables are unknown, and/or when a guiding framework has not been established (Creswell & Plano Clark, 2011; Creswell & Zhang, 2009). Such designs begin with an independent qualitative exploration, gathering data from a small sample of the population to establish a preliminary understanding of the phenomenon of interest (Creswell & Plano Clark, 2011). Results from the qualitative strand are then connected and used to inform the development of the quantitative strand of the study (Creswell & Zhang, 2009). Quantitative data are then independently analyzed using traditional quantitative methods appropriate to the research questions. Finally, findings from both strands of inquiry are integrated to provide a more holistic understanding of the phenomenon of interest. Given the limited research on traumatic content exposure via SM, and for sexual assault survivors in particular, the exploratory sequential mixed method represents the best fit for the current study. This allows for exploration of the nuanced lived experiences of survivors using SM in the current cultural context, while also testing the generalizability of identified themes to a broader sample. Each component (i.e., qualitative and quantitative strands) of the study design will be discussed briefly below, with more specific information provided in their corresponding manuscripts (chapters 3 and 4). See Figure 2.1 for a visual representation of the study design.

Qual RQ: Do survivors report exposure to social media content about sexual assault as impacting their mental or relational health?*		Quan RQ: Is there a relationship between exposure to sexual assault related content on social media and mental or relational health outcomes for survivors?*		Mixed RQ: In what ways do the findings from the qualitative interviews generalize to a larger sample in the general population?

Qual data collection	Qual data analysis	Connecting: Survey development	Quan data collection	Quan data analysis	Integrated interpretation

Procedures:
- Community-based and online recruitment
- Semi-structured interviews (45-90 min)
- Collection of basic demographic and psychometric data

Products:
- Participant interview transcripts ($n = 12$)
- Descriptive demographic and psychometric data

Procedures:
- Thematic analysis of interview transcripts (Braun & Clarke, 2006)

Products:
- Key themes & subthemes identified from interviews

Procedures:
- Review key themes & subthemes to identify relevant measures that already exist
- Generate novel items for measuring key variables as needed
- Conduct cognitive interviewing with people from targeted demographic group to assess clarity of the survey

Products:
- Quantitative survey for online administration

Procedures:
- Recruitment and compensation through CloudResearch's MTurk toolkit
- Online survey hosted on Qualtrics (~15-30 min)
- Collect demographics, assault info, social media use, psychometric and relational measures

Products:
- Participant data ($n = 483$) for statistical analyses

Procedures:
- Statistical analyses performed using SPSS 25 (IBM, 2018)

Products:
- Descriptive data
- Chi-square analyses
- T-tests
- Multiple regression models
- Multilevel linear modeling

Procedures:
- Evaluate generalizability of findings by reviewing interview and survey data together

Products:
- Meta-inferences from study
- Clinical recommendations
- Study limitations
- Future research directions

Figure 2.1 Exploratory Sequential Mixed Methods Design.

Note. Adapted from Creswell & Plano Clark, 2011, p. 124. *Qualitative and quantitative research questions will be discussed in further detail in chapters 3 and 4.

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Methodological Orientation

Methodology represents the systematic way of approaching research which considers the researcher's ontology and epistemology, and subsequently influences the type of methods deemed most appropriate for the study. Given the interpretive process involved in knowledge production within research, it is important to be explicit about the researcher's positionality relating to their identity and values systems driving the work (Leavy, 2017). As a scholar, my research is rooted in intersectional feminist theory. This theory specifies that patriarchal oppression cannot be disentangled from other dominant power structures such as white supremacy, colonialism, and heteronormativity (Crenshaw, 1989). Each of these socially constructed systems interact to create "vectors of privilege and oppression," bolstering the power held by those conforming to these dominant discourses and marginalizing those that cannot conform or choose not to (Hill-Collins, 1991). Throughout history, sexual violence against women has been both a symptom of and tool for perpetuating these systems of dominance. The persistent threat of violence and resulting fear serves to keep women ostensibly "dependent" upon men both for mercy and protection, reinforcing patriarchal views of male dominance (Brownmiller, 1975). Rape has also been used as a method for maintaining racial hierarchies (e.g., white owners raping slaves with impunity, Black men being lynched for false accusations of assaulting white women), colonizing Indigenous peoples, and attempting to "correct" people's sexual orientation or gender identity (Anguita, 2012; Armstrong et al., 2018). Based on these perspectives, my personal ontology and epistemology align with a feminist methodology in that they consider gender and power as central to studying social phenomena and think critically about which voices are being privileged in scientific inquiry.

This study has therefore been designed using feminist methodology, an approach which is uniquely shaped by rooting itself in the lived experiences of women as the source of new knowledge production, and by explicitly working towards political change (Ramanzanoglu & Holland, 2002). While the primary purpose of this research is to inform clinical practice with survivors of sexual assault, there are also implicit political impacts to studies such as this where marginalized voices are being elevated, and existing power structures are being challenged. Approaching research from a feminist methodology does not prescribe a particular set of methods; in fact, most feminist methods used are considered "standard" in social science research more broadly. It is not simply a matter of *what* methods are used, but *how* researcher use them that makes work feminist. Three of the primary features of feminist methodology which are implemented in the present study include: using both quantitative and qualitative methods to capture women's experiences, accessing emotional experiences of participants as a valid form of knowledge building, and reducing the hierarchical relationship between participants and the researcher (Campbell & Wasco, 2000).

Attending to the hierarchal relationship requires the researcher to think reflexively about their own positionality. According to Ramanzanoglu and Holland (2002), reflexivity involves "making explicit the play of power relations in your research process, and in identifying your relationship to the researched" which is "particularly important given the interrelation of politics, ethics and epistemology in feminist research" (pg. 158). In the field of social science, it is impossible to eliminate the influence of human interaction from the process of knowledge production. The interplay of dynamics between researchers and participants based on their social identities and lived experiences (whether very similar or very different) will always impact the research process in some way. Therefore, it is not the feminist researcher's responsibility to

"eliminate" the impact of researcher/participant relationships, but to critically analyze the dynamics, minimize power differentials where possible, and to consider how these issues may have influenced findings from the research.

Researcher Positionality

I am a professionally trained Couple and Family Therapist, which influences my research work in a variety of ways. My desire to pursue sexual assault research stems from clinical experiences working with clients who have endured immense trauma and witnessing their strength and struggle as they move forward in their lives. The research questions for this study were generated while working with survivors in a college mental health setting and having clients report to me, anecdotally, the ways in which exposure to stories about sexual assault on SM impacted their recovery. Because of these experiences, I approach this work from social justice perspective, with the motivation of creating change in clinical practice and social dynamics to minimize negative outcomes experienced by survivors following a sexual assault.

My professional identity not only impacts the way I formulate my research, but how I interact with participants in the data collection process as well. The health and well-being of survivors is always my first priority; therefore, I do not ask participants to push themselves past their comfort level during interviews and surveys, and I am careful to demonstrate empathy rather than approaching the work in a cold, disconnected way. Attending to and validating the emotional experiences of participants is a key tenet of feminist research (Campbell & Wasco, 2000). This being said, while working with survivors as research participants, I am careful to establish boundaries clarifying that I am not acting as their therapist during the interview process. One of the practical ways I establish this boundary is providing resources for mental health providers and crisis services so participants know where to go to establish longer term

help-seeking relationships. While I believe my clinical training provides advantages in knowing how to conduct research interviews with participants, I recognize that my identity as a therapist may also alienate those with a distrust or negative experiences with the mental health system. For this reason, I do not emphasize my professional or educational background during the interview (unless warranted) and avoid using technical jargon which may be off-putting to participants.

In line with the guiding principles of feminist research methodology, I acknowledge the impact my personal identity has on my research as well. I identify (and most people perceive me) as a white, cis-gender woman, in a heterosexual relationship. I am also highly educated and come from a middle-class socioeconomic background. My positionality in society affords me a great deal of privilege and has the potential to impact research participants' comfort level and openness with me based on their own identity. The privilege I carry into research also brings potential for misinterpretation or need for further context when trying to understand the lived experiences of participants holding marginalized identities. I try to approach research from a curious stance, recognizing that my perspective and existing scientific findings cannot entirely capture the diverse experiences of all survivors (McCauley et al., 2019). Engaging in ongoing critical reflexivity throughout the research design, data collection, and analysis process is crucial to producing equitable and trustworthy scholarship.

Qualitative Strand: Semi-Structured Interviews

The initial qualitative strand of the study uses secondary analysis of existing interview data. Semi-structured interviews were conducted with women victims of sexual assault to gather in-depth information on their experiences encountering trauma related content on SM. In line with the principles of feminist methodology, this method allows women's voices to be centered

in the process of knowledge production as a new topic of study is being established (Ramanzanoglu & Holland, 2002). The primary research questions for the qualitative strand are:

1) *Do survivors perceive exposure to social media content about sexual assault as impacting their mental or relational health? If yes, what type of social media content has had a notable impact on them and why?*

2) *Did survivors alter their social media consumption in any way in response to content that was triggering or empowering? If yes, how did this impact their recovery?*

3) *What recommendations do survivors have for clinicians about how to address triggering or empowering social media content in treatment?*

Key qualitative findings from these semi-structured interviews were used to inform the development of the online survey disseminated in the quantitative strand of the study.

Quantitative Strand: Cross-Sectional Survey

The quantitative strand comprises a cross-sectional survey implemented via the online data management platform, Qualtrics (Qualtrics, Provo, UT, 2020), with recruitment taking place through CloudResearch's MTurk toolkit application (Litman et al., 2017). The primary research questions for the quantitative survey were:

1) *Are general SM use, exposure to sexual assault related content, and exposure to content unsupportive to sexual assault survivors, differentially associated with mental health outcomes for survivors compared to non-victims?*

2) *Does the frequency of exposure to sexual assault related content moderate mental health outcomes for women survivors of sexual assault using social media?*

3) When someone posts content perceived by survivors as victim blaming or perpetrator supporting, are there different associations to relational outcomes based on the social proximity the survivor has to the poster?

Integration of findings from both the qualitative and quantitative strands of research will be presented in chapter 5.

Summary

The present study aims to answer the important question: *Does exposure to trauma related content via social media impact the mental and relational health of women survivors of sexual assault?* The study was designed using exploratory sequential mixed methods, given that this is an underexplored area of research. The researcher is guided by intersectional feminist theory and her professional experiences as a mental health clinician. The initial strand of qualitative inquiry conducts secondary analysis of semi-structured interviews with sexual assault survivors, exploring their lived experiences on SM during the #MeToo era. Themes and subthemes from the qualitative strand were used to create a cross-sectional, online survey which tested the generalizability of qualitative findings to a larger sample. Qualitative and quantitative findings will be mixed and interpreted together in chapter 5.

CHAPTER 3: EXPERIENCES OF SEXUAL ASSAULT SURVIVORS ON SOCIAL MEDIA IN THE #METOO ERA: A QUALITATIVE EXPLORATION

A version of this manuscript has been published as:

Abstract

Since the inception of the viral #MeToo Movement in 2017, news coverage of sexual assault incidents and related public discourse have become much more prevalent on social media (SM) platforms. While this hashtag activism has prompted important social discourse, little is known about how exposure to this type of trauma related content affects survivors of sexual assault navigating these online spaces. To explore this phenomenon, we conducted in-depth, semi-structured interviews with young adult women survivors of sexual assault (18-34 years old; $n = 12$) who regularly use SM (e.g., Facebook, Twitter). Participants were asked to reflect on sexual assault related content (i.e., news stories and related public discourse) which they have observed on SM platforms. Thematic analysis of the qualitative data found survivors described: 1) negative changes to their mental health and relationships in the face of these exposures, 2) certain types of content (e.g., rape culture narratives) which were particularly distressing to them, 3) how they coped with distress tied to this exposure, and 4) recommendations for clinicians on how to help survivors navigate social media in a healthier way. The present study is an important first step toward understanding the impact of online social movements on trauma survivors who

are active on SM platforms and provides concrete clinical recommendations for therapists working with sexual assault survivors in this unique post #MeToo context.

Introduction

The impact of exposure to sexual assault content (i.e., news stories and related public discourse) via social media (SM) on the well-being of survivors is a topic currently underexplored in the literature. Sexual assault remains a widespread issue in society, with more than one in three women in the U.S. experiencing unwanted sexual contact and about one in five experiencing attempted or completed rape in their lifetime (Smith et al., 2018). Beyond the criminal justice and human rights problem these statistics highlight, sexual assault constitutes a major public health problem, as it is associated with a variety of mental and behavioral health issues including anxiety, depression, posttraumatic stress disorder (PTSD), substance abuse, and suicidality (Au et al., 2013; Campbell et al., 2009; Mason & Lodrick, 2013, Ullman et al., 2013). These mental health concerns may be exacerbated by exposure to sexual assault related content in traditional and social media. Indeed, research demonstrates that trauma reminders, even outside the presence of an acute threat, can activate fear circuitry in the brain, causing physical and psychological distress for survivors (Moser et al., 2015; Rothbaum & Mellman, 2001). Studies with women who have experienced interpersonal violence have shown increased activation in the amygdala (the fear center of the brain) and higher levels of reported anxiety and hyperarousal when exposed to words (e.g., rape, assault, force) or images relating to physical or sexual assault (Neumeister et al., 2017; Protopopescu et al., 2005).

Recent social movements on SM, including #NotOkay, #TimesUp, #HowIWillChange and perhaps most notably, #MeToo, have called attention to the prevalence of sexual assault against women and the lack of accountability among perpetrators of this violence (Bogen et al., 2019a; Bogen et al., 2019b; PettyJohn et al., 2019). As these movements have prompted increased news coverage and public discourse, stories of sexual assault have become headline

news over a sustained period of time. High profile stories often go "viral" (e.g., are shared widely) on SM platforms, exposing users to words, images, and narratives about sexual assault as they navigate these online spaces. As is the nature of SM, these posts about sexual assault are often accompanied by public discourse as well, which can range from showing empathy and support for victims, to questioning victims' credibility and defending perpetrators (PettyJohn et al., 2019; Zaleski et al., 2016).

Despite the ongoing relevance of contemporary SM movements addressing sexual assault, research is lacking regarding how survivors experience exposure to this content on SM and implications of such exposure for their recovery process. The present qualitative study with women sexual assault survivors explores: if/how survivors perceive exposure to sexual assault related content on SM as impacting their mental health, if/how they have altered their SM consumption in response to such content, and what recommendations they have for clinicians working with other survivors during this unique cultural moment.

#MeToo: Hashtag Activism on Social Media

Hashtag activism, using a particular word or phrase to unite people's voices and stories in a call for social justice (e.g., #BlackLivesMatter), has become popular in recent years due to the wide-reaching influence of SM (PettyJohn et al., 2019). The Me Too Movement was originated by activist Tarana Burke in 2006, tied to her work with young Black girls who experienced sexual abuse (Garcia, 2017). The movement was brought to national attention in 2017 when actress Alyssa Milano posted #MeToo on the SM platform, Twitter, asking people to respond with their own stories of sexual assault. A cascade of responses and disclosures followed Milano's initial tweet, with #MeToo being posted 12 million times on Facebook in the first 24 hours, and 19 million times on Twitter during the following year (Anderson & Toor, 2018;

Renkl, 2017). In that first day, Facebook reported nearly half (45%) of users in the U.S. were connected to a friend who posted #MeToo (CBS, 2017). The initial wave of the movement was tied to news stories of Harvey Weinstein's abuses, however subsequent spikes in #MeToo usage have been seen in connection to other high-profile stories as well (e.g., Dr. Christine Blasey Ford's Senate testimony; Anderson & Toor, 2018).

This hashtag activism has made SM platforms a point of potential exposure to trauma related content for survivors. SM use is widespread in the U.S., with 78% of adult women reporting regular use (Pew Research Center, 2019). Young adults (18-29) are the most active across SM platforms, with 88% using multiple platforms (e.g., YouTube, Twitter, Facebook, Instagram), and about half reporting being online "almost constantly" (Perrin & Kumar, 2019; Smith & Anderson, 2018). In the year after #MeToo went viral, commentary and news stories relating to sexual assault became prevalent across SM platforms. Nearly two-thirds (65%) of U.S. adults reported exposure to sexual harassment or assault content during this time, including nearly one-third (29%) stating it was a great deal of what they saw (Anderson & Toor, 2018). Given the potential for negative outcomes associated with exposure to sexual assault content, the present study explores how survivors subjectively experience sexual assault content in their SM feeds.

Public Discourse Surrounding Sexual Assault on Social Media

Typical of SM, trending content is often accompanied by public discourse, or public conversation and engagement, reflecting societal attitudes and norms about a particular issue. Even prior to the #MeToo Movement in 2017, SM saw trends of public discourse surrounding sexual assault stories going viral on their platforms (Ash et al., 2017; Kosloski et al., 2018; Stubbs-Richardson et al., 2018). For survivors, SM can be a source of support by providing a

sense of belonging, access to helping resources, or empowerment through hashtag activism

(Elmquist & McLaughlin, 2018; Kosloski et al., 2018; Zaleski et al., 2016). These platforms may

also be a source of distress due to unsupportive messages, such as endorsement of rape culture

attitudes, emerging from public dialogue. Rape culture refers to "a pervasive ideology that

effectively supports or excuses sexual assault" (Burt, 1980, p. 218) which includes adherence to

traditional gender roles, sexism, viewing sex as an exploitative exchange, acceptance of violence,

and hostility towards women (Johnson & Johnson, 2021).

In the first known study of its kind, Zaleski and colleagues (2016) found perpetuation of

rape culture, most notably blaming women for their own victimization, to be pervasive in SM

commentary discussing news stories about sexual assault. Researchers sampled articles covering

sexual assault from the digital versions of the largest periodicals in the U.S. (Wall Street Journal,

New York Times, USA Today, and Los Angeles Times) over a four-month period from 2014 to

2015 (prior to the #MeToo Movement). For the first two months, comment threads for each

selected article were extracted from the periodicals' postings on Facebook, and for the last two

months, comment threads were taken directly from the periodicals' websites. This yielded 4239

comments from 52 articles which were analyzed using qualitative content analysis. The largest

group of comments (26%) were categorized as victim blaming and questioning, with behaviors

including: telling rape survivors what to do; claiming a survivor's story is too unbelievable to be

real; implying survivors had a hidden agenda; stating the passage of time made the survivor's

story unbelievable; claiming accusations were false; and blaming victims for their use of alcohol

and drugs (Zaleski et al., 2016). Comments showing explicit support for perpetrators were less

common (constituting 6% of the comments analyzed) but were present on all but one of the

articles reviewed. These comments included things like using sarcasm and humor to discredit

survivors and highlight the suffering of "falsely accused men" (Zaleski et al., 2016). Notably, 16% of the comments were characterized as supportive of survivors, including users disclosing their own personal assault experiences or providing information to defend the survivor in the story (Zaleski et al., 2016).

Similar commentary was identified in SM discussions in 2013 following the Torrington and Stuebenville rape trials and the investigation of Jameis Winston (Ash et al., 2017; Kosloski et al., 2018; Stubbs-Richardson et al., 2018). As Kosloski and colleagues (2018) stated, "sites like Twitter or the comment sections of online newspaper articles can serve as stages where people can publicly discuss, endorse, and disseminate rape myths" (p. 166). While survivor supportive commentary was identified in each of these studies, positive messages and efforts to challenge rape culture were less frequent and less widespread. Stubbs-Richardson and colleagues (2018) examined how victim blaming versus victim supporting messages were disseminated on Twitter in the wake of the Torrington and Steubenville rape trials. They found that tweets which endorsed victim blaming attitudes were retweeted significantly more than victim supporting tweets. Further, accounts posting victim blaming commentary had significantly more followers than accounts that showed victims support (Stubbs-Richardson et al., 2018).

While #MeToo was intended to challenge rape culture, preliminary research on the digital movement suggest that victim blaming and hostile resistance to social change are still prevalent on SM platforms (Nutbeam & Mereish, 2021; PettyJohn et al., 2019). Exposure to narratives that uphold rape culture is concerning as it has the potential to exacerbate negative outcomes for survivors, including self-blame and increased trauma related mental health symptoms (Anderson & Overby, 2021; Campbell et al., 2009; Kosloski et al., 2018; Schneider & Carpenter, 2019). Continuing research is needed to assess whether hashtag activism addressing

sexual assault has altered the overall tone of public discourse on SM platforms, and how such tone is impacting users.

A Framework for Understanding the Impacts of Trauma Related Content

The present study is guided by literature on the neurobiology of trauma and a clinical understanding of how trauma reminders can impact survivors throughout their recovery process. After a traumatic experience such as sexual assault, reminders of the event can activate fear circuitry in the brain, causing survivors to experience rapid, extreme emotional or physical dysregulation (Ehlers & Clark, 2000). This involuntary re-activation of trauma memories can exacerbate mental health symptomatology even after the event is over (Rothbaum & Mellman, 2001; van der Kolk, 2015). Indeed, uncontrolled trauma reminders (i.e., outside therapeutic treatment) can stunt survivor recovery processes by reproducing PTSD related symptoms, preventing change in negative appraisals of the event, and hindering changes to the memory of the trauma (Ehlers & Clark, 2000). Individuals with their own histories of violent trauma may be more susceptible to distress from media coverage depicting trauma (Thompson et al., 2019). This is based on the finding that people who have experienced violence perceive themselves at a greater risk for experiencing further violence or some type of disaster (Blum et al., 2014). While sexual assault related content is being frequently shared via SM in the context of the #MeToo Movement, the impact of this phenomenon on the mental health of survivors has not been thoroughly examined.

Methods

To address existing gaps in the literature, the present study aims to provide foundational information on how survivors are impacted by exposure to sexual assault related content in SM spaces. Qualitative, semi-structured interviews were conducted with young women survivors to

explore their lived experiences with viewing sexual assault related content on SM via news stories and public discourse. More specifically, we were interested in three primary research questions: 1) if/how survivors perceive exposure to sexual assault related content as impacting their mental health, 2) if/how they have altered their SM behaviors in response to such content, and 3) what recommendations they have for clinicians working with other survivors who are active on SM. This study received full board approval from the Institutional Review Board (IRB) at the researchers' academic institution (see Appendix A).

Researcher Positionality

All team members identify as white and American, with other identities on the team including: cis-gender woman, intersex woman, heterosexual, lesbian, survivor, and non-victim. All team members are active on SM and have engaged with sexual assault content on these platforms, both as users and academic researchers. The primary investigator (PettyJohn) is a licensed mental health clinician with extensive experience treating survivors of sexual assault. Her clinical experiences helped inform the research questions for the present study.

Recruitment and Participants

Women between ages 18-34 years old who experienced at least one instance of sexual assault since age 14 were recruited to participate in the present study. These age demographics were chosen as young adults are the most active cohort on SM (Smith & Anderson, 2018), and age 14 is commonly used as a cut-off differentiating experiences of childhood sex abuse from adult sexual assault in violence research (Filipas & Ullman, 2006). Recruitment materials did not define "sexual assault" in a particular way, leaving it up to potential participants to self-identify as a survivor. Recruitment occurred via three sources: flyers posted in local therapy offices and on campus, emailing student organizations for women and/or LGBTQ+ students at a large

Midwestern university, and posting recruitment information on SM (Facebook and Twitter) (see

Appendix B). Due to the sensitive nature of the research subject and potential to cause emotional

distress, individuals were screened over the phone by the first author, a mental health clinician,

for substance abuse, suicidality, and psychoses. This process was written into the study IRB as a

mechanism for protecting participants. None of the prospective participants endorsed concerning

levels of distress to exclude them from the study. Each method of recruitment yielded 4

participants for the study, providing a total of 12 interviews for analysis. This sample size has

been deemed appropriate for social science research using in-depth, semi-structured interviews

with participants representing a group with homogenous experiences of the phenomenon in

question (Guest et al., 2006; Young & Casey, 2019).

Demographic and assessment information for the 12 participants are provided in Table

3.1. Participants ranged from 21 to 32 years old (median = 23.5). One-third ($n = 4$) identified as

women of color (2 as African-American, 1 as Asian-American, 1 as Hispanic-American) and

two-thirds ($n = 8$) identified as white. One-third identified as either bisexual ($n = 3$) or queer ($n = 1$), while two-thirds ($n = 8$) identified as heterosexual. Most participants (50%, $n = 6$) were

current college students earning their bachelor's degree, while 17% ($n = 2$) fell into each of the

three categories: completed high school, completed their bachelor's degree, or completed a

graduate degree. All participants reported using at least one SM platform (range = 1-5; $M = 3.83$), with two-thirds ($n = 8$) using multiple platforms daily, one-quarter ($n = 3$) using one

platform daily, and one participant using one platform weekly. The majority ($n = 10$) of the

sample reported experiences of rape, with one participant reporting a sexual assault which did

not include rape, and one participant stating they were unsure if their assault was rape or not.

