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**THE ROLE OF EMOTIONAL ACCEPTANCE AND AWARENESS IN
THE RELATIONSHIP BETWEEN POSTTRAUMATIC STRESS
DISORDER SYMPTOMS AND POSTTRAUMATIC GROWTH AMONG
SURVIVORS OF SEXUAL ASSAULT**

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THE ROLE OF EMOTIONAL ACCEPTANCE AND AWARENESS IN THE
RELATIONSHIP BETWEEN POSTTRAUMATIC STRESS DISORDER
SYMPTOMS AND POSTTRAUMATIC GROWTH AMONG SURVIVORS OF
SEXUAL ASSAULT

A Thesis

Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
in
Psychology: Clinical Counseling

by

Cecilia Melendez

June 2020

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ABSTRACT

According to the Bureau of Justice Statistics (Morgan & Oudekerk, 2019), sexual assault is defined as an act or attempted act of unwanted sexual violence. The psychological consequences following an assault can lead to a number of negative mental health outcomes, such as Posttraumatic Stress Disorder (PTSD). The National Intimate Partner and Sexual Violence Survey reported that 22.2% of survivors experience symptoms of PTSD following exposure to sexual victimization (Black et al., 2011). However, recent research suggests positive outcomes can also result following trauma, such as enhanced meaning making or clarification of values. Posttraumatic Growth (PTG) refers to a transformation following trauma that initiates positive growth. PTSD symptom severity has been associated with PTG, particularly in situations where a trauma survivor experiences moderate to severe PTSD symptoms. Few studies have examined variables that may account for the relationship between PTSD and PTG. Mindfulness-based interventions that encourage awareness and acceptance of trauma-related emotions have become increasingly popular for treating trauma. The goal of the current study was to explore the role of mindfulness of emotional awareness and acceptance in the relationship between PTSD and PTG. Specifically, we were interested in determining if mindfulness of emotional awareness and acceptance moderated the relationship between PTSD and PTG among survivors of a sexual assault. Undergraduate students who reported a history of sexual assault were recruited from psychology courses for the present

study. Participants completed online measures assessing trauma history, PTSD symptom severity, PTG, and a measure of mindfulness. Findings have important implications for enhancing our understanding of the psychological impact following a trauma and factors that can play a role in trauma recovery.

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CHAPTER ONE: REVIEW OF THE LITERATURE

Sexual Victimization

According to the American Psychiatric Association (APA) trauma is a response to life-threatening, life-changing events such as natural disasters, accidents, sexual assaults, rape, etc. where individuals experience painful memories and have a difficult time living their lives effectively (APA, 2019). This paper will focus on and introduce the prevalence of sexual assault and rape among women. According the Bureau of Statistics (BJS), rape is defined as forced sexual penetration through either psychological or physical coercion (attempted rape can include verbal threats), whereas sexual assault includes a wide variety of sexually charged acts which can include: unwanted sexual contact, fondling or inappropriate grabbing, as well as verbal threats to commit such acts. In recent years, the National Victim of Crime Survey has reported that the prevalence of rape, sexual assault, and other violent crimes among the general population has increased drastically among individuals ages 12 and older (Morgan & Oudekerk, 2019). The National Intimate Partner Sexual Violence Survey reports that one in five women will experience sexual violence in the United States in their lifetime (Black et al., 2011). Unfortunately, within the United States the most prominent form of sexual victimization is “completed forced penetration” which approximately 12.3% of women have reported having experienced. Furthermore, one in two women (approximately 44.6% in the U.S.)

will experience other forms of sexual violence, such as sexual coercion and unwanted forms of sexual contact.

Recently, interest in examining sexual assault among college populations has emerged in an attempt to identify those in a subset of the population that experience sexual victimization (Fedina, Holmes, & Backes, 2018).

Approximately 28 of 1,000 female students will experience a rape or attempted rape while attending university (Fisher, Cullen, & Turner, 2000). Furthermore, those who have been victimized are at a higher risk for experiencing sexual violence, suggesting about one female student per ten students will report being revictimized (Fisher, Cullen, & Turner, 2000).

Although researchers have found some variability in the prevalence rates of sexual assault, they have identified a high rate of occurrence among college populations. Mellins et al. (2017) found that at Columbia University and Barnard College in New York City, 22% of the population reported having experienced a sexual assault in their lifetime. Furthermore, Conley et al. (2017) found similar results in three different cohorts of first year students who are or were currently attending a university. They found that approximately 19% of their population had experienced a sexual assault on their campus since beginning college, with women reporting the highest rates (23% compared to 11.6% men). Additionally, researchers found that of those who had experienced a sexual assault prior to attending college, approximately 40% of those reported being revictimized while in college. This provides insight on the severity of campus sexual assault and

potential risk factors for revictimization in college students who have previously experienced a sexual assault. Other concerning aspects of campus sexual assault is the potential negative effects of survivors of a sexual assault such as developing mental and physical health concerns. For many, the aftermath of a sexual assault includes experiencing flashbacks and unwanted memories of the traumatic event. Unfortunately, for some, these experiences can progress into a more serious long-term mental health concerns, such as Posttraumatic Stress Disorder (PTSD).

According to the Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition (DSM-5, APA, 2013), PTSD is classified as experiencing and/or witnessing a traumatic event (e.g., serious injury, natural disaster, sexual violence) with concomitant symptoms such as distressing dreams, flashbacks, psychological stress, and avoidance. Although, PTSD does not always occur after a traumatic event, PTSD has a significantly higher likelihood of occurrence following sexual assault (Resnick et al., 1993). Researchers have found that when analyzing the psychological impact of exposure to specific crime types, such as sexual assault, participants often showed higher rates of PTSD following an assault as compared to other forms of crime. Because of the high prevalence of sexual victimization among women, women are at greater risk of developing negative trauma-related mental health outcomes, such as PTSD. In fact, in comparison to men, women were two times more likely to develop PTSD

following an assault, making research in prevention and intervention an important area of research (Beslau, Chilcoat, Kessler, Peterson, & Lucia, 1999).

There is a significant amount of research showing the relationship between a history of sexual assault and PTSD. In fact, one study identified through an interview process that the relationship between a history of revictimization and PTSD can appear soon after the initial assault occurs (Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992). In this study, 95 females who were survivors of (actual or attempted) sexual assault within the last 30 days were analyzed. Their reactions and responses surrounding their assault were evaluated weekly. They found that almost all their participants met