Participants' most recent assault timelines ranged from 2007 to 2019.

Table 3.1

Participant Demographics, Psychometrics, and Assault Information (n = 12)

		% (*n*)	Mean	Range (SD)
Demographics				
Age			24.8	21-32 (4.20)
Race/Ethnicity	African American	17 (2)		
	Asian American	8 (1)		
	Caucasian American	67 (8)		
	Hispanic American	8 (1)		
Sexual orientation	Bisexual	25 (3)		
	Heterosexual	67 (8)		
	Queer	8 (1)		
Education	Completed high school	17 (2)		
	Some bachelor's education	50 (6)		
	Completed bachelor's degree	17 (2)		
	Completed graduate degree	17 (2)		
Religious affiliation	Buddhism	8 (1)		
	Christianity	33 (4)		
	Islam	17 (2)		
	Judaism	8 (1)		
	No religious affiliation	25 (3)		
	Other	8 (1)		
Social media use	# of SM platforms		3.83	1-5 (1.34)
SM frequency	Multiple platforms daily	67 (8)		
	One platform daily	25 (3)		
	One platform weekly	8 (1)		
Psychometrics				
PHQ-9			8.42	2-17 (5.04)
GAD-7			10	2-19 (6.34)
PCL-5			32.36	13-72 (18.91)
Assault Information				
Most recent assault	Post-#MeToo (late 2017-19)	17 (2)		
	2012- early 2017	50 (6)		
	2007-2011	33 (4)		
Experienced rape	Yes	83 (10)		
	No	8 (1)		
	Unsure	8 (1)		
Perpetrator type(s)[a]	Authority figure	8 (1)		
	Casual date	33 (4)		
	Friend/acquaintance	67 (8)		
	Romantic partner	33 (4)		
	Stranger	33 (4)		
Reported to police	No	42 (5)		
	Yes	33 (4)		
	Mixed[b]	25 (3)		
Perpetrator prosecuted	No	67 (8)		
	Yes	8 (1)		

Table 3.1 (cont'd)

Mixed[b]	8 (1)
In process	17 (2)

[a] Percentages exceed 100% due to multiple victimizations among participants.
[b] Refers to different outcomes reported by a participant from multiple victimizations.

Interview Protocol

Semi-structured interviews were conducted by the primary investigator (PettyJohn) and lasted between 45-90 minutes. Interviews began in December of 2018 and concluded in June of 2020. The first eight interviews were conducted in-person in a confidential therapy office, and the final four interviews were completed virtually using HIPAA compliant Zoom video conferencing due to the onset of COVID-19. Prior to the interview, participants reviewed the consent form with the investigator (which included consent to audio record the interview), were given the opportunity to ask questions, and were given a hard copy to take with them (see Appendix C).

After consent was obtained, participants completed the aforementioned demographic information, assessment of victimization histories (SES-SFV), and psychometric measures for depression (PHQ-9), anxiety (GAD-7), and PTSD (PCL-5) (see Appendix D). The Sexual Experiences Survey- Short Form Version (SES-SFV; Koss et al., 1987; Koss et al., 2007) assesses participant experiences with 7 distinct forms of sexual assault (e.g., "*Someone had oral sex with me or made me have oral sex with them without my consent*"), the tactics used (e.g., "*Threatening to physically harm me or someone close to me*"), and how many times (*0, 1, 2, or 3+*) they have experienced them in both the last 12 months and since age 14. This comprehensive measure is considered a gold standard for assessing victimization and has demonstrated good reliability and convergent validity among women (Johnson et al., 2017). The PHQ-9 is a 9-item measure with good internal validity ($\alpha = .86$ to $.89$; Kroenke et al., 2001) which asks participants to indicate how often they have experienced a series of symptoms, such

as "*Little interest or pleasure in doing things*" over the past 2 weeks, using a 4-point Likert scale. The GAD-7 is a 7-item measure with strong internal validity (α = .89; Spitzer et al., 2006) which asks how often participants have experienced symptoms such as "*Feeling nervous, anxious, or on edge*" over the past 2 weeks, using a 4-point Likert scale. The PCL-5 is a valid and reliable (α = .94; Blevins et al., 2015) 20-item measure, which uses a 5-point Likert scale to assess how often participants were bothered over the last month by a list of symptoms such as "*Repeated, disturbing dreams*," in relation to a specific stressful event. Data were collected in written form for in-person interviews, and via Qualtrics for virtual interviews. These assessment data were collected to provide descriptive, contextual information about the sample.

There was substantial variability in reported mental health symptomatology among participants. Survivors ranged from non-clinically significant depressive symptoms to moderately severe symptoms (range = 2-17), with the average PHQ-9 score falling in the mild depressive range ($M = 8.42$; Kroenke et al., 2001). Some survivors reported subclinical anxiety while others reported severe anxiety symptoms (range = 2-19), with the average GAD-7 score falling at the clinical cut-off for moderate anxiety ($M = 10$; Spitzer et al., 2006). All survivors reported experiencing posttraumatic stress symptoms (range = 13-72), with the average PCL-5 score falling below the typical cut-off for clinical diagnosis ($M = 18.91$; Blevins et al., 2015).

For the interviews, a semi-structured script anchored in the three aforementioned research questions was used (see Appendix E), with the interviewer using an iterative process of adding sub-questions to the script as common themes emerged from participants over time (Rubin & Rubin, 2012). To protect participant anonymity, no specific questions about their identity (e.g., name, hometown) or assault experience (e.g., location, identity of perpetrator) were asked. When potentially identifiable information was offered by participants, the research team redacted it

from the final interview transcripts. At the conclusion of interviews, participants' distress levels were assessed, and grounding exercises were offered before they exited the space. Each participant was provided a $50 gift card, a list of local/national resources, and a worksheet with healthy coping skills and grounding techniques.

Data Analysis

Interviews were transcribed verbatim, de-identified, uploaded to Dedoose online coding software, and analyzed using Braun and Clarke's (2006) model for thematic analysis. This involved 6 phases of analysis: 1) becoming familiarized with the data (i.e., transcribing, reading, and re-reading the interviews); 2) generating initial codes (i.e., identifying interesting features across the dataset); 3) searching for themes (i.e., gathering codes across interviews into potential themes); 4) reviewing themes (i.e., determining if themes fit across the dataset); 5) defining and naming themes; and 6) producing the report (i.e., extracting key examples of themes from the data) (Braun & Clarke, 2006). The primary investigator and research assistant (authors MP & GA) independently read each transcript and journaled about emerging patterns across participants. These two team members met to discuss their initial codes and begin consolidating them into potential themes. Initial codes and themes were largely organized by the research questions that guided the interview script. Once a preliminary codebook of themes and subthemes was generated, these team members revisited all transcripts again to determine applicability across participants and began extracting exemplary quotes that captured each theme. After this round of review, an expert violence researcher (HM) was consulted to provide an additional perspective. The consultant reviewed all transcripts alongside the preliminary codebook to affirm or challenge themes proposed. Once this review was complete, all three coders met to establish consensus, define, and label themes and subthemes before producing the

final report. At this point, the team concluded that informational redundancy had occurred based on the number of rich examples for each theme identified in the interview data, and the fact that no new themes were emerging after multiple rounds of review (Lincoln & Guba, 1985).

Throughout the process, the team was careful to attend to principles of trustworthiness in qualitative research as outlined by Lincoln and Guba (1985). Engaging in systematic analyst triangulation among team members bolstered the credibility of study findings. Credibility was also strengthened through extensive memo writing during review of the transcripts, and member checking by adding questions to the interview script based on initial findings and gauging fit with future participants. Confirmability was strengthened through extensive engagement in the literature and expertise in violence and mental health research on the team. The team kept a detailed audit trail of our process throughout reviews and coding to ensure dependability of findings. Throughout the process, coders also discussed and challenged each other on their own positionality, beliefs, and biases they brought into the research process. Explicitly engaging in reflexivity and mutual accountability among team members helped strengthen the confirmability of the results (Lincoln & Guba, 1985).

Results

Major themes and subthemes emerged from interviews largely in alignment with the three primary research questions. These findings are presented below, roughly in temporal order of how topics came up in interview conversations, and exemplary quotes from participants are provided.

Impacts of Exposure to Sexual Assault Content on Social Media

Mental Health Impacts (n = 12)

All participants reported emotional distress associated with exposure to sexual assault related content in SM spaces, including feelings of anger, sadness, shock, stress, or being "upset to the point of tears." When asked to reflect on these particular exposures, survivors reported specific symptoms of anxiety, posttraumatic stress disorder, depression, and physical stress in their bodies. Survivors indicated that frequent exposure to sexual assault content triggered anxiety symptoms, primarily because it prompted them to think about their own trauma, as this participant explained:

> …I feel like it does affect me when I see something or I read something about it. I definitely feel a sense of like anxiety or like I get worried…it brings back, I can't even explain it, it's like it brings just brings everything back into the front of my mind and then it's like I'm thinking about it more.

One participant emphasized that persistent exposure to other survivors' experiences made it difficult to work through her anxiety in therapy because she could not challenge the maladaptive belief that she was in ongoing danger:

> …I think that's the biggest thing with my anxiety was that like, you can't talk me out of this [sexual assault] not happening because it has happened before, and so overlooking claims that the media makes isn't helpful because you can't rationalize that it's not going to happen, because it has happened.

Symptoms consistent with posttraumatic stress disorder (PTSD) were commonly reported as well, including hypervigilance, nightmares, difficulty sleeping, avoidance behaviors, and flashbacks. Dissociation was the most reported PTSD symptom among participants, as one

survivor explained what happens when confronted with stories about sexual assault on SM, "I usually get kind of dissociative, and then it's hard to come back cause it's like, I'll feel crappy and then I won't, I'll walk away and then I won't even know why I'm feeling so bad, for a while." One of the survivors who was actively involved in therapy explained clinical changes in her PTSD symptoms during the week that Dr. Blasey Ford testified to Congress about her sexual assault and after the testimony went viral on SM generating large amounts of discussion:

> …so in therapy we were like tracking my like PTSD symptoms and I had been on a steady decline but that week was like a significant spike that like just took more work…eventually it did decline but it took more work.

> Participants reflected on symptoms of depression regarding their moods, sleep habits,

appetite, and ability to focus on things. One participant explained:

> …I'm much more irritable I think…like symptoms of depression too all kind of spike during that time. I do think it's harder to relax so I would say like physically, sleep is definitely affected and then I think, yeah eating habits are too, I think all of those things are generally affected.

> Physical symptoms consistent with a trauma stress response were reported by survivors

as well, including fatigue, headaches, muscle tension, and "feeling nauseous and sick and like, just heavy." As one participant summarized when describing her symptoms, "I feel like there's just a lot more tension in my body at those times [when sexual assault stories are prominent on SM]."

In addition to mental health impacts, several survivors reported changes in their behaviors when SM was saturated with sexual assault content. This affected not only their ability to function with daily tasks such as running errands and going to work, but also interfered with

their ability to interact with people in real life. As one participant stated, "it [exposure to SM content] affects how I'm going to interact with people, it affects whether or not I'm going to go to the store that day." This same survivor also reported a history of suicidal ideation and engaging in cutting behaviors after being exposed to comment sections on SM which were attacking and blaming victims of sexual assault. Another survivor reflected on her exposure to a national news story on SM and how it contributed to "extreme aggression," to the point that she recalled this story:

> …I remember I was so angry one day I actually physically shoved someone out of my way because he was way too close to me, and I was getting uncomfortable and I told him to move. And he either didn't hear me or he didn't give a fuck and so I was just like fine, and so I just pushed him.

Social and Relational Impacts (n = 6)

Beyond the negative impacts on mental and behavioral health, half of the sample also reported negative changes in their interpersonal relationships with co-workers, friends, family, and other important figures such as religious leaders. One participant reflected on the aftermath of reading a SM post about another survivor's experience and how it impacted her professionally:

> …I remember we had a training conference a few days later at work, and I was just like…I love conferences I love that stuff, I eat it up, and I was just not into it, I didn't want to engage with anybody…I didn't want to be there, but I was there.

Another survivor struggled with feeling safe at work after seeing co-workers post hostile commentary about a victim from a national sexual assault news story. She explained that these

types of online interactions caused her to "withdraw in personality and social interactions where the topic can then come up."

Participants also discussed damage to more intimate relationships with family and friends after observing how they responded to other survivors on SM. When asked about interactions on Facebook, one survivor discussed the lasting changes to some of her closest friendships which have resulted from discourse about sexual assault in that space:

> …it's obviously worse when my friends want to have a really strong opinion about it and they've never been through it…there's people I used to talk to on a daily basis that over the last probably, two years I maybe talk to them once a month now.

Also discussing Facebook interactions, another survivor reported distancing herself from extended family members due to comments they made during Brett Kavanaugh's Supreme Court appointment:

> … it was really frustrating for me to see family members you know, say such stupid like uninformed ignorant stuff about [Dr. Blasey Ford] and the whole situation…I stopped following a lot of them on Facebook. I didn't delete them because they're family but I'm like, I don't want to see the dumb shit you write.

While survivors reported feeling anger in situations where friends or family members said hostile or uninformed things about victim experiences, they also expressed sadness and a sense of betrayal that trusted people in their lives no longer felt safe. A survivor summarized this point well when talking about the aftermath of Trump's election and the Kavanaugh hearings:

> …it definitely like, was really hard to trust people, especially with the [2016] election too, in the midst of all that stuff and then after the election, people like…I don't know, just changed [my] interactions with people because people that I thought like, they would

never defend someone who committed sexual assault and then they're publicly defending

someone who committed sexual assault, [it] did naturally change my relationships with

people…I think that was like a pivotal moment of realizing oh, people that I thought were

safe actually aren't […] In my head like, I've known that policy makers don't care, but

when we have family members or friends who are weighing in on this it's like, that's

different because it's a friend that I care about…and when they say things like, oh well

he's a great person, one mistake shouldn't ruin his life or something like that, it's like, I

know they don't mean this, but kind of seems like they don't care about me.

It's important to highlight that none of the aforementioned mental/behavioral health, or relational

impacts were related to participants' *personal* trauma disclosures posted on SM; in fact, very few

($n = 2$) participants reported sharing their assault experiences publicly on SM. All of these

negative outcomes were associated with participants observing how people reacted to *other*

survivors' stories, a point that will be further elucidated in the next theme.

Distressing Social Media Content

As they described the impacts of sexual assault content on SM, participants were asked to

reflect on what types of content or interactions specifically contributed to the distress they

identified. Survivors referenced key stories about sexual assault in the news which saturated their

SM feeds and initiated harmful discourse, with perpetrations by Brett Kavanaugh, Brock Turner,

Larry Nassar, and Donald Trump coming up most frequently. When asked to describe why these

stories and the surrounding dialogues were particularly distressing, participants identified two

key factors: 1) they perpetuated rape culture narratives, and 2) participants could see themselves

in these stories.

Rape Culture Narratives (n = 11)

Survivors were distressed by rape culture narratives playing out in both the media stories which covered sexual assault incidents, and commentary related to the stories on SM. Participants perceived the news stories as presented in "the overall kind of nuanced way that the media can make the perpetrator look [like] anything other than a perpetrator of sexual assault." The Brock Turner case was specifically referenced in this regard, given that he was presented to the public as the "Stanford Swimmer" rather than a criminal. Recollections were given about comment sections blaming or questioning victims and offering more concern for accused men who perpetrated violence than for the women who had been victimized. One survivor stated, "I've seen a lot of comments on like, how drunk was she, like where are her friends, a lot of talking about like, what was she wearing…" In reference to Kavanaugh, another participant remembered, "listening to how the whole hearing played out was very upsetting in general, and then afterwards all of the comments about not believing a woman, it's a he-said she-said, you know why would you destroy a man's life over that…"

Personalizing Content (n = 12)

Participants also reported a tendency to project themselves into the stories of other survivors, which often resulted in bringing traumatic memories back to the forefront of their minds. A survivor explained:

> …stories that have even like a small part that brings me back, that like remind me of my own story, they are harder, just because I kind of have to like, wade through my own headspace of kind of being triggered before I can process them…

Another component of this personalization was survivors *comparing* their own assault to those featured on the news and SM in a way which validated or invalidated their own experience,

or elicited strong emotions. A survivor remembered identifying with Chanel Miller (who was assaulted by Brock Turner), "all those feelings that she had I could relate to, and then I just remember feeling lucky that I had a better outcome than she did, that my story was like, the minority instead of the majority [with regard to the justice system]." From a different perspective, one participant shared that seeing #MeToo content on Facebook made her think, "oh well, that's not that bad […] why are all these people getting so much attention and support for something that like, to me doesn't sound…like I wish that happened to me compared to what did happen to me."

The seemingly most upsetting form of personalization among participants was observing how people, sometimes their own family and friends, negatively responded to other victims' stories, which lead to internalizing the antagonism as though it was directed at them. This type of personalization had significant overlap with the relational impacts subtheme, as exposure to unsupportive SM posts and commentary from friends, family, and co-workers was common, distressing, and impacted their perceptions of the relationships.

Survivor Coping Skills for Navigating Social Media

Throughout the interviews, it became evident that the survivors, knowingly or unknowingly, had developed coping skills to help them navigate SM spaces in a way that reduced their risk of distress. While some of the participants cut back on their SM use or deleted specific platforms, all remained active users. Survivors curated their online experiences through settings management, setting personal boundaries for their usage, and following news sources they deemed safe and trustworthy. They also pointed out the positive aspects of SM since the #MeToo Movement, such as increasing awareness and education about sexual assault, and supporting and empowering survivors.

Settings Management (n = 8)

Survivors reported using the built-in settings and security options on various SM platforms to curate a feed that was less likely to trigger distress. Specific tools included: muting words or hashtags, changing location settings, filtering content, unfriending people, or blocking certain users' ability to private message them. Many participants reported muting "sexual assault," "#MeToo," or specific perpetrators' names during the height of news coverage to help control exposure. Though survivors reported appreciating and benefiting from settings management tools, they also reflected on their limitations (e.g., muted words on Twitter do not filter out words used in article headlines; the landscape of how platforms are designed is always changing). Security tools were particularly valued by the survivors who were connected digitally to their perpetrator via SM, or for those concerned about their perpetrator finding them.

Safe and Trusted News Sources (n = 5)

Some survivors reported curating their SM feeds by only following news sources or seeking out information on sexual assault stories from media they trusted or felt was a safe source for survivors. Three participants who mentioned this strategy reported blocking or avoiding Fox News specifically due to negative perceptions of how that outlet has treated sexual assault survivors historically. Survivors most frequently reported following CNN, New York Times, NPR, their local news channel, and satire or comedy news shows such as John Oliver's Last Week Tonight, The Daily Show, or Saturday Night Live. This was an important tool for survivors as most of them felt it was important to stay informed about news regarding sexual assault cases but were wary about exacerbating negative emotions or mental health symptoms.

Setting Boundaries (n = 10)

In addition to adjusting their SM settings, survivors reported setting personal boundaries with sexual assault content in a variety of other ways, such as making conscious decisions about if, when, or how they would allow themselves to read SM content. As one survivor explained,

> …with stories, I think if I'm not in like a good headspace, I won't even open up stories that deal with [sexual assault], like I'll read until they get to the part where they talk about the instance of violence and then I'll kind of just scroll past.

This decision is complicated by the fact that most participants reported a sense of obligation to show solidarity with other survivors but struggled to balance that with caring for their own needs. As one participant stated, "it's a really crappy struggle cause you want to support someone, cause like, who knows better than someone who has been in the same hole that you have, but it's just, no one wants to constantly hear that."

Survivors also reported making conscious decisions about if or when they would engage directly in *dialogue* about sexual assault happening on SM. The majority of participants had never publicly disclosed their assault experiences on SM, and there was a wide range in how active they were in posting or commenting about sexual assault. As one survivor explained,

> …there was a lot of posts at that time of you know, 'Me Too' and this is my story and, I remember my reaction was that I was so thankful that they had shared theirs but I never… I'm, I don't share mine. I never said 'Me Too,' I never shared my story, I never did that. So I remember feeling a little bit of guilt that I wasn't doing it, but also very glad that everybody else was.

Some participants appreciated and felt encouraged by engaging in dialogue with other survivors or allies who were supportive and understanding. Others had historically engaged in antagonistic

conversations about sexual assault stories in an effort to show support for the survivor, but had stopped over time to protect their well-being. As one participant summarized,

…I used to engage a lot more [but] I kind of stopped [...] just because it takes a toll to like argue about that with people [...] most of the time when I'm engaging in a conversation with someone on social media it's someone I'm agreeing with, I don't really get in like conversations with people that I disagree with on social media anymore.

One participant had a different experience, in that she felt empowered and proud of her ability to engage in hostile comment sections by defending survivors and providing education to other posters.

Most participants reported using trigger warning information (i.e., a statement preceding a post, article, or video stating that sexual assault will be discussed), when available, to make appraisals about how to engage with SM content. Warnings which contained more detailed information about who the content could be distressing to (e.g., survivors vs. the general public) and why (e.g., what content would be described) were appreciated. In fact, one survivor stated, "I rely on [trigger warnings] […] those set the pace for my entire day." The majority of survivors did not let trigger warnings deter them from consuming content they were interested in but appreciated that the warnings allowed them to prepare for potentially feeling distressed. Interestingly, a subset of survivors reported using trigger warnings to "test the waters" of how they were doing in their recovery process, as one participant explained, "I just want to see like, am I better, can I handle this." Pushing this boundary even farther, another survivor identified "ignoring the trigger warnings and just watching the shit anyway" as a "form of self-harm" that she had previously engaged in. She came to understand her online behaviors in this way after

discussions with her therapist which helped identify consuming triggering content as a maladaptive and harmful coping strategy.

Positive Aspects of Social Media (n = 10)

Alongside the detrimental impacts of SM identified, participants also reported positive aspects which helped them cope, particularly since the inception of the #MeToo Movement. Survivors highlighted the role of SM in bringing education and awareness about sexual assault, both to the public at large and to themselves personally. One participant stated that SM has "been a good fact check for me…seeing that there are actual laws against [sexual assault]…does validate, oh like this is actually wrong, and keeps me from minimizing that it's a bad thing." Feelings of support and empowerment were emphasized by participants as well, as indicated by one participant who watched the victim impact statements of survivors from the Larry Nassar case on SM, "I hadn't really met anyone who had experienced sexual trauma or at least was open about it, so to hear someone else talk about it was really helpful for me."

Survivor Recommendations for Clinicians

Participants were asked if they had recommendations for clinicians working with survivors who use SM. All but one of the participants explicitly referenced attending therapy at some point, which allowed them to provide feedback on how clinicians can more effectively address the impacts of SM from firsthand experience. Some of the recommendations were things participants felt their therapists had done well, though most of them were reflections on what they *wished* their therapists had done in treatment. A concise listing of these recommendations can be found in Table 3.2.

First and foremost, participants recommended therapists assess SM use (e.g., types of platforms used, frequency of use, content exposure) and level of news consumption among

clients who have experienced sexual assault. This provides an opportunity for therapists to

proactively offer psychoeducation on the potential impacts of exposure to sexual assault content

and create space for survivors to process and debrief about distressing SM experiences during

sessions. This also creates a baseline for therapists to track changes in symptomatology in

relation to SM use and informs interventions to help clients build skills and healthy coping

strategies for navigating SM spaces. Given the pervasiveness of SM and its centrality to social

life, self-expression, and professional endeavors, survivors suggested therapists provide concrete

ideas on how to mitigate potential harm rather than simply asking them to "log off." Some

specific ideas which helped survivors were: focusing on themselves and setting boundaries about

engagement with other survivors' stories; watching satire news shows (e.g., SNL) to stay current

with stories in a less triggering way; calibrate SM settings on each platform; set a timer for SM

use and/or news consumption each day; and seek social support after exposure to distressing SM

content. Participants also emphasized the importance of therapists staying informed about SM

trends (e.g., current apps/platforms, hashtags or videos that go viral) and widespread news stories

about sexual assault, and proactively asking survivors about exposure in sessions. Overall,

participants wanted therapists to realize that SM can be both a positive resource and a source of

harm or unhealthy coping and navigating these spaces in a way that supports rather than damages

well-being will look unique to each survivors' experience.

Table 3.2
Survivor Recommendations for Clinicians

1.	Assess survivor social media use (e.g., platforms used, frequency) and news consumption
2.	Proactively offer psychoeducation on potential impacts of social media use, and provide space for survivors to process or debrief about distressing social media/news content
3.	Stay informed about social media trends (e.g., apps/platforms, hashtags, viral videos) and widespread news headlines involving sexual assault

Table 3.2 (cont'd)

4. Help clients build skills and healthy coping strategies for navigating social media rather than suggesting they just "log off," specific suggestions include:
    a. Focus on themselves and set boundaries around engagement with other survivors' stories
    b. Watch satire news shows (e.g., SNL) to stay current with stories in a less triggering way
    c. Calibrate social media settings on each platform (e.g., muting certain words or hashtags, limiting who can comment on their content or private message them)
    d. Set timer for social media use and/or news consumption
    e. Seek social support after exposure to distressing content
5. Recognize social media can be both a supportive resource and/or a form of self-harm/ unhealthy coping depending on how survivors are using their platforms

Discussion

Survivors in the present study described how exposure to sexual assault content on SM (i.e., news stories and related public discourse) contributed to distress and impacted their well-being. All survivors in this study described how reading news accounts of sexual assault is activating of their own traumas and negative mental health symptomatology. This is consistent with prior research which identified increases in distress among survivors during major news events involving sexual assault (e.g., Kavanaugh confirmation hearings; Anderson & Overby, 2021). Notably, though the current study was anchored in the #MeToo Movement as a reference point for survivors to think about their experiences, many participants recalled sexual assault stories on SM which preceded #MeToo (e.g., Brock Turner, Donald Trump), suggesting that the impacts of exposure are poignant enough to be recalled many years after the fact.

Research on the neurobiology of trauma indicates that trauma related words, images, and film – even those not connected to one's own personal trauma – may induce symptoms of anxiety and hyperarousal (Neumeister et al., 2017; Protopopescu et al., 2005). This supports the notion that sexual assault related words, images, and videos which survivors may be exposed to day-to-day on SM could produce a negative trauma response, even if the content differs from

their own assault experiences. Previous research with feminist organizers has identified that extensive exposure to trauma related content on SM can confer not only an emotional 'tax,' but can result in physical and psychological reactions like panic attacks (Mendes et al., 2018). Based on this literature and the lived experiences described in the present study, clinicians and survivors' support systems should understand that beyond feeling emotionally "upset," survivors may be experiencing neurophysiological activation when confronted with trauma reminders on SM. This activation may manifest in symptoms consistent with anxiety, depression, or PTSD. More specific clinical recommendations tied to this finding will be presented in chapter 5.

Another key finding for some survivors was the relational impacts of sexual assault discourse on SM, particularly when comments were made by trusted support systems (e.g., friends, family) that were derogatory toward victims. This type of SM activity by friends and family left participants feeling more alone as they distanced themselves from these individuals. Most participants did not disclose their own experiences on SM, but witnessed unsupportive treatment of other survivors (e.g., those in news stories) in online spaces. Participants internalized these unsupportive attitudes as directed at them as well, resulting in a lowered desire to access parts of their social support system. The personalization of responses to other survivors suggests that *observing* negative reactions could serve as a proxy disclosure, impacting whether they choose to disclose themselves and seek help. This is concerning given that social support is a key mediator for survivor long-term outcomes, with positive social support shown to decrease maladaptive coping strategies, and unsupportive reactions shown to increase harmful coping strategies and exacerbate negative mental health outcomes (Campbell et al., 2009; Ullman & Relyea, 2016). In the modern day, SM represents an extension of people's support systems, and should be conceptualized as a platform where survivor well-being can either be supported or

harmed depending on what they see (Schneider & Carpenter, 2019). Clinical recommendations for treating relational harm tied to SM content will be discussed in chapter 5.

Survivors described setting personal boundaries and proactively managing their settings on SM platforms in a way that maximized positive benefits, while minimizing exposure to harmful content. Survivors reported seeking out empowering content at times (e.g., watching survivors impact statements) to make them feel validated and less alone. Indeed, scholarship since #MeToo went viral has found SM can be an effective way for survivors to access resources, validation, and seek advice or support when they are lacking such social support in offline spaces (Alaggia & Wang, 2020). Participants also described strategically using SM settings to limit their exposure to news coverage of sexual assault stories and related commentary which was unsupportive. In conjunction with these built-in tools, most survivors paid attention to trigger warnings and consciously controlled if and when they allowed themselves to consume sexual assault related content. Clinical implications related to online coping skills will be discussed further in chapter 5.

Finally, participants in the present study spoke with conviction and clarity about what they would like to see clinicians incorporate into their practice to help survivors navigate SM in a healthier way (see Table 3.2). This study implores clinicians working with survivors to consider SM use when assessing and conceptualizing client cases through a systemic lens. Further, it highlights the importance of clinicians being aware of national news stories about sexual assault and related social discourse as they are widely shared on SM.

Limitations

Though this was a qualitative study and informational redundancy was deemed to be reached, we are limited by the sample size of twelve participants. While survivors' rich

descriptions of their lived experiences are necessary to move the field forward, it should not be assumed that these findings are widely generalizable across survivor experiences on SM. Generalizability may also be limited by self-selection bias inherent in recruiting people for qualitative studies like this one. Almost all participants had a history of involvement in therapy, which means that they may have received more psychoeducation, engaged in more personal reflection about their experience, and therefore been more likely to volunteer for a project like this compared to the average survivor. Additionally, the present study focused primarily on adverse impacts of SM use, with less attention given to positive impacts such as finding empowerment or community through exposure to trauma related content. In the current sample, positive impacts from SM use did not emerge as a significant theme, which may have been at least partially shaped by the interview questions asked. The research questions and interview script developed by the primary investigator were rooted in clinical experiences where regression in mental health symptomatology was observed among sexual assault survivors using SM. Future research should attempt to build on these findings by assessing the key themes identified amongst a larger, more diverse sample, and by trying to capture a more holistic perspective of both the harmful and potentially helpful nature of SM use for survivors.

Conclusion

While recent social movements (e.g., #MeToo) have prompted important cultural conversations, the present study suggests that the increased saliency of news stories and public discourse about sexual assault on SM has also had negative impacts on survivors trying to interact in these digital spaces. Though participants appreciate the education and empowerment that has come from such awareness campaigns, they also endorse adverse changes in their mental health and relationships, largely driven by exposure to trauma narratives, community dialogue

that is unsupportive of other survivors, and a tendency to personalize antagonistic content as though it is directed at themselves. In response to distressing content in online spaces, survivors report developing coping strategies to help them navigate SM in a healthier way that allows them to remain engaged on platforms they enjoy. Reflecting on their own experiences, survivors ask that clinicians be more active in addressing exposure to sexual assault content on SM and any related impacts on clients' mental health and personal relationships.

CHAPTER 4: YOUNG WOMEN'S SOCIAL MEDIA EXPERIENCES AND MENTAL HEALTH IN THE #METOO ERA: A CROSS-SECTIONAL CLOUDRESEARCH SURVEY

Abstract

Since the #MeToo Movement went viral in 2017, content relating to sexual assault (i.e., news stories and related public discourse) has been posted more frequently on social media (SM) platforms (Anderson & Toor, 2018). Given the popularity of SM use (78% of women) and prevalence of sexual assault (44% of women) in the U.S., more research is needed to determine how exposure to trauma related content impacts users who are survivors (Pew Research Center, 2019; Smith et al., 2018). The present study recruited participants ($n = 483$) via CloudResearch's MTurk toolkit and utilized a cross-sectional online survey to assess young adult women's (ages 18-34) SM use, trauma histories, exposure to sexual assault content, and mental health outcomes (i.e., depression, anxiety, PTSD). About two-thirds (65%) of participants had experienced sexual assault. Using multiple linear regression, general SM use, exposure to sexual assault content, and exposure to unsupportive attitudes significantly predicted depression, anxiety, and PTSD symptoms for both survivors and non-victims. The overall model fit equally well for each of these groups; however, differences emerged regarding which individual independent variables were significantly predictive of mental health outcomes for survivors and non-victims. Exposure to unsupportive attitudes (i.e., victim blaming or perpetrator supporting content) was reported at high rates for the entire sample; survivors reported seeing these posts significantly more often from people in their personal networks (e.g., extended family, close friends) than non-victims.

This study demonstrates widespread exposure to sexual assault content on SM, including content unsupportive of survivors, and provides preliminary findings on how young women's mental health is associated with these exposures.

Introduction

In 2017, the viral #MeToo Movement called attention to the endemic nature of sexual assault by prompting social media (SM) users to share their personal experiences with this type of abuse (Renkl, 2017). Indeed, nearly half of women in the U.S. (44%) experience sexual assault in their lifetime, a trauma which is associated with myriad mental health concerns, including anxiety, depression, posttraumatic stress disorder (PTSD), substance abuse, and suicidality, among others (Campbell et al., 2009; Mason & Lodrick, 2013; Smith et al., 2018). This hashtag movement flooded SM with sexual assault related content by spurring disclosures from millions of people, primarily women, and initiating ongoing public discourse and media coverage surrounding sexual assault incidents (Anderson & Toor, 2018). Much of this SM content was supportive, with many survivors finding community and empowerment through #MeToo (Schneider & Carpenter, 2019). However, significant backlash to the movement emerged on SM as well, including victim blaming and perpetuation of rape culture ideals (PettyJohn et al., 2019; Stubbs-Richardson et al., 2018).

Given the prevalence of sexual assault, and of SM use among women in the U.S. (78%), research is needed to examine potential mental health impacts of survivors navigating #MeToo related content online (Pew Research Center, 2019). In particular, more information is needed on the possible effects of exposure to trauma related content on SM (i.e., news stories and related public discourse) given existing knowledge on the neurobiology of trauma. Additionally, because SM exists as an extension of users' social support systems, more information is needed regarding potential relational impacts of support persons posting about sexual assault.

Impact of Trauma Reminders for Survivors

Following a traumatic experience, such as sexual assault, reminders of the event can trigger neurophysiological reactions in some survivors by re-activating fear circuitry in the brain (Moser et al., 2015; Rothbaum & Mellman, 2001). These reactions can include emotional dysregulation and heightened physiological arousal (e.g., increased heart rate, skin conductance, muscle reactivity) stemming from the release of stress hormones in the body (Liberzon et al., 1999; Pitman et al., 1990; Shin et al., 2004; van der Kolk, 2015). Reminders capable of triggering this type of response often mimic sensory stimuli present during the traumatic event (e.g., sights, smells, sounds) (Turnbull, 2006). Neuroscience research with survivors of gender-based violence has identified reactivity to scripted narratives of personal trauma stories (e.g., Elzinga et al., 2003), as well as words, images, and film depicting interpersonal violence more generically (Moser et al., 2015; Neumeister et al., 2017; Protopopescu et al., 2005). Psychophysiological distress connected to generic trauma content supports the possibility that survivors exposed to sexual assault related content on SM could experience adverse mental health reactions, even if it is not directly related to their own assault.

Potential impacts of traumatic content exposure via SM are currently underexplored in the literature. Historically, research has focused on exposure via traditional media sources (i.e., television, newspaper, radio) related to large-scale traumatic events (e.g., 9/11, Oklahoma City bombing, Boston Marathon bombing) (Pfefferbaum et al., 2014). These studies identified increased risk of posttraumatic symptoms, with a positive association between the amount of time consuming this traumatic content and level of distress reported (Jones et al., 2016; Pfefferbaum et al., 2014; Thompson et al., 2019). As news consumption has begun to happen more frequently via SM (Shearer & Matsa, 2018), the field is gradually shifting focus to these

70

platforms. Research examining exposure to natural disaster related content has identified trauma symptoms and psychological distress in relation to SM use (Goodwin et al., 2015). Insomnia has been associated with SM consumption of news from the 2015 terror attacks in Paris (Goodwin et al., 2018). Exposure to content relating to the COVID-19 pandemic in China was positively associated with anxiety, depression, and secondary trauma symptoms (Gao et al., 2020; Zhong et al., 2021). Qualitative interview data, which informed the development of the present survey, indicates survivors experience symptoms consistent with anxiety, depression, and PTSD when exposed to sexual assault content and related discussions on their SM platforms (PettyJohn et al., 2021). More work is needed to understand SM as a vehicle for traumatic content exposure, specifically in reference to hashtag movements such as #MeToo which represent repeated exposure to different trauma narratives rather than one mass communal trauma event.

Responses to Survivor Disclosures

Social media platforms facilitate relational connections and communication between users and represent an extension of people's "real life" support systems (Schneider & Carpenter, 2019). Online interactions disclosing or discussing sexual assault should thus be contextualized by existing research which demonstrates that survivor outcomes are greatly impacted by the type of response they receive from support systems. Survivors are much more likely to disclose assault experiences to people in their informal support system (e.g., friends, family; those likely to be part of their social media networks), opposed to people in formal support systems (e.g., police, medical personnel) (Ahrens et al., 2007). Though a positive response can help facilitate survivor recovery processes by validating their experience and connecting them to proper resources, research has found negative responses to have a more significant impact by exacerbating anxiety, depression, and PTSD symptoms (Campbell et al., 2009; Ullman & Peter-

Hagene, 2014). Moreover, a negative initial response to disclosure (e.g., blaming or questioning the victim, dismissing their experience) may deter survivors from seeking further help in the future (Ahrens, 2006).

The #MeToo Movement initiated an influx of sexual assault disclosures on SM platforms, with 12 million related posts on Facebook in the first 24 hours, and 19 million posts on Twitter throughout the subsequent year (Anderson & Toor, 2018; Renkl, 2017). While many survivors experience positive reactions to disclosures via SM through demonstrations of support, validation, and connection to resources (Alaggia & Wang, 2020; Schneider & Carpenter, 2019), many others receive backlash for coming forward (Bogen et al., 2021). More work is needed to understand the prevalence rates of disclosure on SM among survivors, and the similarities or differences between online and in-person disclosures (Bogen et al., 2021).

Beyond direct disclosure of *personal* experiences, more research is also needed to examine the impact of survivors *observing* harmful discourse surrounding sexual assault in SM spaces. Qualitative research has found that some survivors report negative changes to personal relationships with family or friends based on hurtful things they post on SM about *other* survivors' stories (PettyJohn et al., 2021). This included things such as commenting on news stories to question or blame survivors, or publicly demonstrating support for men who had been accused of perpetrating sexual assault (e.g., Donald Trump, Brett Kavanaugh). Understanding how often survivors are exposed to unsupportive attitudes such as these from friends and family on SM, and if these attitudes contribute to distress within the relationship, will help inform education and intervention efforts to connect more survivors with supportive resources.

Research Questions

The present study was guided by three primary research questions and related hypotheses as presented below:

1) *Are general SM use, exposure to sexual assault related content, and exposure to content unsupportive to sexual assault survivors, differentially associated with mental health outcomes for survivors compared to non-victims?*

Hypothesis 1

General SM use, exposure to sexual assault related content, and exposure to unsupportive content will predict mental health outcomes for survivors, but not non-victims.

2) *Does the frequency of exposure to sexual assault related content moderate mental health outcomes for survivors of sexual assault using SM?*

Hypothesis 2

Exposure to sexual assault related content will significantly moderate the association between SM use and mental health outcomes for survivors.

3) *When someone posts content perceived by survivors as victim blaming or perpetrator supporting, are there different associations to relational outcomes based on the social proximity the survivor has to the poster?*

Hypothesis 3

Survivors will report more relational distress in relation to victim blaming or perpetrator supporting content that is posted by people with closer social proximity to them.

Methods

The purpose of this study is to explore associations between survivors' mental and relational health and exposure to sexual assault related content on SM. An online quantitative

survey was created, building on the qualitative findings of a previous interview study with survivors (PettyJohn et al., 2021). Recruitment for the survey took place through CloudResearch using their Amazon MTurk toolkit, and data collection took place on Qualtrics. Women-identified individuals (cisgender and transgender women) and non-binary individuals assigned female at birth, located in the U.S., between the ages 18-34 were recruited to participate, regardless of past violence experiences. Individuals had to have an MTurk account (as this is where recruitment took place) and indicate using a SM platform at least once a week to be eligible. Exclusion criteria included having a plan to hurt themselves and/or active symptoms of psychoses (i.e., hearing or seeing things others do not). These criteria were put in place to protect high risk individuals from exposure to potentially activating questions relating to trauma and mental health. This study received full board approval from the Institutional Review Board (IRB) at the researchers' academic institution (see Appendix F).

Data Collection Procedures

The following sections will provide a more detailed description of Amazon's MTurk crowdsourcing platform, how it interacts with CloudResearch's new toolkit application to improve data quality and outline how these tools were used for data collection through Qualtrics in the present study.

Amazon MTurk

MTurk is a crowdsourcing platform which became popular among social science researchers over the last decade due to its ease of use and access to a large pool of potential participants (Litman et al., 2017). People from around the world can sign up as "workers" to complete "Human Intelligence Tasks" (HITS) for a set wage (called a reward) (Paolacci et al., 2010). Upon sign up, each user is assigned a unique Worker ID that allows their work to be

tracked in MTurk's system. Researchers (called requesters on MTurk) post HITS (i.e., surveys),

and can specify qualifying criteria to allow only certain workers to participate (e.g., gender,

country of origin) (Paolacci et al., 2010). Workers are able to read a brief description of each

HIT, including the estimated amount of time to complete and reward sum before choosing to

participate (Paolacci et al., 2010). Rewards are distributed through MTurk's platform directly to

a unique credit card tied to each individual worker, simplifying the compensation process for

researchers. Participant recruitment through MTurk is generally more time efficient and cost-

effective compared to other methods (Engle et al., 2019). MTurk does not provide overall

demographics for workers on the platform, however previous research has demonstrated that

MTurk yields samples that are more representative of the general population than traditional

college samples or other types of internet based samples (Arditte et al., 2016; Buhrmester et al.,

2011; Engle et al., 2019).

Mental health and trauma researchers specifically have increasingly used MTurk in

recent years due to its aforementioned efficiency and cost-effectiveness (Engle et al., 2019).

Shapiro and colleagues (2013) found that 66% of workers surveyed on MTurk reported at least

one lifetime trauma experience, a rate comparable to those reported in college samples. Rates of

likely PTSD among workers (assessed using PCL-5; Blevins et al., 2015) range from 11% (Engle

et al., 2019) to 22% or 23% (Frewen et al., 2015; Price et al., 2019), varying based on the cut-off

score used. These rates are all higher than lifetime PTSD prevalence estimates for the general

U.S. population (8.3%; Kilpatrick et al. 2013). Findings on other common mental health

disorders are mixed. Anxiety has been identified at substantially higher degrees among MTurk

samples compared to community and nonclinical samples in multiple studies (Arditte et al.,

2016; Engle et al., 2019; Shapiro et al., 2013), though Engle and colleagues (2019) found anxiety

symptoms to be comparable to undergraduate samples. Some studies assessing clinical characteristics of MTurk samples have identified rates of depression comparable to the general population and comparison samples (Engle et al., 2019; Shapiro et al., 2013), while others identified substantially greater rates of depression among MTurk participants (Arditte et al., 2016).

Taken together, access to a diverse nationwide pool of participants, time and cost-efficient recruitment and participant compensation, and existing literature from clinical studies suggested MTurk was an appropriate recruitment avenue for the current study. However, initial piloting on MTurk yielded concerns about data quality from this platform.

Survey Pilot. At the outset of the study, two rounds of pilot surveys were released on MTurk and 43 responses were collected. For the pilot surveys, the screening questions for eligibility (described in more detail below) were integrated into the beginning of the Qualtrics survey with conditional commands that would end the survey and provide national resources for people who did not qualify. Users who screened out did not receive compensation (set at $3.50), as these few screening questions preceded the survey consent form. Several workers, presumably experienced with MTurk's platform, were able to circumvent their exclusion from the study by clearing their browser's cookies and taking the survey between two and four times, changing their screening responses each time to test what would advance them to the survey and allow them to collect payment. Qualtrics collects user IP addresses along with their survey responses, which allowed researchers to identify who was taking the survey multiple times, and how they were adjusting their answers with each submission.

Among those who met eligibility criteria (either legitimately or through trial and error) and completed the main survey, data quality was poor as evidenced by patterned responses (e.g.,

filling in the same bubble for long lists of questions), contradictory answers (e.g., endorsing no victimization history, but answering yes to multiple victimization questions), and/or missing multiple attention check questions. Accounting for the aforementioned issues, only 13 of the 43 responses (30%) were deemed valid data. Upon reviewing data for those who passed validation checks, it became apparent that one of the Likert questions and including a "Not applicable" option in the original structure of the relational measure (described below) yielded confusing data that would not be useful for analysis. In collaboration with her dissertation chair, the primary investigator revised this question in the relational measure and removed "N/A" as a response option. Due to these changes, it was decided that the valid respondents should be compensated, but their data would not be retained for final analyses in the study. Significant concerns with MTurk's association with low quality data also led the primary investigator to explore other options for the recruitment process.

CloudResearch

Despite its popularity, MTurk was not designed as a platform for academic research, making it susceptible to data quality threats such as "bots," inattentive users, users lying about their geographic location, and low language proficiency (Litman et al., 2021). A significant decline in MTurk data quality occurred specifically over the summer of 2018, prompting CloudResearch (previously known as TurkPrime) to develop innovative tools for vetting MTurk users before allowing them to participate in studies (Litman et al., 2021). CloudResearch's MTurk Toolkit application allows researchers to access MTurk's worker pool while screening them through stricter quality control mechanisms such as: verifying users geographic location, blocking repeat IP addresses, running language tests, and identifying bots. Workers who pass these checks are designated as "CloudResearch-Approved Participants." Researchers using the

platform can specify their HIT only be released to these approved participants by paying a small fee to CloudResearch, increasing the likelihood of high-quality data (Litman et al., 2021). Though this vetting process shrinks the available subject pool for studies, current data suggests the overall MTurk pool and the CloudResearch-Approved Participant pool are demographically similar (Litman et al., 2021). Other useful features offered by the Toolkit include: barring users from taking repeat HITS more than once (e.g., when the researcher posts the same survey in multiple waves), and the option to include or exclude a specific list of users from HITS based on their WorkerID.

The present study used the MTurk Toolkit on CloudResearch to facilitate recruitment for both the screener survey and the main survey, each of which will be discussed in more detail below. Recruitment and data collection took place from January to April 2021. Access to the screener survey HIT was limited to MTurk workers identified as CloudResearch-Approved Participants who had a confirmed location in the United States. These workers were redirected from MTurk's platform to Qualtrics to complete the screener survey. Data from the screener survey was reviewed in Qualtrics, and WorkerID's for participants who met inclusion criteria for the main survey were extracted and copied back into CloudResearch, such that the main survey HIT was only available to users who had been vetted by CloudResearch and met study requirements. Separating the screening procedures from the main survey eliminated the issue of workers completing the screening questions multiple times in an effort to get through to the main survey. Figure 4.1 provides a visual overview of the recruitment and vetting process.

Worker ID's of eligible participants extracted from screener survey and re-entered to CloudResearch for main survey, $n = 742$

4

Inclusion/Exclusion criteria assessed:
- Women identified
- Age 18-34
- Use social media
- No active suicidality
- No psychoses

Screener survey $n = 2928$

3

Qualtrics

2

CloudResearch-Approved Participants redirected to Qualtrics for screener survey

Pool of MTurk workers

1

CloudResearch Screening Toolkit

MTurk workers filtered using quality assessments:
- Verifying geographic location
- Blocking IP repeats
- Screening for bots
- Testing language proficiency

5

Qualtrics

6

Access to main survey on Qualtrics restricted to CloudResearch qualified workers who screened as eligible for participation

Main survey $n = 491$

7

Additional quality checks:
- Passed 2 out of 3 attention checks
- No patterned responses
- No text copied and pasted in open responses
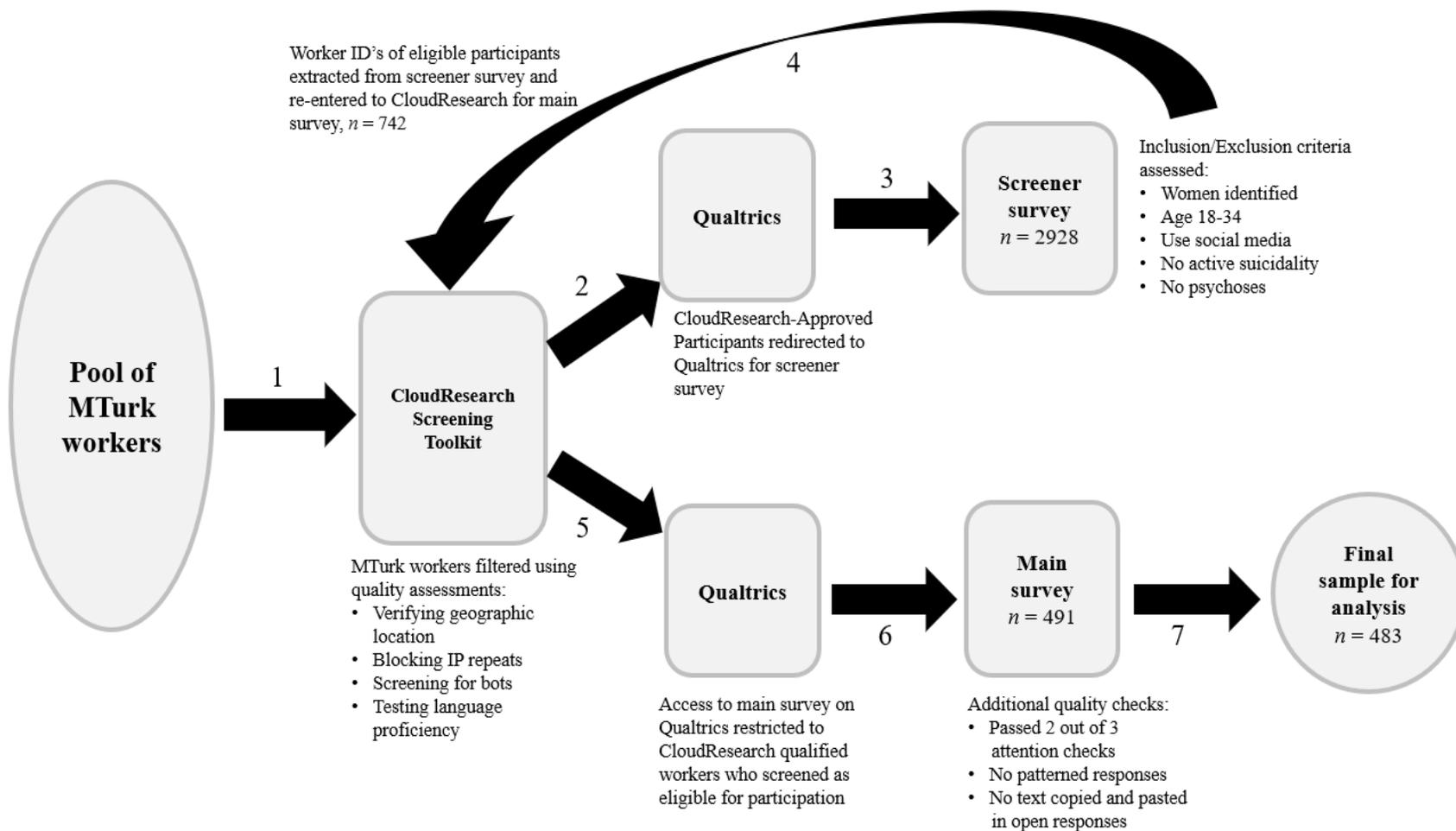
Final sample for analysis $n = 483$

Figure 4.1 Summary of Data Collection Processes.

Qualtrics

As stated, CloudResearch users were able to view a brief description of the screener survey on their Worker dashboard. Those who accepted the HIT were provided an external link which redirected them to Qualtrics to complete the screener survey.

Screener survey. The screener survey consisted of 8 questions assessing the aforementioned inclusion and exclusion criteria and took an average of 1-2 minutes for workers to complete (see Appendix G). In line with screener surveys of similar length on the platform, workers were paid $.02 for the task. The screener survey was posted in 20 waves on CloudResearch to allow the primary investigator to review the data in more manageable batches. The Qualtrics survey was coded to extract the embedded user data (i.e., WorkerID's) from each person who completed the screener. As stated, this allowed the PI to copy qualified participant's WorkerIDs into CloudResearch so that the main survey would only be available to these specific individuals.

A total of 2928 CloudResearch-Approved Participants completed the screener survey through Qualtrics and were screened for inclusion. Of this group, 742 (25.3%) met inclusion criteria for the main survey (see Table 4.1 for exclusion reasons).

Table 4.1
Exclusion Reasons for Main Survey

Exclusion Criteria	Screener Demographics	# Excluded
Gender	Cisgender man	1065
	Nonbinary (assigned male at birth)	96
	Transgender man	15
Age	Older than 34[a]	910
Social Media Use	Do not use social media	17
Mental Health Concerns	Plan to hurt self	16
	Hearing things	49
	Seeing things	18
Total Excluded		2186

[a] Two participants turned 35 after taking the screener but before taking the main survey. This is why the age range for the main survey is 18-35.

Main survey. The main survey began with the study consent form (see Appendix H) which required workers to select 'Yes' and click to advance to the rest of the survey if they agreed to participate. The survey contained approximately 104 questions (numbers varied slightly based on conditional responses by participants; see Appendix I) and took an average of 15 minutes to complete. Workers were paid $3.50, an amount intended to address ethical concerns about fair pay for MTurk users participating in social science research (Difallah et al., 2018; Gleibs, 2017). Embedded within the main survey were three attention check questions (e.g., 'If you're paying attention, select 'Rarely' for this question). As specified in the study consent, participants had to respond accurately to these questions (at least 2 out of the 3) in order to receive payment. Using this method allows for participants answering randomly to be removed from the dataset, thereby improving validity and increasing statistical power for the study (Oppenheimer et al., 2009). Data was also reviewed for other common indicators of poor attention or lack of effort, such as patterned responses, contradictory answers, and/or copy and pasting text into free response questions (CloudResearch, 2020).

Of the 742 people who met inclusion criteria assessed by the screener survey and were invited to participate, 511 (68.9%) started the main survey and 491 people (66.2%) completed it. Among the twenty people who started but did not complete the main survey, the point of drop out was concentrated during the anxiety assessment (GAD-7, described below; 9 dropped out) and the PTSD assessment (PCL-5, described below; 4 dropped out). These measures were placed back-to-back, approximately one-third of the way through the survey. Both measures came before participants' sexual trauma histories were assessed (via SES-SFV, described below). Of the 491 participants who completed the main survey, five were removed from the sample after failing validation checks (i.e., missed more than one attention check question and/or answered

measures in a repetitious way), and three more were removed due to spending less than 5 minutes on the survey. This yielded a final sample size of ($n = 483$).

Ethics Statement

As stated, participants reviewed the informed consent and indicated their understanding of the form by selecting 'Yes' within Qualtrics' platform prior to beginning the survey. The informed consent included information on limits to confidentiality through MTurk's system. While workers are each assigned an anonymous "worker ID" at sign up, this information can be linked back to their public profile information by recruiters who place HITS on MTurk. If workers try to contact the researcher through MTurk, Amazon autofills their email address and full name to allow the recruiter to respond. For this reason, all worker ID information was stored in password protected Excel sheets which only the research team had access to. Worker ID's will not be published or tied to data in any way.

The nature of this study posed risk for psychological distress as participants recalled their assault experiences and thought about how they have experienced trauma reminders. For this reason, careful screening processes for active suicidality and psychoses occured at the beginning of the survey, prior to obtaining informed consent, to ensure only those feeling emotionally stable were allowed to participate. The informed consent clearly stated that individuals could end participation at any time should they begin to feel distressed. At the end of the survey, resources for national mental health, sexual assault, and substance abuse agencies were provided.

Measures

The following measures were included in the main survey. Copies of all measures can be found in Appendix I.

Demographics. Participant demographics were assessed using a series of exhaustive, mutually exclusive multiple-choice responses, including questions regarding: gender identity, age, race/ethnicity, sexual identity, disability status, income level, education level, political affiliation, and religious affiliation.

General Social Media Use. Social media use was measured by asking participants whether they use 9 of the most popular platforms and apps (i.e., Twitter, Instagram, Facebook, Snapchat, YouTube, Pinterest, LinkedIn, Reddit, TikTok). For each platform/app participants endorsed using, they were asked how frequently they visit the site with response choices: "0 = Less than once a week; 1 = 1-2 days a week; 2 = 3-6 days a week; 3 = About once a day; 4 = 2-4 times a day; and 5 = 5 or more times a day." A grand frequency SM use score was calculated for each participant by summing across the platforms. These measures were adapted from the Pew Research Center (2019) and other SM studies examining the association of SM use and mental health outcomes (Levenson et al., 2016; Lin et al., 2016).

Exposure to Sexual Assault Related Content. Exposure to sexual assault related content on SM were measured using an adapted scale from Arlt and Wolling (2018). For each platform participants reported using, they were asked how frequently, on average, they have been exposed to information about sexual assault since the beginning of the #MeToo Movement in 2017, based on the scale: "0 = No exposure; 1 = Less than once a week; 2 = Once a week; 3 = 2-3 times a week; 4 = Once a day; 5 = Multiple times a day." Grand frequency scores for exposure to sexual assault related content were calculated by summing totals across platforms.

Posttraumatic Stress Symptoms. Posttraumatic stress symptoms were measured using the PTSD Checklist for DSM-5 with Criterion A (PCL-5; Blevins et al., 2015). Criterion A prompts: "*This questionnaire asks about problems you may have had after a very stressful*

experience involving actual or threatened death, serious injury, or sexual violence" and then

asked participants to "*Very briefly identify the worst event you've experienced (if you feel*

comfortable doing so):" with an open-ended response option. These qualitative responses were

thematically coded to provide descriptive data on types of traumatization in the sample. The rest

of the questionnaire consists of 20 self-report items assessing symptom severity over the past

month across four clusters of the PTSD diagnosis laid out in the DSM-5 (American Psychiatric

Association, 2013). Each item (ex: "*In the past month, how much were you bothered by*

repeated, disturbing, and unwanted memories of the stressful experience?") is answered using a

5-point Likert scale ranging from "0 = Not at all" to "4 = Extremely." The measure yields a total

symptom severity score ranging from 0-80. The PCL-5 has been identified as a valid and reliable

measure (α = .94; Blevins et al., 2015) and has been used in previous clinical research assessing

PTSD symptomatology via MTurk (α = .95; Engle et al., 2019). Internal consistency for the

present sample was high (α = .96).

  Depression Symptoms. The Patient Health Questionnaire 9-item measure (PHQ-9) was

used to assess participant symptoms of depression (Kroenke et al., 2001). The PHQ-9 prompts

participants to think "*Over the last 2 weeks, how often have you been bothered by any of the*

following problems?" Participants respond to each of the subsequent statements (ex: "*Little*

interest or pleasure in doing things") on a 4-point Likert scale ranging from "0 = Not at all" to

"3 = Nearly every day." A total score is calculated by adding up responses from the 9 questions.

The PHQ-9 is a longstanding measure within the mental health field and has been used in

previous clinical research assessing depression via MTurk (α = .91; Engle et al., 2019). Similarly

high internal consistency was identified in the present sample (α = .91).

Anxiety Symptoms. Participant anxiety symptoms were measured using the Generalized Anxiety Disorder 7-item measure (GAD-7; Spitzer et al., 2006). The GAD-7 prompts participants to think "*Over the last 2 weeks, how often have you been bothered by the following problems?*" Participants respond to each of the subsequent statements (ex: "*Feeling nervous, anxious, or on edge*") on a 4-point Likert scale ranging from "0 = Not at all sure" to "3 = Nearly every day." A total score is calculated by adding up responses from the 7 questions. The GAD-7 has demonstrated good validity and reliability ($\alpha = .89$) for community samples (Löwe et al., 2008), and in clinical research assessing anxiety symptoms via MTurk ($\alpha = .94$; Engle et al., 2019). Internal consistency for the present sample was high as well ($\alpha = .93$).

Sexual Assault Victimization. Participant victimization histories were assessed using an adaptation of the Sexual Experiences Survey- Short Form Version (SES-SFV; Koss et al., 1987). This measure has demonstrated good reliability and convergent validity among women and is considered a gold standard for victimization assessment (Johnson et al., 2017). The 7 primary items were presented (e.g., "*Someone had oral sex with me or made me have oral sex with them without my consent*") and participants responded to each by indicating "Yes" if they have experienced it since age 14, and "No" if they have not. Participants who responded affirmatively to *any* of the 7 items were recoded as "1 = Survivors" and all others were recoded as "0 = Non-victims." In order to clarify how many unique instances of sexual victimization participants may have experienced, the question "*About how many separate instances of unwanted sexual contact have you experienced since age 14? (Select '0' if this does not apply to you)*" was asked. Participants responded using a drop-down menu with individual numbers ranging from "0" to "10 or more." For the sake of analysis, the response unit "10 or more" was coded as "10" when calculating the sample's average number of separate victimizations.

Relational Outcomes. Outcomes for specific relationships in participants' lives in relation to SM interactions were assessed using two sections of questions with several conditional prompts based on participants' reported experiences. The prompt for both sets of questions was "*Thinking back to stories about sexual assault in the news (e.g., Harvey Weinstein, Brock Turner, Brett Kavanaugh, R. Kelly), how often have you seen people post on social media:*" The first question following this prompt was designed to assess for victim blaming content posted online and asked about, "*Content that blames or questions women victims of sexual assault, through things like asking how much she had to drink, what she was wearing, or if she can be trusted?*" The second question was designed to assess for perpetrator supporting content posted online and asked about, "*Content that supports men accused of sexual misconduct through things such as talking about his positive accomplishments or trying to protect his reputation?*" Participants were prompted to respond to each of these questions with the following options, "Never; Once or twice; A few times; Many times." Participants who reported seeing either victim blaming or perpetrator supporting content posted on SM (i.e., they selected any response other than "Never") were asked to indicate *who* the poster(s) was/were in relation to themselves. They indicated their relationship to the poster(s) by selecting from seven pre-determined relational groups (i.e., immediate family, extended family, close friends, casual friends, co-workers, trusted others, and acquaintances/strangers). These relational groups were conceptualized to reflect descending social proximity to the survivor (e.g., immediate family represents closer social proximity than extended family; close friends represent closer social proximity than casual friends, etc.). When survivors reported seeing such content posted by someone from one of the six relational groups not including acquaintances/strangers, they were asked a series of four questions regarding *each* of the relational groups selected. (In example, if a

survivor reported seeing victim blaming content posted by extended family, co-workers, and trusted others, they would be asked the set of question three different times, each in reference to the unique relational groups). These four questions were: "1) *This made me question how much I could trust this person*; 2) *This made me feel betrayed*; 3) *This made me feel like a sexual assault survivor should not reach out to this person for help*; 4) *This negatively impacted our relationship*." Participants responded to each item using a 5-point Likert scale (1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree). A composite variable for each relational group selected by the survivor was created by summing the responses to these four questions, yielding a potential range score of 4-20. Higher scores were indicative of more relational distress being experienced by survivors in the context of that specific relational group. Internal consistency statistics for the 4-item measure were calculated for each individual relational group, for both sets of questions (i.e., victim blaming and perpetrator supporting), yielding twelve alpha values. Internal consistency for the victim blaming measure ranged from acceptable (α = .74 for extended family) to good (α = .89 for close friends). For the perpetrator supporting measure, internal consistency ranged from acceptable (α = .77 for immediate family) to high (α = .93 for trusted others).

Exposure to Unsupportive Attitudes. Participants' level of exposure to unsupportive attitudes regarding sexual assault stories on SM (i.e., endorsement of victim blaming or perpetrator supporting attitudes) were calculated using questions from the relational outcomes measure. Responses to the two questions about "*How often have you seen people post* [victim blaming/perpetrator supporting content]" were coded numerically as: 0 = Never, 1 = Once or twice, 2 = A few times, 3 = Many times. The exposure to unsupportive attitudes variable was a

composite score summing together the frequency participants had seen victim blaming and perpetrator supporting content, giving a potential range score of 0-6.

Passive vs. Active Social Media Use. Participants' behaviors on SM regarding passive vs. active use were measured using an adapted scale from Escobar-Viera and colleagues (2018). The measure consisted of 7 items, beginning with the prompt "*How often do you engage in the following behaviors on your social media platforms?*" Passive use was assessed with 3 of the items (e.g., Read discussions, Watch videos or view pictures) and active use was assessed with 4 of the items (e.g., Share others' content, Comment on content). Participants rated their responses on a 6-point Likert scale ranging from "0 = Never" to "5 = Several times/day." Each participant had a grand score for both passive and active use by summing their responses to the respective subscale items referenced above, yielding a potential passive use score of 0-15 and active use score of 0-20.

Coping Skills. Participant engagement in various strategies or coping skills on SM to help them navigate exposure to sexual assault content were assessed via 7 items developed by the investigator, each connected to findings from qualitative interview data (PettyJohn et al., 2021). The prompt stated, "*Thinking about the time you spend on social media, please respond to each of the following statements*" and asked participants to rate using a 5-point Likert scale (0 = Never; 1 = Rarely; 2 = Sometimes; 3 = Often; 4 = Very often). Example items included, "*I adjust my social media settings (e.g., muting words, blocking people/accounts) to avoid seeing content about sexual assault*" and "*I am intentional about what news sources I follow on social media based on how they discuss sexual assault.*"

Data Analyses and Results

All data were downloaded from Qualtrics and imported into SPSS 27 (IBM, 2018). Survey data were cleaned and assumption testing was conducted prior to running analyses. More detail on analyses conducted, relevant assumption testing, and results are organized by research question and presented below. First, a descriptive overview of the data is provided.

Participant Demographics

A detailed summary of demographic information for the overall sample can be found in Table 4.2. Most participants identified as cis-gender women (94%). The age of participants ranged from 18-35, with the average being 27.7 years old. Approximately two-thirds (68%) of the sample were Caucasian/White (non-Hispanic), 12% were African-American/Black, 10% were Asian-American/Asian, 5% were Hispanic/Latinx, 5% were Multiracial, and less than 1% were Indigenous. While the majority of the sample (73%) identified as heterosexual, a notable portion (17%) identified as bisexual, with 3% being lesbian, 3% being queer, and 4% indicating another sexual identity. Participants represented 47 states in the U.S. Nearly two-thirds of the sample (65%, $n = 312$) were identified as survivors of sexual assault according to their responses on the SES-SFV (Koss et al., 1987; Koss et al., 2007), and about a third of the sample (35%, $n = 171$) were non-victims. Demographics among survivors and non-victims were compared and no meaningful differences existed between groups. A t-test indicated significant differences in age between groups, though the difference was less than one year, $t(324) = -2.21$, $p = .03$, (survivor, $M = 27.98$, $SD = 4.19$; non-victims, $M = 27.04$, $SD = 4.58$).

Table 4.2

Participant Demographics (n = 483)

Demographics		% (*n*)	Mean	Range (SD)
Gender	Cisgender woman	94.0 (454)		
	Nonbinary	4.6 (22)		
	Transgender woman	0.8 (4)		
	Other	0.6 (3)		
Age			27.7	18-35 (4.3)
Ethnicity	African American/Black	12.4 (60)		
	Asian American/Asian	9.5 (46)		
	Caucasian/White (non-Hispanic)	67.5 (326)		
	Hispanic/Latinx	5.2 (25)		
	Native American/Alaska Native	0.2 (1)		
	Native Hawaiian/Pacific Islander	0.2 (1)		
	Multiracial	4.8 (23)		
	Other	0.2 (1)		
Sexual Identity	Bisexual	17.2 (83)		
	Lesbian	3.1 (15)		
	Queer	3.1 (15)		
	Straight (heterosexual)	72.9 (352)		
	Other	3.7 (18)		
Disability	Physical disability	2.1 (10)		
	Psychological disability	32.1 (155)		
	Both physical and psychological	6.6 (32)		
	No disability	59.2 (286)		
Income	Lower class	11.6 (56)		
	Working class	40.6 (196)		
	Middle class	46.2 (223)		
	Upper class	1.7 (8)		
Education	Less than high school	1.2 (6)		
	Graduated high school	19.7 (95)		
	Some bachelor's education	24.8 (120)		
	Bachelor's degree	35.0 (169)		
	Some graduate education	8.3 (40)		
	Master's degree	9.7 (47)		
	PhD/Doctoral level degree	1.2 (6)		
Political affiliation[a]	Strongly liberal/Democrat	26.1 (126)		
	Lean liberal/Democrat	30.6 (148)		
	Lean conservative/Republican	15.9 (77)		
	Strongly conservative/Republican	6.0 (29)		
	Independent/Third party	13.3 (64)		
	No political affiliation	7.9 (38)		
Religious affiliation	Buddhist	1.4 (7)		
	Christian	48.4 (234)		
	Hindu	0.6 (3)		
	Islamic	0.4 (2)		

Table 4.2 (cont'd)

	Jewish	1.2 (6)
	Latter Day Saint	1.0 (5)
	No religious affiliation	42.4 (205)
	Other	4.3 (21)
Sexual	Yes	64.6 (312)
victimization	No	35.4 (171)

[a] One participant's political affiliation missing

Participant Mental Health and Trauma Histories

In the overall sample, depression scores assessed using the PHQ-9 ranged from 0-27 with a mean score of 8.43 (SD = 6.51). This score falls at the upper end of the mild depression range (Kroenke et al., 2001). Anxiety scores assessed using the GAD-7 ranged from 0-21 with an average of 7.57 (SD = 5.79). This score falls at the upper end of the mild anxiety range (Spitzer et al., 2006). Post-traumatic stress symptoms assessed using the PCL-5 ranged from 0-80 and had an average score of 20.42 (SD = 18.15). This score falls below the typical cut-off (31-33) for a provisional PTSD diagnosis (Blevins et al., 2015). There were significant differences in symptomatology between survivors and non-victims, across the board. Survivors reported significantly more depression, $t(481)$ = -2.43, p = .02 (M = 8.96, SD = 6.43), anxiety, $t(481)$ = -3.19, p = .002 (M = 8.19, SD = 5.67), and PTSD symptoms, $t(481)$ = -3.88, p < .001 (M = 22.76, SD = 18.25) compared to non-victims.

As stated previously, 65% (n = 312) of the sample were coded as survivors by endorsing at least one of the seven questions on the SES-SFV (Koss et al., 1987; Koss et al., 2007). SES-SFV scores for survivors ranged from 1-7, with an average of 2.88 (SD = 1.81), meaning the average survivor had experienced multiple *types* of sexual assault (e.g., fondling, oral sex without consent, vaginal penetration without consent) since age 14. Multiple victimization *instances* were common among survivors as well with an average of 2.91 separate victimizations (SD = 2.06). Timing of most recent sexual victimization experience ranged from within the last 6

months to more than 10 years ago, with the average falling between 3-5 years ago and 5-10 years

ago ($M = 4.22$, $SD = 1.43$). Only 29 survivors (9.3%) reported that they had ever disclosed their

sexual assault experience on SM.

To provide a general overview of the types of trauma experienced by the sample,

participants' open-ended responses to Criterion A of the PCL-5 were descriptively coded.

Ninety-three (19.3%) participants did not provide trauma information, which could indicate

either a lack of traumatic experiences or discomfort disclosing. The largest subset of participants

($n = 143$; 29.6%) described sexual assault, 42 (8.7%) described loss of a loved one, 37 (7.7%)

referenced car accidents, 36 (7.5%) described intimate partner violence (instances of sexual

assault perpetrated by current or former partners were only coded as sexual assault). Complete

data on the codes applied to participants' reported trauma experiences can be seen in Table 4.3.

Table 4.3
PCL-5 Criterion A Traumas Qualitatively Reported (n = 483)

Trauma type	Comment on coding	Participants *n* (%)
Sexual assault	Any type of unwanted sexual contact	143 (29.6)
No information provided	Responses could be blank, indicate lack of trauma history, or lack of comfort disclosing	93 (19.3)
Loss of loved one	Death of someone in their life	42 (8.7)
Car wreck		37 (7.7)
Intimate partner violence	Sexual assault from past or current intimate partner coded only as sexual assault	36 (7.5)
Medical issues/injury	Inclusive of medical diagnoses (e.g., cancer) or traumatic injury (e.g., broken bones)	25 (5.2)
Mental illness	Mental illness experienced by self or with a loved one; inclusive of suicide attempts	19 (3.9)
Stalking/harassment	Stalking or harassment perpetrated by someone *other* than an intimate partner	19 (3.9)
Childhood abuse/trauma	Sexual abuse/trauma experienced in childhood coded only as sexual assault	14 (2.9)
Victim/witness of violent crime	Violent crime outside context of personal relationships	11 (2.3)
Physical assault	Physical assaults outside the context of personal relationships	11 (2.3)

Table 4.3 (cont'd)

Natural disaster/fire		4 (0.8)
Threatened violence		4 (0.8)
Near death experience (other)	Near death experiences not represented in other codes	3 (0.6)
Work related trauma	Vicarious traumatization occurring through secondhand experiences in workplace (e.g., therapists)	3 (0.6)
Other	Responses could not be coded based on information provided or did not align with larger code categories	22 (4.6)

Note. Totals slightly exceed ($n = 486$) sample total due to 3 participants listing out two mutually exclusive trauma experiences (e.g., natural disaster and sexual assault) which were double coded.

Participant Social Media Use

A detailed summary of SM use information for the overall sample and each subgroup can be found in Table 4.4. Among the 9 social media platforms that were assessed, participants used an average of 5.5 (range = 1-9, $SD = 1.9$). The platforms most widely used were YouTube with 88% of participants, followed by Facebook at 85%, and Instagram at 82%. Participants who reported using each platform were asked a follow up question to rate their frequency of use on a scale of 1-6, with 1 = Less than once a week and 6 = 5 or more times per day. Facebook had the highest use frequency rate among users ($n = 412$, $M = 4.49$, $SD = 1.56$), followed by TikTok ($n = 214$, $M = 4.44$, $SD = 1.55$), YouTube ($n = 424$, $M = 4.19$, $SD = 1.56$), Instagram ($n = 394$, $M = 4.11$, $SD = 1.75$), and SnapChat ($n = 255$, $M = 4.04$, $SD = 1.75$). These values indicate that participants were visiting these platforms, on average, more than once per day.

Participants were also asked to indicate how often they were exposed to content relating to sexual assault on relevant platforms they use on a scale of 0-5, with 0 = No exposure and 5 = Multiple exposures per day. Twitter was endorsed by users as facilitating the most frequent exposures to sexual assault related content ($n = 249$, $M = 2.11$, $SD = 1.47$), or roughly an average of 1-2 times per week. Facebook ($n = 412$, $M = 1.78$, $SD = 1.36$) and TikTok ($n = 214$, $M = 1.76$,

$SD = 1.53$) had the next highest rates, with averages suggesting exposures between less than

once a week and 1-2 times per week.

Between survivors and non-victims, no differences existed in number or type of

platforms used, frequency of SM use, frequency of exposure to sexual assault content, or passive

use behaviors. The one significant difference between groups was in active use behaviors, $t(481)$

$= -2.89$, $p < .01$, with survivors reporting significantly more active use ($M = 10.86$, $SD = 4.73$)

than non-victims ($M = 9.53$, $SD = 5.01$). In other words, survivors reported posting their own

content, sharing, or interacting with other people's content on social media significantly more

often than non-victims.

Table 4.4
Participant Social Media Use (n = 483)

Platform	Users in sample % (n)	Use Frequency[a] M (SD)	SA Exposure[b] M (SD)
YouTube	87.8 (424)	4.19 (1.56)	1.26 (1.32)
Facebook	85.3 (412)	4.49 (1.56)	1.78 (1.36)
Instagram	81.6 (394)	4.11 (1.75)	1.51 (1.28)
Pinterest	58.2 (281)	2.62 (1.48)	0.35 (0.76)
Reddit	54.2 (262)	3.91 (1.63)	1.54 (1.43)
Snapchat	52.8 (255)	4.04 (1.75)	0.61 (1.00)
Twitter	51.6 (249)	3.64 (1.92)	2.11 (1.47)
TikTok	44.3 (214)	4.44 (1.55)	1.76 (1.53)
LinkedIn	36.4 (176)	2.03 (1.29)	0.48 (0.91)

[a] Use frequency calculated only from participants who endorsed using each platform. Response scale: 1 = Less than once a week, 2 = 1-2 days/week, 3 = 3-6 days/week, 4 = About once a day, 5 = 2-4 times/day, 6 = 5 or more times/day. [b] SA Exposure = Sexual assault content exposure; Calculated only from participants who endorsed using each platform. Response scale: 0 = No exposure, 1 = Less than once/week, 2 = 1-2 times/week, 3 = 3-6 times/week, 4 = About once/day, 5 = Multiple times/day.

Exposure to SM content which was unsupportive of survivors was highly common in the

overall sample. Approximately 90% ($n = 433$) of the sample reported ever seeing victim blaming

content posted on SM related to sexual assault news stories, with 32% ($n = 153$) stating they had

seen it "many times." Notably, survivors reported seeing victim blaming content significantly

more often (M = 1.95, SD = .97) compared to non-victims (M = 1.74, SD = .98), t(481) = -2.33, p = .02. Nearly 80% (79.3%, n = 383) of participants reported ever seeing posts which supported the perpetrator related to news stories discussing sexual assault, with 23% (n = 111) stating they had seen this content "many times." Exposure to SM content which espoused support for survivors was highly prevalent within the sample as well. Over 90% (93.4%, n = 451) reported ever seeing content which supported survivors in relation to sexual assault news stories, with over half (53.4%) stating they had seen this positive content "many times." No significant differences existed between groups regarding exposure to perpetrator supporting or survivor supporting content.

Table 4.5 provides a full account of how many participants endorsed seeing victim blaming content, perpetrator supportive content, or survivor supportive content broken down by the relational group the poster belonged to (i.e., immediate family, extended family, close friends, casual friends, someone I work with, someone else I trust, acquaintances or strangers). Chi-square analyses were conducted to compare how frequently survivors vs. non-victims endorsed seeing the three types of content across each of the relational groups. Survivors reported seeing victim blaming content posted by extended family, X^2(1, 483) = 5.79, p = .016; close friends, X^2(1, 483) = 11.97, p = .001; casual friends, X^2(1, 483) = 16.41, p < .001; and co-workers, X^2(1, 483) = 11.88, p = .001, at significantly higher rates than non-victims. Survivors also reported seeing perpetrator supportive content posted by close friends, X^2(1, 483) = 4.83, p = .028; casual friends, X^2(1, 483) = 5.16, p = .023; and co-workers, X^2(1, 483) = 10.38, p = .001, at significantly higher rates than non-victims. No significant differences were found regarding people in different relational groups posting survivor supportive content.

Table 4.5

Relational Groups Posting Unsupportive or Survivor Supporting Content

Question	Relational Group	# Total Sample	% Total Sample[a]	# Survivors	% Survivors[b]	# Non-victims	% Non-victims[c]
Victim blaming	Immediate family	18	3.73	15	4.81	3	1.75
	Extended family	50	10.35	40*	12.82	10*	5.85
	Close friends	26	5.38	25*	8.01	1*	0.58
	Casual friends	155	32.1	120*	38.46	35*	20.47
	Someone I work with	35	7.24	32*	10.26	3*	1.75
	Someone else I trust	15	3.11	12	3.85	3	1.75
	Acquaintances or strangers	366	75.78	237	75.96	129	75.44
Perpetrator support	Immediate family	15	3.11	12	3.85	3	1.75
	Extended family	32	6.63	22	7.05	10	5.85
	Close friends	18	3.73	16*	5.13	2*	1.17
	Casual friends	85	17.60	64*	20.51	21*	12.28
	Someone I work with	28	5.80	26*	8.33	2*	1.17
	Someone else I trust	12	2.48	9	2.88	3	1.75
	Acquaintances or strangers	332	68.74	216	69.23	116	67.84
Survivor support	Immediate family	86	17.81	60	19.23	26	15.20
	Extended family	79	16.36	57	18.27	22	12.87
	Close friends	228	47.20	157	50.32	71	41.52
	Casual friends	263	54.45	177	56.73	86	50.29
	Someone I work with	87	18.01	60	19.23	27	15.79
	Someone else I trust	64	13.25	41	13.14	23	13.45
	Acquaintances or strangers	311	64.39	202	64.74	109	63.74

[a] % of total sample ($n = 483$). [b] % of survivors ($n = 312$). [c] % of non-victims ($n = 171$).
*Significant difference in endorsement between survivors and non-victims according to chi-square analyses ($p < .05$).

Some participants reported employing coping skills to help them navigate exposure to sexual assault content on SM, though these behaviors were not common. A summary of the descriptive statistics for the coping skills items, delineating survivors and non-victims, are presented in Table 4.6.

Table 4.6
Coping Skill Behaviors Reported by Sample

Item #/ Topic	Survivor M (SD)	Non-victim M (SD)
1. Adjust SM settings	.63 (1.01)	.51 (.88)
2. Feel empowered by sexual assault content	1.26 (1.17)*	.97 (1.02)*
3. Have learned sexual assault information from SM	2.06 (1.26)	2.09 (1.14)
5. Engage in sexual assault discourse on SM	.80 (.97)	.63 (.88)
6. Follow particular news sources based on sexual assault content	1.26 (1.28)	1.15 (1.17)
7. Avoid 'trigger warning' content	1.19 (1.16)*	.96 (1.12)*
8. Consume sexual assault content to 'test how strong I am'	.79 (.98)*	.53 (.88)*

Note. Item number 4 in the coping skills measure of the survey was an attention check that is not relevant. Response scale: 0 = Never; 1 = Rarely; 2 = Sometimes; 3 = Often; 4 = Very often.
*Significant difference at $p < .05$.

Research Question #1

Research question #1 asks: *Are general SM use, exposure to sexual assault related content, and exposure to content unsupportive to sexual assault survivors, differentially associated with mental health outcomes for survivors compared to non-victims?* This question was answered using a series of six multiple regression models examining each of the outcome variables of interest (i.e., depression, anxiety, and PTSD symptoms) for each of the groups surveyed (i.e., survivors and non-victims). The shape of data distributions were examined for each of the dependent variable (DV) measures among survivors and non-victims individually. Most of the outcome data demonstrated a moderately positive skew (skewness range: .481 to .853; kurtosis range: -.586 to .330) with only one (non-victim PCL-5 scores) falling outside the bounds of normality (skewness = 1.14; kurtosis = .619) (Bulmer, 1979). Univariate outliers were

assessed for all DV's to determine if this would help correct skewness in the data. Examining Z-score boxplots, 2 univariate outliers were identified and removed from the non-victim PCL-5 data, which brought the skewness statistic down to 1.00. Among survivor data, 8 univariate outliers from the PHQ-9 and 3 outliers from the PCL-5 were identified and removed as well. Given that all DV distributions fell within the acceptable range of an absolute value of 1 for skewness statistics (Bulmer, 1979), no transformations were applied to the data. Cook's Distance (Cook's D) was used to assess for multivariate outliers in each of the models. All models yielded a Cook's D range of less than 1.0, indicating no multivariate outliers needed to be removed (Cook & Weisberg, 1982). A summary of results for each of the regression models can be seen in Table 4.7.

Table 4.7
Regression Statistics for Research Question 1

Group	Outcome variable	Predictor	Stan. β	SE	t	p	adj. R²	df	F	p
Non-victims	Depression (n = 171)						.08	3, 167	5.74	.001*
		SM Use	.212	.066	2.41	.017*				
		SA Expo	-.025	.101	-.282	.778				
		Unsupport	.197	.266	2.62	.010*				
	Anxiety (n = 171)						.069	3, 167	5.19	.002*
		SM Use	.090	.059	1.01	.313				
		SA Expo	.083	.090	.947	.345				
		Unsupport	.222	.239	2.93	.004*				
	PTSD (n = 169)						.096	3, 165	6.92	.000*
		SM Use	.140	.161	1.59	.115				
		SA Expo	.100	.248	1.14	.255				
		Unsupport	.220	.653	2.94	.004*				
Survivors	Depression (n = 303)						.024	3, 299	3.48	.016*
		SM Use	.003	.048	.039	.969				
		SA Expo	.143	.065	2.02	.044*				
		Unsupport	.088	.195	1.52	.130				
	Anxiety (n = 312)						.019	3, 308	3.04	.029*
		SM Use	.005	.046	.068	.946				

Table 4.7 (cont'd)

	SA Expo	.083	.063	1.18	.238				
	Unsupport	.130	.187	2.26	.025*				
PTSD						.043	3, 305	5.59	.001*
(*n* = 309)									
	SM Use	.041	.140	.599	.550				
	SA Expo	.175	.192	2.52	.012*				
	Unsupport	.072	.573	1.26	.209				

Notes. *p* < .05. Sample sizes for models which are less than the total number of each group (non-victims = 171; survivors = 312) represent DV's which had outliers removed prior to analyses. SM Use = General social media use; SA Expo = Exposure to sexual assault content; Unsupport = Exposure to unsupportive content.

Depression Symptomatology (PHQ-9)

A regression model examining general SM use, exposure to sexual assault related content, and exposure to unsupportive content significantly predicted depression scores (i.e., PHQ-9 values) for non-victims (*n* = 171): *adj. R²* = .08, *F*(3, 167) = 5.74, *p* = .001. Within the model, it was found that the individual IV's general SM use (β = .212, *p* = .017) and exposure to unsupportive content (β = .197, *p* = .01) were significant predictors of depression symptoms, while exposure to sexual assault content was not (β = -.025, *p* = .778). This indicates that for each unit increase in frequency of SM use and amount of exposure to unsupportive content, depression scores increased by approximately 0.2 points.

The same regression model was run for survivors (*n* = 303) and yielded a regression model of: *adj. R²* = .024, *F*(3, 299)= 3.48, *p* = .016. Within the model, the individual IV exposure to sexual assault related content was significantly predictive of survivor depression (β = .143, *p* = .044), while general SM use (β = .003, *p* = .969) and exposure to unsupportive attitudes (β = .088, *p* = .130) were not. This indicates that for each unit increase in exposure to sexual assault content, survivor depression scores increased by .14 points.

Anxiety Symptomatology (GAD-7)

A regression model was conducted to examine anxiety scores (i.e., GAD-7 values) for non-victims ($n = 171$) using the same predictor variables. The overall regression model was statistically significant, *adj. R^2* = .07, $F(3, 167) = 5.19$, $p = .002$. Within the model, exposure to unsupportive attitudes was identified as a significant individual predictor ($\beta = .222$, $p = .004$), while general SM use ($\beta = .09$, $p = .313$) and exposure to sexual assault content ($\beta = .083$, $p = .345$) were not. This Indicates that for each unit increase in exposure to unsupportive attitudes, anxiety scores increased among non-victims by .22 points.

The same model was run for survivors ($n = 312$) and also yielded significant results, *adj. R^2* = .02, $F(3, 308) = 3.04$, $p = .029$. Similar to the non-victims group, exposure to unsupportive attitudes was a significant individual predictor ($\beta = .13$, $p = .025$), while general SM use ($\beta = .01$, $p = .946$) and exposure to sexual assault content ($\beta = .08$, $p = .238$) were not. This indicates that for each unit increase in exposure to unsupportive content, anxiety scores increased among survivors by .13 points.

PTSD Symptomatology (PCL-5)

Multiple regression models were also run to examine how general SM use, exposure to sexual assault content, and exposure to unsupportive content predicted PTSD symptoms among non-victims and survivors. The model for non-victims ($n = 169$) was significant, *adj. R^2* = .10, $F(3, 165)$, $p < .001$. Within the model, the individual IV exposure to unsupportive attitudes ($\beta = .22$, $p = .004$) was a significant predictor, while general SM use ($\beta = .140$, $p = .115$) and exposure to sexual assault content ($\beta = .10$, $p = .255$) were not. This indicates that for every unit increase in exposure to unsupportive attitudes, PTSD symptomatology scores increased by .22 points among non-victims.

The same model was run for survivors ($n = 309$) and was also found to be significant, *adj.* $R^2 = .04$, $F(3, 305) = 5.59$, $p = .001$. Within this model, the individual IV exposure to sexual assault content ($\beta = .175$, $p = .012$) was significantly predictive, while general SM use ($\beta = .041$, $p = .55$) and exposure to unsupportive attitudes ($\beta = .072$, $p = .209$) were not. This indicates that for every unit increase in exposure to sexual assault content, PTSD symptomatology increased by .18 points among survivors.

Fisher's Z Tests

Using these regression statistics, a series of three Fisher's Z tests were run to compare the fit of this set of Ivs for predicting mental health outcomes for survivors versus non-victims. Comparison of fit demonstrated no significant differences between correlation coefficients for the multiple regression models predicting depression ($Z = 1.349$, $p > .05$), anxiety ($Z = 1.347$, $p > .05$), or PTSD ($Z = 1.196$, $p > .05$).

Hypothesis 1. Taken together, these findings suggest hypothesis 1: *General SM use, exposure to sexual assault content, and exposure to unsupportive content will predict mental health outcomes for survivors, but not non-victims,* is rejected. Overall models examining each of the mental health outcomes (depression, anxiety, and PTSD) were significant for both survivors and non-victims and follow up Fisher's Z tests indicated that the models fit equally well for both groups. Differences between survivor and non-victim models regarding which individual Ivs were significant predictors will be explored further in the discussion section.

Research Question #2

Research question #2 asks: *Does the frequency of exposure to sexual assault related content moderate mental health outcomes for survivors of sexual assault using SM?* This question was answered using three multiple regression models (to assess depression, anxiety, and

PTSD symptoms) with predictors: exposure to sexual assault related content, general SM use, as well as an interaction term created for these variables together. These models were restricted to only the survivor subsample ($n = 312$). Prior to running the models, the Ivs of interest were centered to combat concerns of multicollinearity with the addition of the interaction term. The moderating variable was created by multiplying the centered Ivs.

The overall models for depression (*adj. R^2 = .02, F(3, 299)= 2.85, p = .038*) and PTSD symptoms (*adj. R^2 = .04, F(3, 305) = 5.38), p = .001*) were found to be significant. The interaction of general SM use X exposure to sexual assault content was not significant. The overall model for anxiety was not significant (*adj. R^2 = .004, F(3, 308) = 1.44, p = .23*).

Given that exposure to sexual assault content and exposure to unsupportive attitudes emerged as significant predictors for survivor outcomes in the models from research question 1, a second set of three regression models were run, this time with an interaction term for exposure to sexual assault content X exposure to unsupportive attitudes. The individual Ivs were centered prior to creating the interaction term. The overall model was significant for depression (*adj. R^2 = .03, F(3, 299) = 3.54, p = .015*), anxiety (*adj. R^2 = .02, F(3, 308) = 3.10, p = .03*), and PTSD symptoms (*adj. R^2 = .04, F(3, 305) = 5.50, p = .001*); however, none of the interaction terms emerged as significant predictors.

Hypothesis 2

Based on these findings, hypothesis 2: *Exposure to sexual assault related content will significantly moderate the association between SM use and mental health outcomes for survivors*, is rejected. The interaction term of exposure to sexual assault X general SM use was not a significant predictor of mental health outcomes.

Research Question #3

Research question #3 asks: *When someone posts content perceived by survivors as victim blaming or perpetrator supporting, are there different associations to relational outcomes based on the social proximity the survivor has to the poster?* Multilevel linear modeling (MLM) was selected as the preferred analytical tool given the need to account for survivors being potentially represented across multiple relational groups (e.g., survivors having composite scores for immediate family, extended family, and close friends within the same model), which violates the assumption of independence of observations in analysis of variance (ANOVA) testing (Tabachnick & Fidell, 2013). Prior to running the fully specified MLM, the intraclass correlation coefficient (ICC; between group variance divided by total variance) was calculated. The ICC value for the victim blaming data was .831, and for the perpetrator supporting data was .922. These high ICC values suggest that errors among survivors represented within the relational groups are highly correlated, therefore MLM is appropriate to account for this relevance of group influence (Tabachnick & Fidell, 2013). Separate MLM's were run to examine survivors' relational data in response to victim blaming and perpetrator supporting posts. For both models, the composite scores survivors provided for each relational group served as Level 1 data, while the survivors themselves served as Level 2 data. Survivor IDs were specified as random effect variables, allowing the intercept to vary within the model. The relational groups variable was specified as a repeated measure and fixed factor within the model. An unstructured covariance type was selected as there was not a prediction of what correlations within subjects should be. Results from each of the MLM's are presented below.

Relational Outcomes of Victim Blaming Posts by Group

The MLM examining the association of victim blaming posts and survivor relationship distress demonstrated that there were not significant differences in scores based on the relational group, $F(1,5) = 1.40$, $p = .274$.

Relational Outcomes of Perpetrator Supporting Posts by Group

The MLM examining the association of perpetrator supporting posts and survivor relationship distress demonstrated that there were not significant differences in scores based on the relational group, $F(1,5) = .81$, $p = .573$.

Hypothesis 3. Based on these findings, hypothesis 3: *Survivors will report more relational distress in relation to victim blaming or perpetrator supporting content that is posted by people with closer social proximity to them*, is rejected.

Discussion

The present study aimed to examine associations of exposure to sexual assault related content on SM and mental health and relational outcomes by surveying both survivor and non-victims about their experiences online since the #MeToo Movement. This was achieved by recruiting participants via CloudResearch's Mturk toolkit to complete a self-report, cross-sectional online survey administered through Qualtrics.

Associations Between Social Media Use and Mental Health Outcomes

General SM use, exposure to sexual assault content, and exposure to unsupportive attitudes were collectively significant in predicting depression, anxiety, and PTSD symptoms for both survivors and non-victims. Further, regression models for each mental health outcome fit equally well between the two groups. There were, however, differences in which individual variables were significantly predictive *within* the various models across groups.

General SM use was significantly predictive of depression symptoms among non-victims, but not survivors. While several studies have identified a positive association between frequency of SM use and depression and anxiety symptoms (see Keles et al., 2020), emerging literature suggests that these outcomes may be mediated by the type of behaviors users engage in. Active users (i.e., those who post their own content or engage proactively with others) have demonstrated negative correlations between amount of SM use and depression and anxiety symptoms (Escobar-Viera et al., 2018; Thorisdottir et al., 2019). Given that survivors in the current sample reported significantly higher active use behaviors than non-victims, this may help explain why general SM use was a predictor of non-victim depression symptoms, but not survivors'.

In line with research on the neurobiology of trauma which guided the present study, exposure to sexual assault content was a significant predictor of depression and PTSD symptoms among survivors. Indeed, being exposed to trauma reminders can trigger emotional dysregulation by re-activating fear circuitry in the brain (Moser et al., 2015; Rothbaum & Mellman, 2001). Neuroscience research has identified exposure to words, images, and sounds as potential triggers for physiological and psychological arousal among trauma survivors (Bremner et al., 1999; Moser et al., 2015; Neumeister et al., 2017). More specifically, Protopopescu and colleagues (2005) identified exaggerated activity in the amygdala (i.e., the "fear center" of the brain) among survivors of interpersonal violence when they were exposed to trauma-related words (e.g., rape, force, assault). In that study, survivor activation levels were positively correlated with their reported level of PTSD symptomatology (Protopopescu et al., 2005). The present study assessed survivors' frequency of exposure to news stories, posts, hashtags, or comments discussing sexual assault on SM, and identified a positive predictive association between this reported frequency

and symptoms of depression and PTSD. Building on this existing literature, these findings may indicate that SM can serve as a vehicle for exposure to trauma-related words which can have a harmful effect on survivors using these platforms with regards to their depression and PTSD. Acknowledging the cross-sectional design of this study, it could alternatively be that survivors with elevated depression and PTSD symptoms are more likely to notice sexual assault content. Given the experimental design of past research on this topic, which demonstrated a causal association between exposure to word triggers and neurobiological activation, more work examining this dynamic on SM is warranted.

Exposure to unsupportive attitudes (i.e., the frequency participants reported seeing victim blaming and/or perpetrator supporting content) was a significant predictor of all non-victim mental health outcomes, as well as anxiety among survivors. It may be that, whether or not someone has experienced sexual assault themselves, seeing posts which are unsupportive of people who have been harmed, or supportive of people accused of perpetrating harm, can create stress for users that manifests as depression, anxiety, or trauma symptoms. Given that this was a cross-sectional survey which cannot provide evidence of directional effects, this finding may alternatively indicate that non-victims with more depression, anxiety, and PTSD symptoms, and survivors with more anxiety symptoms, are more likely to be aware of or notice unsupportive attitudes in their SM feeds.

Taken together, these data may indicate manifestation of secondary traumatic stress among non-victims. Secondary traumatic stress (STS) refers to the experiencing of trauma symptoms from learning about the traumatic experience of someone else (Figley, 1995), and has been identified among non-trauma victims in many studies examining the impact of traumatic content exposure via the news media (Jones et al., 2016; Pfefferbaum et al., 2014; Thompson et

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al., 2019). Preliminary work piloting an adapted measure of STS for SM users demonstrated an association between STS symptoms (based on a three-factor model: intrusion, avoidance, arousal) and SM use among young adults; however, more research is needed to validate this tool (Mancini, 2019). It should be noted, however, that exposure to sexual assault related content did not emerge as a significant independent predictor for any of the non-victim mental health outcomes, which brings a degree of uncertainty regarding if these data represent manifestations of STS. Further work is needed to determine if non-victims experience STS through observing lack of support for survivors specifically, or if these data are capturing mental health symptoms related to observing disagreement or combativeness on SM more broadly.

Incidental Findings of Interest

Beyond the scope of the primary research questions, several incidental findings from the survey are worth discussing as well. These findings are organized thematically and presented below.

Survivors in Mturk Sample

Based on responses to the SES-SFV measure (Koss et al., 1987), nearly two-thirds of this sample (65%, $n = 312$) were identified as survivors of sexual assault. This number greatly exceeds the lifetime prevalence rate (43.6%) for women identified in the U.S. National Intimate Partner and Sexual Violence Survey which assesses for similar forms of non-consensual experiences (Smith et al., 2018), especially when you consider the relatively young age cut-off for women to be included in the present study (age 18-34). This number is also substantially higher than other Mturk studies which have assessed trauma histories (e.g., Engle et al., 2019; Petri et al., 2020; van Stolk-Cooke et al., 2018). Each of these studies found accidents or disasters as the most frequently experienced trauma in their samples, with sexual

assault/unwanted sexual experiences ranging in prevalence from 21.8-50.6%. Notably, each of these Mturk trauma samples included both men and women, which may have contributed to lower rates of sexual assault experiences reported. Different measures were also used to assess trauma histories in the other studies, including the LEC-5 (Weathers et al., 2013; used by Petri et al., 2020 and van Stolk-Cooke et al., 2018) and the Brief Trauma Questionnaire (BTQ; Schnurr et al., 2002; used by Engle et al., 2019). Data from the present study and other trauma research suggest that the Mturk pool may have a disproportionately high number of sexual assault survivors, and that the types of trauma identified in Mturk samples are highly sensitive to the measures administered.

Survivor Behaviors on Social Media

Disclosures on SM were rare in the present sample- less than 10% (9.3%, $n = 29$) of survivors reported posting about their personal experiences. This is notable given the volume of #MeToo posts (tens of millions) which appeared across SM platforms in the first year of the online movement alone (though, not all posts containing #MeToo include a personal disclosure; Anderson & Toor, 2018; CBS, 2017; Renkl, 2017). While online social movements like #MeToo, #NotOkay, and #WhyIDidntReport have solicited disclosures to highlight the prevalence of sexual assault and encourage survivors to find community, these data suggest that only a small minority of survivors may actually be using SM in this way. However, not posting about a sexual assault experience *publicly* does not negate the possibility that survivors use SM in other ways to disclose or seek support. Indeed, research has found that some survivors interact with hashtag movements (without disclosing themselves) to find fellow survivors who they can seek support from through SM on an individual basis (Barta, 2021). Notably, the only significant difference in SM behaviors between survivors and non-victims was in type of use, with survivors

reporting more active use behaviors (e.g., posting their own content, interacting with others'

content). Given that such a small percentage of survivors reported publicly disclosing their

assault experiences on SM, it is unlikely that this difference in behaviors is linked to posting

their assault experiences. However, this may support the notion that survivors utilize SM as a

coping skill, to create community with others, and/or to engage in broader

conversations/activism, even when they are not sharing their own personal histories. More

research on survivor SM behaviors is needed to explore this possibility.

Platforms on Social Media with More Frequent Sexual Assault Content

Twitter users reported the highest frequency of exposure to sexual assault content ($M =$

2.11, $SD = 1.47$), followed by Facebook ($M = 1.78$, $SD = 1.36$) and TikTok users ($M = 1.76$, SD

$= 1.53$). This makes sense given that Twitter as a platform is known for hashtag activism

(PettyJohn et al., 2019), and that the #MeToo Movement initially took off primarily on Twitter

and Facebook (Anderson & Toor, 2018; Renkl, 2017). TikTok is a video-based platform

dominated by younger users- 48% of 18-29 year olds report use, while this rate drops to 22%

among the next closest cohort of 30-49 year olds (Auxier & Anderson, 2021). This site is often

used for discussing current events and for users to share personal stories, which may lend to

more sharing of sexual assault content. Future SM research would benefit from assessing sexual

assault content trends between platforms at a more granular level to better understand how

survivors' may be differentially impacted based upon which platforms they actively use.

Survivor Exposure to Unsupportive Attitudes on Social Media

Exposure to unsupportive content was high among the entire sample, with approximately

90% ($n = 433$) of participants seeing victim blaming content (32%, $n = 153$, seeing this many

times). This supports existing literature which has found victim blaming content to be pervasive

and widely shared on SM platforms (Stubbs- Richardson et al., 2018; Zaleski et al., 2016). Additionally, nearly 80% ($n = 383$) of the sample reported seeing perpetrator supporting content (with 23%, $n = 111$, seeing this many times). Between groups, survivors reported significantly higher frequency of exposure to victim blaming content (no differences existed regarding perpetrator supporting content). Drilling down into the data, survivors reported seeing victim blaming content posted by extended family, close friends, casual friends, and co-workers at significantly higher rates than non-victims. Survivors also reported seeing content supportive of perpetrators posted by close friends, casual friends, and co-workers significantly more often. Given that no differences existed in demographics, frequency of SM use, or platforms used between survivors and non-victims, and that very few survivors posted about their own experiences, it is unlikely that survivors were truly exposed to significantly higher rates of unsupportive attitudes. It is more likely that survivors were simply more attuned to noticing posts which were unsupportive, particularly when they were posted by people they know personally. Research on disclosure processes shows that survivors intentionally assess potential benefits and harms that could come from telling people about their own experience (Ahrens et al., 2007). This can include exploring resource options available to them and trying to determine the type of reactions they might receive. Ultimately, survivors often choose not to disclose when they foresee negative consequences such as anticipated emotional distress or blame/stigma being placed on them (Ahrens et al., 2007; Washington, 2001). Even if survivors are not consciously considering disclosing (online or otherwise), the literature suggests that they are aware of the impact that sexual assault narratives can have, and likely pay closer attention to the attitudes of people around them regarding this topic.

Fortunately, participants reported high rates of exposure to content that was supportive of survivors as well (over 90%, $n = 451$). However, no significant differences existed in frequency of exposure to this supportive content between survivors and non-victims. Alongside the findings regarding exposure to unsupportive attitudes, this may strengthen the assertion that survivors are more aware of, or more impacted by, seeing negative content than they are by seeing supportive content. Indeed, sexual assault literature has found negative social reactions to have a more notable effect on survivor outcomes than positive social reactions (Campbell et al., 2009). Taken together, these findings suggest that seeing messages that are supportive of survivors on SM may not compensate for seeing harmful content on these platforms. Further research is needed to examine survivor experiences on SM holistically to better understand the interplay of content which provides emotional support juxtaposed with content which may be unsupportive.

Limitations

This study was limited by its cross-sectional design, which does not allow for directionality to be evaluated between variables. In other words, by collecting cross-sectional data, it is not clear whether exposure to trauma reminders on SM influences mental health symptoms, or if mental health drives SM behaviors in certain ways. Asking participants to recall and self-report about experiences on SM which could have happened over a multi-year period (i.e., since the inception of the viral #MeToo Movement in 2017), also introduces error to measurement. Despite these limitations, establishing that associations exist between these variables is a crucial first step to understanding the well-being of survivors and SM users more generally, for beginning to formulate clinical recommendations, and to obtain future funding for more experimental investigations in this area.

Additionally, well-validated measures for this area of research are currently limited. Most of the measures used to assess SM behaviors and exposure to sexual assault content were adapted from measures published in the literature (see Methods section for more details), though these have yet to be widely validated for general use. More specifically, the relational measure used was developed for the present study. Internal consistency statistics suggest this measure shows promise, though some of the individual relational groups assessed had small response pools. Further scale development is needed to determine the generalizability of use.

Conclusion

The current study suggests that Amazon Mturk is an effective platform for recruiting women survivors of sexual assault for cross-sectional survey research. Multiple regression models indicate a significant association between general SM use, exposure to unsupportive attitudes, and exposure to sexual assault content for mental health outcomes among both survivors and non-victims. Notably, within these models, exposure to sexual assault content emerged as a significant independent predictor for survivor depression and PTSD symptoms. Building on existing research explaining links between trauma reminders and neurobiological activation (e.g., Protopopescu et al., 2005), this suggests that viewing sexual assault content through SM may be activating for users who have experienced a similar type of trauma. Both survivors and non-victims also reported high levels of exposure to SM content which was unsupportive of survivor experiences, including content which blamed victims and which showed support for accused perpetrators. Survivors reported seeing victim blaming content at significantly higher frequencies overall and specifically in posts from groups in their social network (i.e., extended family, close friends, casual friends, and co-workers). Survivors also reported seeing perpetrator supportive content posted significantly more frequently by close

friends, casual friends, and co-workers. These findings are concerning given that seeing this type

of unsupportive content from friends and family on SM may deter survivors' willingness to seek

help (Ahrens et al., 2007). The present study demonstrates an association between sexual assault

content on SM and mental health outcomes for users and emphasizes the need for more

longitudinal research which could illuminate the directionality of this relationship more clearly.

CHAPTER 5: INTEGRATION OF MIXED METHODS

The aim of the present study was to better understand the experiences of sexual assault survivors with exposure to sexual assault related content (i.e., news stories and related public discourse) while using social media (SM) platforms. The viral #MeToo Movement, which began online in 2017, was used as a temporal reference point for the study. An exploratory sequential mixed methods design (consisting of qualitative interviews with survivors followed by a quantitative survey of survivors and non-victims) was chosen, given that this specific area of research is currently underexplored in the literature (Creswell & Plano Clark, 2011). We found that symptoms of anxiety, depression, and PTSD were associated with seeing sexual assault content on SM, among both survivors and non-victims. Survivors were highly attuned to SM content which was unsupportive of other victims, particularly when it was posted by people they personally know. This chapter will address the mixed methods research question: '*In what ways do the findings from interviews with survivors generalize to a larger sample in the general population?*' by connecting the findings from the qualitative and quantitative strands of the study (presented individually in chapters 3 and 4) and providing meta-inferences. Mixed methods validity, clinical implications, study limitations, and future research directions will be presented as well.

Connecting Mixed Methods Findings

Table 5.1 provides a summary of how results from the quantitative survey support or counter the generalizability of findings from qualitative interviews with survivors. Discussion of meta-inferences taking these data together will follow.

Table 5.1

Connecting Qualitative and Quantitative Data

Qualitative Finding	Example Qualitative Data	Quantitative Findings and Data
All survivors (*n* = 12) reported exposure to sexual assault content via SM as common	"…with Kavanaugh and the other claims I had a lot of friends posting on Facebook things that like just weren't helpful and are very extreme…" "…a lot of the stuff regarding like the Me Too movement and comments regarding things Trump said came up and I would try to like eliminate things that my friends were posting…" "I think I saw [stories on Roger Ailes abuses] like on the Instagram actually where like, it was a bunch of just like they were flooding with like these stories like it was a video and if you swiped it was another video, another one…"	• 90% of overall sample reported seeing victim blaming content (32% had seen "many times") • 79% of overall sample reported seeing perpetrator supporting content (23% had seen "many times") • 93% of overall sample reported seeing content which supported survivors (53% had seen "many times") • Survivors reported seeing victim blaming content significantly more often (*M* = 1.95, *SD* = .97) compared to non-victims (*M* = 1.74, *SD* = .98), *t*(481)= -2.33, *p* = .02
All survivors (*n* = 12) perceived negative changes to their mental health tied to exposures to sexual assault content on SM. Specifically, survivors described increased symptoms of anxiety, depression, and PTSD	"……I feel like it does affect me when I see something, or I read something about [sexual assault]. I definitely feel a sense of like anxiety or like I get worried" "...I'm much more irritable I think…like symptoms of depression too all kind of spike during that time [when sexual assault stories go viral]. I do think it's harder to relax so I would say like physically, sleep is definitely affected and then I think, yeah eating habits are too" "…I usually get kind of dissociative, and then it's hard to come back…"	Multiple regression models with independent variables: general SM use, exposure to sexual assault content, and exposure to unsupportive attitudes, significantly predicted survivor anxiety (*adj. R²* = .02, *F*(3, 308) = 3.04, *p* = .029), depression (*adj. R²* = .024, *F*(3, 299) = 3.48, *p* = .016), and PTSD symptomatology (*adj. R²* = .04, *F*(3, 305) = 5.59, *p* = .001) • Exposure to sexual assault content emerged as a significant individual predictor within the models for survivor depression (β = .143, *p* = .044) and PTSD (β = .175, *p* = .012) • Exposure to unsupportive attitudes emerged as a significant individual predictor within the model for survivor anxiety (β = .13, *p* = .025)

Table 5.1 (cont'd)

Half of participants (n = 6) reported seeing people they have personal relationships with posting content which was unsupportive of survivors	"…it's obviously worse when my friends want to have a really strong opinion about it and they've never been through it…" "… it was really frustrating for me to see family members you know, say such stupid like uninformed ignorant stuff about [Dr. Blasey Ford] and the whole situation…" "…when we have family members or friends who are weighing in on this it's like, that's different because it's a friend that I care about…and when they say things like, oh well he's a great person, one mistake shouldn't ruin his life or something like that, it's like, I know they don't mean this, but kind of seems like they don't care about me…"	• Survivors reported seeing victim blaming content posted by extended family, $X^2(1, 483) = 5.79$, $p = .016$; close friends, $X^2(1, 483) = 11.97$, $p = .001$; casual friends, $X^2(1, 483) = 16.41$, $p < .001$; and co-workers, $X^2(1, 483) = 11.88$, $p = .001$, at significantly higher rates than non-victims • Survivors reported seeing perpetrator supportive content posted by close friends, $X^2(1, 483) = 4.83$, $p = .028$; casual friends, $X^2(1, 483) = 5.16$, $p = .023$; and co-workers, $X^2(1, 483) = 10.38$, $p = .001$, at significantly higher rates than non-victims • No significant differences were found between groups regarding people in different relational groups posting survivor supportive content
Few survivors (n = 2; 17% of sample) reported posting about their own assault experiences on SM*	"…I remember my reaction was that I was so thankful that they had shared theirs but I never... I'm, I don't share mine. I never said Me Too, I never shared my story I never did that." "I made a Facebook post about [Me Too] and that actually, it was impactful but it wasn't damaging or negative, like I feel like everybody was actually very like respectful, like caring, comforting like, safe about it?"	9.3% of survivors reported disclosing their own sexual assault experiences on SM

Table 5.1 (cont'd)

| Most survivors (*n* = 10) reported using at least one coping strategy (e.g., adjusting SM settings, following trusted news sources, setting personal boundaries, paying attention to trigger warnings) for navigating exposures to sexual assault content on SM | "I mute a lot of the Me Too stuff…sexual assault- muted, rape-muted, I have like almost every word you could possibly think of related to that muted because I just don't want to see it…"

"…I used to engage a lot more [but] I kind of stopped [...] just because it takes a toll to like argue about [sexual assault] with people."

"I rely on [trigger warnings] […] those set the pace for my entire day." | • Survivors did not commonly report adjusting their settings on SM to avoid sexual assault (SA) content (*M* = .63, *SD* = 1.01); No differences between survivors and non-victims
• Survivors did not commonly engage in discussions about SA in SM (*M* = .80, *SD* = .97); No differences between survivors and non-victims
• Some survivors reported being selective about their news sources based on how they discussed SA (*M* = 1.26, *SD* = 1.28); No differences between survivors and non-victims
• Some survivors reported skipping SA content which featured a trigger warning (*M* = 1.19, *SD* = 1.56); This was significantly more frequent than non-victims reported
• Though survivors did not commonly report using SA content to test how "strong" they are (*M* = .79, *SD* = .98), survivors reported this behavior significantly more frequently than non-victims |

Note. *A question about posting personal experiences on SM was not explicitly asked, but came up throughout the course of participant interviews.

Meta-inferences

As sharing of news stories and activism surrounding sexual assault have become more common online since the inception of the viral #MeToo Movement (Anderson & Toor, 2018), most people are being exposed to this type of content via SM. This finding from qualitative interviews was supported by data from the quantitative survey, from both survivors and non-victims. These exposures include things such as news stories, hashtags, posts from friends, and comment sections discussing sexual assault. These content exposures can be characterized as both supportive (i.e., articles and commentary intended to show support for survivors), or

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unsupportive (i.e., articles and commentary which feature messages of victim blaming or perpetrator support). Survivors in both strands of the study reported high rates of exposure to content which was supportive, and qualitatively described related benefits such as a sense of community and empowerment. SM platforms being a source of support, validation, and resources has been supported by other studies (e.g., Schneider & Carpenter, 2019; Li et al., 2021). However, exposure to unsupportive content was reportedly high in both strands of the study as well (a finding supported by previous research; e.g., Stubbs-Richardson et al., 2018; Zaleski et al., 2016) and was predictive of negative mental health outcomes.

An association exists between survivors SM use in the #MeToo era and their mental health. The present study supports both qualitatively and quantitatively that survivor symptoms of anxiety, depression, and PTSD are related to exposure to sexual assault related content on SM. During interviews, survivors provided rich, concrete examples of incidents when they perceived SM content as exacerbating problematic mental health symptoms. Survey data helped delineate the associations of certain SM experiences and mental health outcomes more precisely. Survivor anxiety symptoms were significantly predicted by exposure to unsupportive attitudes, while survivor depression and PTSD symptoms were significantly predicted by exposure to sexual assault content more broadly. While the qualitative data indicated that survivors perceived exposure to sexual assault related content on SM as affecting their mental health, the cross-sectional design of the quantitative survey does not allow for presumption of the directionality of the association between these constructs. These points should be considered alongside the finding that only a small proportion of young women survivors report making disclosures about their own assaults on SM, a finding from the qualitative interviews that was supported by data from the quantitative survey. This suggests that most survivors who experience adverse

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outcomes related to SM use are being negatively impacted by exposure to *other* survivors'

stories. This supports the potential generalizability of lab-based neuroscience research with

survivors of gender-based violence in which subjective distress and neural activation of the

limbic system was triggered by generic words, images, and film (i.e., not the survivors' own

trauma narratives) (Moser et al., 2015; Neumeister et al., 2017; Protopopescu et al., 2005).

Survivors appear to be primed to notice content on SM that is unsupportive of their

experiences, particularly when it is posted by people they personally know. This finding from

qualitative interviews was supported by quantitative data. Compared to non-victims, survivors

reported seeing victim blaming content on their SM feeds at significantly higher rates. Given the

lack of differences in demographics and SM behaviors between these groups, this finding may

imply that survivors are simply more likely to notice and/or remember exposures to victim

blaming content compared to users who have not experienced sexual assault. Further, the data

support that survivors are more adversely affected by unsupportive attitudes posted by people

they personally know. Connecting back to the finding that few survivors disclosed their personal

trauma histories on SM, qualitative data from the present study demonstrated that many

survivors were surprised to see people in their support systems post hurtful things about *other*

survivors' stories, and subsequently questioned whether those people were emotionally safe for

them to interact with. Quantitative data demonstrated that survivors notice unsupportive attitudes

posted by their personal support systems at high rates (significantly more often than non-

victims). This, again, likely implies that survivors are primed to notice and/or remember seeing

loved ones post hurtful things. These findings have significant implications for survivors' ability

and willingness to seek support. Survivors go through myriad considerations before deciding if

or when to disclose their own trauma to their networks of social support, including whether or

not they foresee negative consequences such as emotional distress or being stigmatized or blamed (Ahrens et al., 2007; Washington, 2001). For survivors who *do* decide to disclose, receiving an initial positive reaction can support healthy coping, while receiving an initial negative reaction can deter further help seeking behaviors (Campbell et al., 2009). Taking this literature and data from the present survey together, I assert that observing support persons' reactions to other survivors' stories on SM may act as a *proxy disclosure*, such that seeing negative responses from people who survivors would otherwise consider disclosing to may deter them from seeking further help for themselves, personally.

Some survivors employ strategies or coping skills through their SM use to help buffer potential negative effects of exposure to sexual assault related content. Almost all survivors in the qualitative interviews ($n = 10$) endorsed common use of strategies (e.g., adjusting settings, following particular news sources) to control how often they were exposed to news stories or discussions about sexual assault on SM; however, this level of engagement with specific coping skills did not generalize to the larger quantitative survey. Counter to qualitative findings, it was not common in the survey for survivors to report adjusting their SM settings to control exposures to sexual assault content. This difference may stem from the fact that the majority ($n = 11$) of participants in the qualitative interviews had experiences in therapy, where coping skills such as these could have been discussed or developed. Additionally, survivors who self-selected for the qualitative interviews may have been more likely to have thought about their experiences navigating SM, compared to survivors who participated in the quantitative survey (which had more generic recruitment language). In line with qualitative data, survivors in the survey reported low levels of active engagement with discussions about sexual assault on SM platforms. However, no differences in this behavior existed between survivors and non-victims in the

survey, suggesting this lack of engagement was not necessarily due to boundary setting (the motivation cited among many interview participants). Across both strands, some survivors reported being selective of their news sources based on how they covered sexual assault stories. This behavior was endorsed at similar rates in the survey by survivors and non-victims. Given that non-victims' mental health symptoms were significantly predicted by exposure to unsupportive attitudes, this is perhaps a strategy some young women engage in regardless of sexual trauma histories. Though not a common occurrence, survivors in the quantitative survey were significantly more likely than non-victims to report avoiding sexual assault content based on trigger warnings. This strategy was reported more frequently among interview participants, potentially due to the reasons previously discussed (i.e., involvement in therapy). Finally, though it was less common, survivors in the survey reported using sexual assault content to "test how strong" they were significantly more frequently than non-victims. Specifically, it came up among several survivors during the qualitative interviews as a tactic they used to gauge how they were doing in their recovery, and in some instances, as a form of self-harm.

Mixed Methods Validity

When conducting mixed methods research, it is necessary to evaluate the validity of the individual strands of the research (as presented in chapters 3 and 4) as well as the validity of the study overall (Creswell & Plano Clark, 2011). Validity for the present study was strengthened through data collection by using the same inclusion and exclusion criteria for recruitment in each strand of the study (aside from the quantitative strand allowing both survivors and non-victims to participate). Sampling from the same demographic group increases confidence in the generalizability of qualitative findings when they are supported by the quantitative data.

Appropriate sample sizes were recruited for each strand of the study as well, in line with methodological expectations for qualitative and quantitative research.

The survey measures included in the quantitative strand were developed directly from major themes identified in the qualitative strand. This strengthens validity in mixed methods research by increasing confidence that each strand is studying the same phenomenon and therefore able to be connected in meta-inferences. Table 5.2 provides a summary of findings from qualitative interviews and which components of the quantitative survey they informed.

Table 5.2

Findings from Interviews Informing Survey Development

Major Qualitative Themes/Subthemes	Quantitative Survey Components
Mental and Behavioral Health Impacts	
Exposure to sexual assault content	Frequency of exposure to sexual assault content measure (adapted from Arlt & Wolling, 2018)
Depression symptoms	PHQ-9 (Kroenke et al., 2001)
Anxiety symptoms	GAD-7 (Spitzer et al., 2006)
Posttraumatic stress symptoms	PCL-5 (Blevins et al., 2015)
Social and Relational Impacts	Relational outcomes measure (developed by investigator)
Distressing Social Media Content	
Rape culture narratives	Exposure to unsupportive attitudes measure (developed by investigator)
Survivor Coping Skills for SM Use	Coping skills items (developed by investigator)

Note. Only measures from the survey which were used for analyses in chapter 4 are included.

Finally, mixed methods validity for the present study is strengthened by how findings across strands are interpreted. As is expected in exploratory sequential mixed methods design, the quantitative results are interpreted as building on and assessing generalizability for the primary qualitative data. Meta-inferences are presented in this format and tied back to the original guiding frameworks and literature for the study.

Clinical Implications

Clinicians should be aware of the finding that mental health symptomatology for both survivors and non-victims were collectively predicted by general SM use, exposure to sexual

assault content, and exposure to unsupportive attitudes. Specifically, among non-victims, general SM use was a significant individual predictor for depression symptoms, and exposure to unsupportive attitudes was a significant individual predictor for depression, anxiety, and PTSD symptoms. As discussed in chapter 4, the association between general SM use and depression among this sample may be attributable to the fact that non-victims reported lower levels of active SM use (a behavior found to mediate the relationship between SM use and depression; e.g., Escobar-Viera et al., 2018). Further, these findings may indicate non-victims experience secondary traumatic stress from consuming this content via SM, though further research is needed to explore this phenomenon. Taken together, clinicians may benefit from assessing SM use behaviors and exposures to unsupportive attitudes among all young women clients, regardless of trauma histories. However, given the focus of the current study on survivor experiences on SM, the remaining clinical recommendations will focus specifically on work with sexual assault survivors.

Based on existing literature on the neurobiology of trauma (see chapter 1) and the experiences of survivors described in the present study, it is crucial for clinicians to understand that survivors may not only feel subjectively "upset" by sexual assault content on SM, but that this distress may manifest itself in a wide array of clinically diagnostic symptoms consistent with anxiety, depression, or PTSD. For participants in this study, exposure to sexual assault narratives on SM and related discourse appeared to activate their own trauma memories and reportedly exacerbated distressing symptomatology. Clinicians working with survivors should assess SM usage at the outset of treatment and specifically ask about the amount of exposure clients have to sexual assault related content across SM platforms. Asking clients to reflect on how they feel physically and emotionally when confronted with sexual assault news stories or commentary

from people in their SM networks could be a useful intervention to: 1) help survivors become more attuned to their mind-body connection in relation to their trauma, and 2) provide the opportunity to discuss potential ways survivors can modify their SM use to support rather than hinder their recovery. Providing psychoeducation on the neurobiology of trauma throughout this process can help normalize what survivors may experience when exposed to trauma reminders on SM and help them feel empowered to take a more active role managing their symptoms. Establishing a baseline understanding of SM behaviors and symptomatology and tracking changes over time are important practices, as survivors in the present study reported notable changes in their distress levels tied to specific news events (e.g., Kavanaugh's confirmation hearing) which may pop up at any given time during treatment.

Therapists need to also be cognizant of the relational damage that can occur through SM and understand the potential impacts it can have on survivors when people in their support system are engaging in discourse surrounding sexual assault stories. For clients who have not disclosed their experience to trusted support persons, it could be valuable to assess survivors' perceptions of their social network's beliefs about sexual assault. Based on data from the present study and the current cultural context, some survivors may reference incidents on SM where support persons endorsed beliefs or attitudes that were unsupportive of other victims' experiences. Therapists should process with survivors what this felt like for them to observe loved ones react negatively to the story of another survivor and validate their experience. Psychoeducation can be provided on the impacts of rape culture on how people are socialized to perceive sexual assault, and to discuss with survivors the possibility that support persons' reactions to other victims' stories may not mirror how they would respond to the client's experience. The goal for treatment should be broadening positive social supports of survivors

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and working on healthy strategies to deal with families and friends who hurt survivors through unsupportive comments on SM. In some cases, therapists and clients may collaboratively determine that avoiding disclosure to certain individuals or fully cutting people out who feel unsafe may be a beneficial strategy. In other cases, it may be more beneficial for survivors to engage in appropriate confrontation that could shift the relationship and lead to more support. For example, therapists could coach their clients to approach a family member and say, "When you posted your negative comment about [a particular news story or survivor], it made me feel extremely hurt, because it made me feel like you don't care about my experience." Clients' expertise on their relationships with support persons should be trusted, and in cases where survivors' existing networks do not offer adequate or healthy assistance, therapists should help strategize how clients' systems can be expanded to find those necessary supports.

Therapists should also highlight the resilience and agency already being practiced by survivors and leverage these existing strengths to buffer potential negative mental health outcomes associated with SM use. While the quantitative data suggest these are not widely generalized practices, survivors in both strands of the present study reported strategies such as adjusting their SM settings (e.g., muting words), being selective about the news sources they follow, and avoiding content with trigger warnings for sexual assault. Survivors who participated in the qualitative interviews described these techniques as helpful for their recovery. Assessing coping skills clients may already be practicing on SM and collaborating to develop others can offer survivors a sense of control over their online environments, without limiting their ability to engage in SM platforms that can be important to their personal and professional lives.

Taken together, this study should serve as a call for clinicians working with survivors to proactively integrate SM use in assessment and case conceptualization from a systemic lens, and

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to stay informed about viral news stories covering sexual assault and related social discourse as it unfolds on SM.

Study Limitations

Despite strengths in the relevancy of the research question and the study design, notable limitations should be acknowledged. Limitations relevant to the qualitative and quantitative methods used are presented in chapters 3 and 4. A limitation relevant to both strands of the study are the exclusion criteria used when recruiting participants. To protect survivors, high risk individuals (i.e., those endorsing active suicidality or psychoses) were screened out of the study for their own safety. While no participants interested in the qualitative strand were excluded for these reasons, 83 individuals were excluded from the quantitative survey during the initial screening phase. This may mean that the study did not access individuals more vulnerable to triggers in SM, given that reactivity to trauma reminders has been found to positively correlate with severity of PTSD symptoms (Mchugo et al., 2001; Orr et al., 1998). This may have limited the sensitivity and validity of the quantitative survey by constraining variance in symptomatology among participants.

The measure used to assess experiences of sexual violence (SES-SFV; Koss et al., 2007) in both strands of the study does not assess for experiences of sexual harassment. Many news stories released in association with #MeToo and other related hashtags centered on sexual harassment, related to, or independent of, sexual assault. Failing to capture women who may have experienced harassment but *not* an attempted or completed assault may have influenced study findings, particularly in the online survey. Subsequent research on this topic should include items which capture sexual harassment experiences to allow for comparison to survivors of sexual assault and women who have no harassment or assault experiences.

Additionally, almost all interview participants in the qualitative strand (11 out of 12) reported currently or previously being involved in therapy. The survey in the quantitative strand did not include a question about therapy involvement. As mentioned previously, this could help explain differences between levels of coping skill endorsement between the samples from each strand. There may be additional ways therapy involvement could have influenced findings between samples which cannot be identified in the current study. Follow-up work should assess for therapy involvement in all participants to use as a potential control variable to better understand the association between SM content and mental health outcomes.

<center>**Future Directions for Research**</center>

More work is needed to build on the findings of the present study to determine the directionality and strength of associations between SM use and mental health outcomes for survivors. This will require tracking longitudinal data at a more granular level. Screenomics, an emerging method in psychological, media use, and communications research, would be an effective method for gathering the type of data necessary for elucidating these associations. This technique uploads software to participants' laptops and/or smart phones to capture screenshot data of their activities at set time intervals (often captured every 5 seconds) (Reeves et al., 2021). These data are then encrypted and uploaded to a central database where they can be extracted and analyzed through a combination of computer driven text and image cataloguing, and manual coding (Reeves et al., 2021). Thus far, the majority of SM research (including the current project) has relied on retrospective, self-report data from participants. In the best of circumstances, this type of method introduces unavoidable human error to data; however, this approach is particularly problematic in assessing SM behaviors, which involve extremely short segments of engagement and quick switching between screens, applications, and tasks (Brinberg

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et al., 2020). Using Screenomics data collection methods for SM content consumption, alongside more frequent (e.g., nightly) brief assessments of mental health symptomatology (e.g., depression, anxiety, PTSD) would help us better understand how SM use and mental health interact and influence one another in survivors' lives. Establishing procedures for this type of research and identifying more concrete theoretical connections between the mental health of sexual assault survivors related to their SM use would open the door for related research with other populations of trauma survivors or minoritized populations. In example, research on the mental health of young Black Americans tied to consumption of SM content of police brutality and #BlackLivesMatter; trans and gender non-conforming individuals tied to consumption of SM content on trans violence or anti-trans legislation; or military veterans tied to consumption of SM content related to war or civil unrest. At least two-thirds of adults are estimated to have a lifetime experience of trauma (Kessler et al., 2017; Kilpatrick et al., 2013; PTSD Alliance, 2018), and the continuing rise of hashtag activism and sharing/discussion of trauma related news stories on SM make the potential applications of this area of research expansive and important.

Additionally, more intersectional work is needed to understand the experiences of women survivors who are subjected to forms of oppression beyond their gender. Women with marginalized racial/ethnic identities, from the LGBTQ+ community, and with disabilities experience sexual assault at higher rates (Armstrong et al., 2018; Cantor et al., 2015; Rothman et al., 2011), and have been underrepresented in hashtag activism movements such as #MeToo (Ison, 2019; Onwuachi-Willig, 2018; Strike, 2018). Building on the current study, it is crucial to understand how survivors' identities and life experiences may uniquely impact their mental health and relational outcomes tied to sexual assault content exposure on SM.

Conclusion

The current study helps establish foundational knowledge about associations between exposure to trauma related content (i.e., news stories and related discourse) through SM and the well-being of women sexual assault survivors, not only through in-depth qualitative interviews, but by testing the generalizability of findings within a larger sample as well. Survivors' symptoms of anxiety, depression, and PTSD can be exacerbated by exposure to sexual assault related content on SM, particularly when that content is unsupportive of survivor experiences. Notably, mental health symptomatology of young women without sexual victimization histories were significantly predicted by these exposures as well, suggesting that distress tied to sexual assault content on SM may extend beyond just trauma survivors. Survivors appear to be more attuned to noticing SM content which blames victims or supports perpetrators, particularly when this content is posted by people they personally know (e.g., family, friends, co-workers). Clinicians working with survivors should explicitly assess for SM use and potential exposures to sexual assault related content on these platforms, particularly at times when news stories (e.g., Dr. Blasey Ford's testimony to Congress) or hashtags (e.g., #MeToo) go viral and saturate people's feeds. Treatment should also highlight and potentially expand on coping strategies survivors already have in place for navigating SM in a way that minimizes their distress, while still allowing them to access these platforms to satisfy their personal or professional needs.

APPENDICES

APPENDIX A:

IRB Approval Letter for Interviews

MICHIGAN STATE
U N I V E R S I T Y

Initial Study APPROVAL

October 8, 2018

To: Heather Lynne McCauley

Re: **MSU Study ID:** STUDY00000532
        IRB: Biomedical and Health Institutional Review Board
        Category: Expedited 7
        Submission: Initial Study STUDY00000532
        Submission Approval Date: 10/8/2018
        Effective Date: 10/8/2018
        Study Expiration Date: 10/7/2019

Title: Media Impact on the Trauma Recovery Process of Female Survivors of
Sexual Assault

This submission has been approved by the Michigan State University (MSU) BIRB.
The submission was reviewed by the Institutional Review Board (IRB) through the
Non-Committee Review procedures. The IRB has found that this study protects the
rights and welfare of human subjects and meets the requirements of MSU's Federal
Wide Assurance (FWA00004556) and the federal regulations for the protection of
human subjects in research (e.g., 45 CFR 46, 21 CFR 50, 56, other applicable
regulations).

**Office of
Regulatory
Affairs**
Human Research
Protection Program

4000 Collins Road
Suite 136
Lansing, MI 48910

517-355-2180
Fax: 517-432-4503
Email: irb@msu.edu
www.hrpp.msu.edu

How to Access Final Documents
To access the study's final materials, including those approved by the IRB such as
consent forms, recruitment materials, and the approved protocol, if applicable,
please log into the Click™ Research Compliance System, open the study's
workspace, and view the "Documents" tab. To obtain consent form(s) stamped with
the IRB watermark, select the "Final" PDF version of your consent form(s) as
applicable in the "Documents" tab. Please note that the consent form(s) stamped
with the IRB watermark must typically be used.

Continuing Review: IRB approval is valid until the expiration date listed above. If
the research continues to involve human subjects, you must submit a Continuing
Review request at least one month before expiration.

Modifications: Any proposed change or modification with certain limited
exceptions discussed below must be reviewed and approved by the IRB prior to
implementation of the change. Please submit a Modification request to have the
changes reviewed. If changes are made at the time of continuing review, please
submit a Modification and Continuing Review request.

Immediate Change to Eliminate a Hazard: When an immediate change in a
research protocol is necessary to eliminate a hazard to subjects, the proposed
change need not be reviewed by the IRB prior to its implementation. In such

APPENDIX B:

Recruitment Flyer for Interviews

STUDY:

MEDIA IMPACT ON THE RECOVERY PROCESS OF FEMALE SURVIVORS OF SEXUAL ASSAULT

- Are you a woman between 18-34 years old?
- Have you experienced sexual assault since you were 14 years old?

If you answered yes to these questions, you may be eligible to participate in a mental health research study.

The purpose of this research study is to determine if stories about sexual violence covered in the news or social media have an impact on the psychological recovery of survivors. Eligible participants will complete a 1 to 1.5 hour interview with a trained clinician discussing these topics. Participants will receive a gift card incentive.

This study is being conducted through the secure, web-based platforms **Qualtrics** and **Zoom video conferencing**. Interested individuals must have the ability to access these platforms to participate.

FOR MORE INFORMATION

Please contact:
Morgan PettyJohn, ABD
616-841-5086 (call or text)
Pettyjo1@msu.edu

Figure 6.1 Recruitment Flyer for Interviews.

APPENDIX C:

Interview Consent Form

Study Title: Media Impact on the Recovery Process of Female Survivors of Sexual Assault

Consent Form

Study Principal Investigator:

Heather McCauley, ScD
Assistant Professor
Human Development and Family Studies
Michigan State University
552 W. Circle Drive, 13E Human Ecology
East Lansing, MI 48824
517-432-2263
mccaul49@msu.edu

Study Interviewer:

Morgan E. PettyJohn, MS
PhD Student
Human Development and Family Studies
Michigan State University
552 W. Circle Drive, Human Ecology
East Lansing, MI 48824
Telephone: 817-343-5681
pettyjo1@msu.edu

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1. Purpose of research: Why am I being asked to participate in the research study?

You are being invited to participate in a research study to learn more about how media exposure impacts the trauma recovery process of women who have experienced sexual violence. Our first goal is to gain knowledge on whether news stories about sexual violence featured on TV, radio, social media, etc. have a significant emotional or psychological impact on survivors of sexual trauma. Our second goal is to inform therapists and mental health clinicians about our findings to ensure that survivors are receiving the best care possible throughout their recovery process. You are being invited to participate in the study because you are a self-identified survivor of sexual violence and are between the ages of 18 and 34.

2. What will I be asked to do?

Your participation is voluntary. If you join the study, you will be invited to complete demographic paperwork, three mental health assessments, take part in an in-person interview. The interview will include basic questions about your most recent experience with sexual violence, including when it took place and any additional information which you feel comfortable providing. The primary focus of the interview will be about news stories on sexual violence in the media/social media which you can recall being exposed to, and how this impacted you. Some of the questions we ask may be upsetting, but you have the ability to ask your interview to slow down, take a break, skip any questions you do not want to answer, or end your participation at any time.

To help the study team process your interview responses, we will ask you if you are willing to allow us to audio-record your interview; this is voluntary and you do not have to agree to be audio-recorded. Study participation will be about 90 minutes.

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Study Title: Media Impact on the Recovery Process of Female Survivors of Sexual Assault

Consent Form

3.   Potential benefits: What are the benefits of participating in the study?

There is no direct benefit to you for participating in the study, although it is possible that some of the questions may prompt self-reflection and care-seeking behaviors. You will receive sexual health, mental health and violence resource information at the end of study completion which might be useful to you. What is learned in the study will likely benefit survivors by improving the mental health services they receive, and establishing literature on how the media impacts trauma recovery.

4.   Potential risks: What are the possible risks and discomforts of participating in the study?

The potential risks of you taking part in this study include that you might feel uncomfortable and emotionally distressed answering some of the study questions about sexual violence and you experienced.

It's possible that someone other than the researchers or Institutional Review Board (IRB) staff could find out you were in the study or see your private study information. The steps we take to keep this from happening are described below.

Your participation in the study is voluntary. You can stop participating in the study at any time without penalty to you. You can also skip any question during the interview that you don't want to answer.

5.   Privacy and confidentiality: Who will see the information that I give?

The study team will make all efforts to keep the information you provide confidential to the maximum extent allowable by law. Although we will make every effort to keep your data confidential there are certain times, such as a court order, where we may have to disclose your data. Only the study researchers and the Institutional Review Board staff will have access to your study information.

To additionally protect your privacy and confidentiality, the study team will de-identify your personal information at the time of interview by assigning each file a random number. After the interview, your personal contact information will be destroyed. For participants who consent to being videotaped, interviews will be transcribed by undergraduate and/or graduate student members of the research team. Every research assistant will be required to sign a statement of confidentiality. Once your interview responses have been transcribed, they will be summarized, and any potentially identifiable information will be removed so that no individual participant can be identified in study reports, publications and presentations. Additionally, all original interview recordings will be destroyed once transcriptions have been completed and reviewed for accuracy.

We will also protect your privacy and confidentiality by keeping all de-identified study information in locked filed cabinets and password protected computer files maintained by

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Study Title: Media Impact on the Recovery Process of Female Survivors of Sexual Assault

Consent Form

Morgan PettyJohn, the Study Co-Investigator, in the Couple and Family Therapy Clinic at Michigan State University.

Data from the research study will be kept for three (3) years after the project closes, per MSU policy and the research team and the MSU Human Research Protection Program will have access to the data.

6. *Your rights to participate, say no, or withdraw: Do I have to take part in the study?*

Being in this study is up to you. Your participation is voluntary. You are free to say no now or to leave the study at any time later. You may also choose not to answer specific study questions or to stop the interview altogether. There is no penalty to you if you stop being in the study. You may discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled.

7. *Costs and compensation for being in the study: Will there be any costs to me?*

There are no costs to you for taking part in the study. We will provide you with $50 gift card for participating in the study.

8. *Alternative Options*

There are no alternative options to participating in the study.

9. *Conflict of interest*

The research/study team has no conflicts of interest in conducting this study, such as significant financial interests.

10. *Contact information: Who do I call if I have questions or I change my mind about participating?*
    - If you have questions about the study such as scientific issues, how to do any part of it, or to report an injury (i.e., physical, psychological, social, financial, or otherwise), please contact the Principal Investigator: **Dr. Heather McCauley (mccaul49@msu.edu; 552 W. Circle Drive, East Lansing , MI 48824)**. If you choose to stop participating, the study team will remove you from the study.
    - If you have problems, questions, or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the **Michigan State University Human Research Protection Program:**

3

Study Title: Media Impact on the Recovery Process of Female Survivors of Sexual Assault

Consent Form

11. How do I agree to participate in the study?

By completing the interview, you agree to voluntarily participate in the study.

By indicating "Yes", you agree to be audio taped.

APPENDIX D:

Demographics and Assessment Forms for Interviews

Please answer the following questions to the best of your ability, so long as you are comfortable doing so.

1. How would you identify your race/ethnicity (Please select all that apply):
   - ☐ African-American/Black
   - ☐ American Indian/Alaska Native
   - ☐ Asian-American/Asian
   - ☐ Caucasian-American/White (Non-Hispanic/Latino)
   - ☐ Hispanic/Latino
   - ☐ Native Hawaiian/Pacific Islander
   - ☐ Two or more races (please select applicable races from list)
   - ☐ Other: _____

2. How would you identify your sexual orientation?
   - ☐ Asexual
   - ☐ Bisexual
   - ☐ Lesbian/Gay
   - ☐ Queer
   - ☐ Straight
   - ☐ Other: _____

3. What is the highest level of education you've completed?
   - ☐ Some high school
   - ☐ Graduated high school
   - ☐ Some Bachelor's education
   - ☐ Completed Bachelor's degree
   - ☐ Some graduate school
   - ☐ Completed Master's degree
   - ☐ Completed Ph.D.

4. How would you describe your religious affiliation?
   - ☐ Buddhist
   - ☐ Christian
   - ☐ Hindu
   - ☐ Islam
   - ☐ Jewish
   - ☐ No religious affiliation
   - ☐ Other: _____

5. How would you describe your relationship to people who have sexually harmed you in the past? (Check all that apply):
   - ☐ Authority figure (e.g., boss, religious leader, teacher, etc.)
   - ☐ Casual date
   - ☐ Friend/Acquaintance
   - ☐ Parent/Step-parent
   - ☐ Romantic partner
   - ☐ Sibling
   - ☐ Stranger
   - ☐ Other family member (similar age to you)
   - ☐ Other family member (significantly older than you)
   - ☐ Other: _____

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

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Over the last *2 weeks,* how often have you been bothered by any of the following problems?
(use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite — being so figety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

add columns [   ] + [   ] + [   ]

(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card).   TOTAL: [   ]

10. If you checked off *any problems,* how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all _____ Somewhat difficult _____ Very difficult _____ Extremely difficult _____

Generalized Anxiety Disorder 7-item (GAD-7) scale

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all sure	Several days	Over half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it's hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3
Add the score for each column		+	+	+

Total Score *(add your column scores)* =

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all _____
Somewhat difficult _____
Very difficult _____
Extremely difficult _____

Source: Spitzer RL, Kroenke K, Williams JBW, Lowe B. A brief measure for assessing generalized anxiety disorder. *Arch Inern Med.* 2006;166:1092-1097.

SES-SFV

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 this helps you feel comfortable answering each question honestly. Place a check mark in 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 could check both boxes a. and c. The past 12 months refers to the past year going back from today. Since age 14 refers to your life starting on your 14th birthday and stopping one year ago from today.

Sexual Experiences	How many times in the past 12 months?				How many times since age 14?			
	0	1	2	3+	0	1	2	3+
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. If you are a male, check box and skip to item 4 ☐								
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.	☐	☐	☐	☐	☐	☐	☐	☐

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Sexual Experiences	How many times in the past 12 months?				How many times since age 14?			
	0	1	2	3+	0	1	2	3+
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. If you are male, check this box and skip to item 7. ☐ **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.	☐	☐	☐	☐	☐	☐	☐	☐

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SES-SFV Cont.

8. I am:
- ☐ Female
- ☐ Male

My age is ___ years and ___ months.

9. Of the experiences described in the survey which happened to you, what was the sex of the person or persons who did them to you?
- ☐ Female only
- ☐ Male only
- ☐ Both females and males

10. Have you ever been raped?
- ☐ Yes
- ☐ No

PLEASE CONTINUE TO THE NEXT PAGE

PCL-5

Instructions: Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

In the past month, how much were you bothered by:	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4
4. Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
8. Trouble remembering important parts of the stressful experience?	0	1	2	3	4
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4
10. Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4
13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17. Being "superalert" or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4
19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

APPENDIX E:

Interview Question Guide

Questions for Qualitative Interviews

This verbal interview is designed to help us get a better understanding of if or how survivors of sexual assault are impacted by content in the news and social media. Please share as much information as you're comfortable, but know that you are not expected to share details or specifics about your assault experience if you do not wish to. The questions may be difficult to process, so I will check in on how you're feeling periodically. If you wish to slow down, take a break, or stop the interview at any time, let me know. We'll conclude with a grounding exercise to help you feel more emotionally secure before leaving the space. Do you have any questions?

- **Do you use social media? Which platforms?**
    - How frequently?
    - Is this how you get most of your news information?
    - Do you follow news sources or is it just other people sharing?

- **How do you get your news information?** (Cable news outlets, radio, etc.)
    - How frequently?

- **Rough timeline of assault experience(s)**

- **Were any of these experiences reported to authorities?**

- **In the past 14 months since the #MeToo movement started, are there particular stories that stood out to you as bothersome?** What about any stories before the #MeToo movement?
    - **What made that story stand out?**
    - **Where did you hear or read about this story?** (e.g., Facebook, TV, Twitter)
    - **After hearing about the story, did you notice any changes in your mental health symptoms?**
    - **How did this story make you feel emotionally?**
    - **Question set up: some stories have covered perpetrators who have been punished and others who haven't received any consequences- how does this shape your perception of survivors seeking justice?**
        - **Influence decision to report?**
    - **What was the timeline of your assault to the stories referenced?**
    - **Did the stories make them more likely to identify their experience as sexual assault, or more likely to disclose?**

- **Follow up questions will assess for:**
    - PTSD symptoms
    - Depression symptoms
    - Anxiety symptoms
    - Changes in social behaviors/engagement/activities

- **Could this story have been presented in another way to make it less bothersome?**
    - Who delivered the story?

- o How it was delivered/talked about?
- o Are there particular ways you prefer to receive the information (reading, video, etc.)

- **If you could tell the media how stories about sexual assault impact you, what would you say?**
  - o **Trigger warnings**
  - o **Details in stories**
  - o **How stories are portrayed**
  - o **Particular language (names, words, labels) media uses that bothers you**
  - o **Comment sections**

- **Has any story/event in the media stuck out to you in a positive/helpful way?**

- **What do you think mental health professionals should know about how media coverage of these stories impact survivors?**

APPENDIX F:

IRB Approval Letter for Survey

MICHIGAN STATE
U N I V E R S I T Y

Initial Study APPROVAL
Revised Common Rule

October 5, 2020

To: Heather Lynne McCauley

Re: **MSU Study ID:** STUDY00004887
IRB: Social Science / Behavioral / Education Institutional Review Board
Principal Investigator: Heather Lynne McCauley
Category: Expedited 7b
Submission: Initial Study STUDY00004887
Submission Approval Date: 10/5/2020
Effective Date: 10/5/2020
Study Expiration Date: 10/4/2021

Title: Survey of social media use and mental health outcomes among survivors of sexual assault

This submission has been approved by the Michigan State University (MSU) SIRB. The submission was reviewed by the Institutional Review Board (IRB) through the Non-Committee Review procedure. The IRB has found that this study protects the rights and welfare of human subjects and meets the requirements of MSU's Federal Wide Assurance (FWA00004556) and the federal regulations for the protection of human subjects in research (e.g., 2018 45 CFR 46, 21 CFR 50, 56, other applicable regulations).

Institutional restrictions to in-person human subject research activities conducted by MSU employees, MSU students, or agents of MSU are in place, but MSU is phasing in human research that has the potential for in-person interactions with participants, using a Tier approach. Restrictions to in-person interactions with human research participants by MSU employees, MSU students, or agents of MSU are in place until the activity is permitted under a Tier and a Human Research Plan for a Safe Return is approved. Visit http://hrpp.msu.edu/COVID-19/index.html for the restrictions, Tiers, forms, and the process.

How to Access Final Documents
To access the study's final materials, including those approved by the IRB such as consent forms, recruitment materials, and the approved protocol, if applicable, please log into the Click™ Research Compliance System, open the study's workspace, and view the "Documents" tab. To obtain consent form(s) stamped with the IRB watermark, select the "Final" PDF version of your consent form(s) as applicable in the "Documents" tab. Please note that the consent form(s) stamped with the IRB watermark must typically be used.

**Office of
Regulatory
Affairs**
Human Research
Protection Program

4000 Collins Road
Suite 136
Lansing, MI 48910

517-355-2180
Fax: 517-432-4503
Email: irb@msu.edu
www.hrpp.msu.edu

MSU is an affirmative-action,
equal-opportunity employer.

APPENDIX G:

Screener Survey

CloudResearch Screener Survey

We're interested in learning more about MTurk users. Please answer the following questions about yourself.

*Note: **Bolded responses** indicate the inclusion criteria for the study

1. What country are you located in? (Dropdown list) **United States**
2. Which best describes your gender identity?
    a. Cisgender man (not transgender)
    b. Transgender man
    c. **Cisgender woman (not transgender)**
    d. **Transgender woman**
    e. Nonbinary (assigned male at birth)
    f. **Nonbinary (assigned female at birth)**
3. How old are you? (Dropdown list) **18-34**
4. Do you use some kind of social media platform (e.g., Facebook, Instagram, Twitter, etc.) at least once a week?
    a. **Yes**
    b. No
5. Are you having thoughts of hurting yourself right now?
    a. **Yes**
    b. **No**
6. Do you have a plan to hurt yourself?
    a. Yes
    b. **No**
In the past 30 days…
7. Have you heard things that other people can't hear, such as noises, or the voices of other people whispering or talking?
    a. Yes
    b. **No**
8. Have you had visions or seen things that other people can't see?
    a. Yes
    b. **No**

Please paste the following confirmation code into MTurk: [RandomID]

End of survey text:

Thank you for completing this survey! Please access these national resources for mental health, substance use, and sexual assault recovery as needed. We appreciate your time and hope you and your family remain safe and healthy.

National Suicide Prevention Lifeline (1-800-273-8255)
Crisis Text Line (Text "HOME" to 741-741)
National Substance Abuse and Mental Health Hotline (1-800-662-4357)

National Sexual Assault Hotline (1-800-656-4673)
All are available 24 hours a day, 7 days a week.

APPENDIX H:

Consent Form for Main Survey

Consent to Participate in Survey

1.   Purpose of research: Why am I being asked to participate in the research study?
You are being invited to participate in a research study to learn more about how social media use and exposure to content about sexual violence impacts mental and relational health.

2.   What will I be asked to do?
Your participation is voluntary. If you join the study, you will be asked to complete an online survey, consisting of several measures asking about your social media behaviors, mental health symptoms, relationships, and sexual violence history. Some of the questions asked in the survey may be upsetting, but you have the ability to slow down, take a break, or end your participation at any time. The survey will take approximately 30 minutes.

3.   Potential benefits: What are the benefits of participating in the study?
There is no direct benefit to you for participating in the study, although it is possible that some of the questions may prompt self-reflection and care-seeking behaviors. You will receive resource information at the end of survey completion which might be useful to you. What is learned in the study will likely benefit the public by improving the mental health services they receive, and establishing literature on how social media impacts the well-being of sexual assault survivors.

4.   Potential risks: What are the possible risks and discomforts of participating in the study?
The potential risks of you taking part in this study include that you might feel uncomfortable and emotionally distressed answering some of the survey questions about your mental health or sexual violence you may, or may not, have experienced. Your participation in the study is voluntary. You can stop participating in the study at any time.

5.   Privacy and confidentiality: Who will see the information that I give?
The study team will make all efforts to keep the information you provide confidential to the maximum extent allowable by law. Although we will make every effort to keep your data confidential there are certain times, such as a court order, where we may have to disclose your data. Only the study researchers and the Human Research Protection Program (HRPP) staff will have access to your study information.

To additionally protect your privacy and confidentiality, you will not be asked to provide your name, birthdate, or any other specifically identifiable information in the Qualtrics survey. At the end of the survey, you will be provided with a survey completion code that needs to be entered into MTurk in order for your HIT to be approved. Only the principle investigators will have access to your data.

Data from the survey will be stored on secured devices accessible only by the research team and the MSU Human Research Protection Program and will be kept for three (3) years after the project closes, per MSU policy.

6.   Your rights to participate, say no, or withdraw: Do I have to take part in the study?

Being in this study is up to you. Your participation is voluntary. You are free to say no now or to leave the study at any time later. You may also choose not to answer specific study questions or to stop the survey altogether.

7.   Costs and compensation for being in the study: Will there be any costs to me?
There are no costs to you for taking part in the study. Compensation will be provided through MTurk's system once the primary investigators have confirmed the survey completion code provided matches one of the surveys in Qualtrics. You are allowed to skip questions that you do not want to answer without penalty; however, you must accurately respond to the attention check questions for your HIT to be accepted and be given compensation. You will not be compensated if you attempted to or succeeded in taking the survey multiple times.

8.   Alternative Options
There are no alternative options to participating in the study.

9.   Conflict of interest
The research/study team has no conflicts of interest in conducting this study, such as significant financial interests.

10.   Contact information: Who do I call if I have questions or I change my mind about participating?
If you have questions about the study such as scientific issues, how to do any part of it, or to report an injury (i.e., physical, psychological, social, financial, or otherwise), please contact the Principal Investigator: **Dr. Heather McCauley (mccaul49@msu.edu; 655 Auditorium Road, East Lansing , MI 48824)**. If you choose to stop participating, the study team will remove you from the study.

If you have problems, questions, or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the **Michigan State University Human Research Protection Program: Phone: (517) 355-2180; Fax: (517) 432-4503; E-mail: irb@msu.edu** or regular mail at 4000 Collins Road, Ste. 136, Lansing, MI 48910.

11. How do I agree to participate in the study?
By selecting yes below and continuing on to the survey, you agree to participate in this study. If you would like to keep a copy of this consent form, please take a screen shot or copy and paste the text from this screen.

Should you experience any distress during or after completing the survey, please contact the following resources as applicable:
National Sexual Assault Hotline (1-800-656-4673)
National Suicide Prevention Lifeline (1-800-273-8255)
Crisis Text Line (Text "HOME" to 741-741)
National Substance Abuse and Mental Health Hotline (1-800-662-4357)
All are available 24 hours a day, 7 days a week.

APPENDIX I:

Main Survey

Main Survey

Demographics
1. How would you describe your gender identity?
    a. Cisgender woman (not transgender)
    b. Transgender woman
    c. Nonbinary
    d. Other (please specify): ___
2. How old are you? (Dropdown list)
3. How would you describe your ethnicity? (Select all that apply):
    a. African American/Black
    b. Asian American/Asian
    c. Caucasian/White (non-Hispanic)
    d. Hispanic/Latinx
    e. Native American/Alaska Native
    f. Native Hawaiian/Pacific Islander
    g. Other (please specify): ___
4. What state are you located in? (Dropdown list)
5. How would you best describe your sexuality?
    a. Bisexual
    b. Lesbian
    c. Queer
    d. Straight (heterosexual)
    e. Other (please specify): ___
6. How would you describe your disability status?
    a. Physical disability (e.g., any physical impairment that may limit activities or make them more challenging)
    b. Psychological disability (i.e., cognitive or developmental impairment, or mental health/mood disorder such as anxiety, depression, eating disorder, etc.)
    c. Both physical and psychological disability
    d. No disability
7. How would you describe your socioeconomic class from the options below?
    a. Lower class
    b. Working class
    c. Middle class
    d. Upper class
8. What is the highest level of education you've completed?
    a. Less than high school
    b. Graduated high school
    c. Some bachelor's education
    d. Graduated with bachelor's degree
    e. Some graduate education
    f. Graduated with Master's degree
    g. Graduated with PhD/Doctoral level degree
9. How would you best describe your political affiliation?
    a. Strongly liberal/Democrat

      b. Lean liberal/Democrat

      c. Lean conservative/Republican

      d. Strongly conservative/Republican

      e. Independent/Third party

      f. Don't have a political affiliation

10. How would you best describe your religious affiliation?

      a. Buddhist

      b. Christian

      c. Hindu

      d. Islamic

      e. Jewish

      f. Latter Day Saint

      g. No religious affiliation

      h. Other (please specify): ___

Social Media Use *(adapted from Lin et al., 2016)*

1. Please select all the social media platforms you use:

      a. Twitter

      b. Instagram

      c. Facebook

      d. Snapchat

      e. YouTube

      f. Pinterest

      g. LinkedIn

      h. Reddit

      i. TikTok

(Skip logic auto filled platforms selected from list above for questions 2 & 3)

2. How often do you use each platform you selected?

      a. Less than once a week

      b. 1-2 days/week

      c. 3-6 days/week

      d. About once a day

      e. 2-4 times/day

      f. 5 or more times/day

3. On average since the #MeToo Movement started in 2017, how often have you seen information or content relating to sexual assault on each platform you selected (such as news stories, friends' posts, hashtags, or comments)?

      a. No exposure

      b. Less than once a week

      c. 1-2 times/week

      d. 3-6 times/week

      e. About once a day

      f. Multiple times/day

4. How often do you engage in the following behaviors on your social media platforms? (Answered on 6-point Likert scale: Never, Less than once/week, Once/week, 2-6 times/week, Once/day, Several times/day) *(adapted from Escobar-Viera et al., 2018)*
    a. Read discussions (e.g., original content posted by another user)
    b. Read comments
    c. Watch videos or view pictures
    d. Share others' content (e.g., retweet, share posts)
    e. Like, favorite, or vote on content
    f. Comment on, or respond to someone else's content
    g. Post your own content (e.g., tweet, status update, post pictures)
    h. Read news articles or watch news videos posted by another user
    i. Share news articles or news videos for other users to see

Mental Health Measures

PHQ-9 *(Kroenke et al., 2001)***:** Over the <u>last 2 weeks</u>, how often have you been bothered by any of the following problems? (Answered on 4-point Likert scale: Not at all, Several days, More than half the days, Nearly every day)
1. Little interest or pleasure in doing things
2. Feeling down, depressed, or hopeless
3. Trouble falling or staying asleep, or sleeping too much
4. Feeling tired or having little energy
5. Poor appetite or overeating
6. Feeling bad about yourself, or that you have let yourself or your family down
7. Trouble concentrating on things, such as reading the newspaper or watching television
8. Moving or speaking so slowly that other people could have noticed OR the opposite-being so fidgety or restless that you have been moving around a lot more than usual
9. Thoughts that you would be better off dead or hurting yourself

*(Suicide Hotline resource provided at end of measure): If you're having a difficult time right now, please contact the National Suicide Prevention Lifeline (1-800-273-8255) or the Crisis Text Line (Text "HOME" to 741-741).

GAD-7 *(Spitzer et al., 2006)*: Over the last 2 weeks, how often have you been bothered by the following problems? (Answered on 4-point Likert scale: Not at all, Several days, More than half the day, Nearly every day)
1. Feeling nervous, anxious, or on edge
2. Not being able to stop or control worrying
3. Worrying too much about different things
4. Trouble relaxing
5. Being so restless that it's hard to sit still
6. Becoming easily annoyed or irritable
7. Feeling afraid as if something awful might happen

PCL-5 *(Blevins et al., 2015)***:** This questionnaire asks about problems you may have had after a very stressful experience involving actual or threatened death, serious injury, or sexual violence.

Very briefly identify the worst event you've experienced (if you feel comfortable doing so): ___

About how long ago did this happen?
   a. Not applicable/Do not wish to disclose
   b. Within the last 6 months
   c. 6 months to 1 year ago
   d. 1 to 3 years ago
   e. 3 to 5 years ago
   f. 5 to 10 years ago
   g. More than 10 years ago

Keeping your worst event in mind, please read each problem carefully and then select the response that indicates how much you have been bothered by that problem in the past month. (Answered on 5-point Likert scale: Not at all, A little bit, Moderately, Quite a bit, Extremely).
   1. Repeated, disturbing, and unwanted memories of the stressful experience
   2. Repeated, disturbing dreams of the stressful experience
   3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)
   4. Feeling very upset when something reminded you of the stressful experience
   5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)
   6. Avoiding memories, thoughts, or feelings related to the stressful experience
   7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)
   8. If you're paying attention, select 'Quite a bit' for this question
   9. Trouble remembering important parts of the stressful experience
   10. Having strong negative beliefs about yourself, other people, or the world (for example, having bad thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)
   11. Blaming yourself or someone else for the stressful experience or what happened after it
   12. Having strong negative feelings such as fear, horror, anger, guilt, or shame
   13. Loss of interest in activities that you used to enjoy
   14. Feeling distant or cut off from other people
   15. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)
   16. Irritable behavior, angry outbursts, or acting aggressively
   17. Taking too many risks or doing things that could cause you harm
   18. Being "super alert" or watchful or on guard
   19. Feeling jumpy or easily startled
   20. Having difficulty concentrating
   21. Trouble falling or staying asleep

Rape Myth Scale *(McMahon & Farmer, 2011)*

Please read each of the following statements and choose the response that best represents how true each is for you: (Answered using a 5-point Likert scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree)

1. If a girl is raped while she is drunk, she is at least somewhat responsible for letting things get out of control
2. When girls go to parties wearing slutty clothes, they are asking for trouble
3. If a girl goes to a room alone with a guy at a party, it is her own fault if she is raped
4. If a girl acts like a slut, eventually she is going to get into trouble
5. When girls are raped, it's often because the way they said "no" was unclear
6. If a girl initiates kissing or hooking up, she should not be surprised if a guy assumes she wants to have sex
7. When guys rape, it is usually because of their strong desire for sex
8. Guys don't usually intend to force sex on a girl, but sometimes they get too sexually carried away
9. Rape happens when a guy's sex drive gets out of control
10. If a guy is drunk, he might rape someone unintentionally
11. It shouldn't be considered rape if a guy is drunk and didn't realize what he was doing
12. If both people are drunk, it can't be rape
13. If a girl doesn't physically resist sex- even if protesting verbally- it can't be considered rape
14. If a girl doesn't physically fight back, you can't really say it was rape
15. A rape probably didn't happen if the girl has no bruises or marks
16. If the accused "rapist" doesn't have a weapon, you really can't call it a rape
17. If a girl doesn't say "no" she can't claim rape
18. A lot of times, girls who say they were raped agreed to have sex and then regret it
19. Rape accusations are often used as a way of getting back at guys
20. If you're paying attention, select 'Strongly agree' for this question
21. A lot of times, girls who say they were raped often led the guy on and then had regrets
22. A lot of times, girls who claim they were raped just have emotional problems
23. Girls who are caught cheating on their boyfriends sometimes then claim it was rape

Sexual Experiences Survey- Short Form Version *(Koss et al., 1987; Koss et al., 2007)*
Please respond to the following questions thinking about your sexual experiences <u>since age 14</u>. These experiences could have occurred due to verbal pressure or coercion, manipulation, use of substances, threats of force, or actual use or force.

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).
    a. Yes
    b. No
2. Someone had oral sex with me or made me have oral sex with them without my consent
    a. Yes
    b. No
3. Someone put their penis into my vagina, or someone inserted fingers or objects without my consent
    a. Yes

   b. No
 4. Someone put their penis into my butt, or someone inserted fingers or objects without my consent
   a. Yes
   b. No
 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
   a. Yes
   b. No
 6. Even though it did not happen, someone TRIED to put their penis into my vagina, or someone tried to stick in fingers or objects without my consent
   a. Yes
   b. No
 7. Even though it did not happen, someone TRIED to put their penis into my butt, or someone tried to stick in objects or fingers without my consent
   a. Yes
   b. No

About how many separate instances of unwanted sexual contact have you experienced <u>since age 14</u>? (Select '0' if this does not apply to you). (Dropdown list ranging from 0-10+ times)

By your best recollection, how long ago was your <u>most recent unwanted</u> sexual experience?
  a. Not applicable
  b. Within the last 6 months
  c. 6 months to 1 year ago
  d. 1 to 3 years ago
  e. 3 to 5 years ago
  f. 5 to 10 years ago
  g. More than 10 years ago

Have you ever posted about your sexual assault experience on social media?
  a. Yes
  b. No

Coping Mechanisms
Thinking about the time you spend on social media, please respond to each of the following statements: (Answered using a 5-point Likert scale: Never, Rarely, Sometimes, Often, Very often)
 1. I adjust my social media settings (e.g., muting words, blocking people/accounts) to avoid seeing content about sexual assault
 2. I feel empowered by seeing content about sexual assault on social media
 3. I have learned important information about sexual assault because of social media
 4. If you're paying attention, answer 'Rarely' for this question
 5. I engage in conversations about sexual assault on social media through things like posting news articles or commenting on other people's posts

6. I am intentional about what news sources I follow on social media based on how they discuss sexual assault
7. When I see a 'trigger warning' for sexual assault content (e.g., on news stories or social media videos) I automatically skip over that content
8. When I see sexual assault content on social media, I click on the content to test how strong I am

Relational Questions

Thinking back to stories about sexual assault in the news (e.g., Harvey Weinstein, Brock Turner, Brett Kavanaugh, R. Kelly), how often have you seen people post on social media:

1. Content that blames or questions women victims of sexual assault, through things like asking how much she had to drink, what she was wearing, or if she can be trusted?
   a. Never
   b. Once or twice
   c. A few times
   d. Many times

   (Skip logic: If any of the bolded selections made, next question pops up about who posted the content)

   Who posted or shared this content? (Select all that apply):
   a. Someone from my immediate family (e.g., parents, siblings, grandparents, very close chosen family)
   b. Someone from my extended family (e.g., aunts, uncles, cousins)
   c. Someone I'm close friends with (e.g., friends you feel you can disclose very personal things to)
   d. Someone I'm casually friends with (e.g., friends you chat with or spend time with but don't share personal information)
   e. Someone I work with (e.g., people you interact with on a regular basis at work)
   f. Someone else I trust (e.g., teachers, coaches, religious leaders)
   g. Acquaintances or strangers

   (Skip logic: If any of the bolded selections made, the following question pops up for EACH of the relational groups participant selected; e.g., if a participant selected 4 different relational groups, 4 questions would populate for them to answer)

   Thinking about this content you saw your [RELATIONAL GROUP] post, select how much you agree or disagree with the following statements: (Answered with a 5-point Likert scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree)
   1. This made me question how much I could trust this person
   2. This made me feel betrayed
   3. This made me feel like a sexual assault survivor should not reach out to this person for help

4. This made me feel physically distressed (e.g., heart racing, stomach hurting)
5. This negatively impacted our relationship

Thinking back to stories about sexual assault in the news (e.g., Harvey Weinstein, Brock Turner, Brett Kavanaugh, R. Kelly), how often have you seen people post on social media:

2. Content that supports men accused of sexual misconduct through things such as talking about his positive accomplishments or trying to protect his reputation?
   a. Never
   b. **Once or twice**
   c. **A few times**
   d. **Many times**

➡ **(Skip logic: If any of the bolded selections made, next question pops up about who posted the content)**

Who posted or shared this content? (Select all that apply):
   a. **Someone from my immediate family (e.g., parents, siblings, grandparents, very close chosen family)**
   b. **Someone from my extended family (e.g., aunts, uncles, cousins)**
   c. **Someone I'm close friends with (e.g., friends you feel you can disclose very personal things to)**
   d. **Someone I'm casually friends with (e.g., friends you chat with or spend time with but don't share personal information)**
   e. **Someone I work with (e.g., people you interact with on a regular basis at work)**
   f. **Someone else I trust (e.g., teachers, coaches, religious leaders)**
   g. Acquaintances or strangers

➡ **(Skip logic: If any of the bolded selections made, the following question pops up for EACH of the relational groups participant selected; e.g., if a participant selected 4 different relational groups, 4 questions would populate for them to answer)**

Thinking about this content you saw your [RELATIONAL GROUP] post, select how much you agree or disagree with the following statements: (Answered with a 5-point Likert scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree)
   1. This made me question how much I could trust this person
   2. This made me feel betrayed
   3. This made me feel like a sexual assault survivor should not reach out to this person for help
   4. This made me feel physically distressed (e.g., heart racing, stomach hurting)
   5. This negatively impacted our relationship

Thinking back to stories about sexual assault in the news (e.g., Harvey Weinstein, Brock Turner, Brett Kavanaugh, R. Kelly), how often have you seen people post on social media:

3. Content that supports survivors of sexual assault, through things such as indicating they believe them, showing empathy, or calling for justice?
    a. Never
    b. **Once or twice**
    c. **A few times**
    d. **Many times**

> **(Skip logic: If any of the bolded selections made, next question pops up about who posted the content)**

Who posted or shared this content? (Select all that apply):
   a. **Someone from my immediate family (e.g., parents, siblings, grandparents, very close chosen family)**
   b. **Someone from my extended family (e.g., aunts, uncles, cousins)**
   c. **Someone I'm close friends with (e.g., friends you feel you can disclose very personal things to)**
   d. **Someone I'm casually friends with (e.g., friends you chat with or spend time with but don't share personal information)**
   e. **Someone I work with (e.g., people you interact with on a regular basis at work)**
   f. **Someone else I trust (e.g., teachers, coaches, religious leaders)**
   g. Acquaintances or strangers

> **(Skip logic: If any of the bolded selections made, the following question pops up for EACH of the relational groups participant selected; e.g., if a participant selected 4 different relational groups, 4 questions would populate for them to answer)**

Thinking about this content you saw your [RELATIONAL GROUP] post, select how much you agree or disagree with the following statements: (Answered with a 5-point Likert scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree)
   1. This made me feel like I can trust this person
   2. This made me feel supported
   3. This made me feel like a sexual assault survivor <u>should</u> reach out to this person for help
   4. This made me feel physically safe to interact with this person
   5. This positively impacted our relationship

End of survey text:
Here is your ID to be eligible for compensation: [RANDOM ID]

Please copy this value and paste it into MTurk

When you have copied this ID, please click the next button to submit your survey.

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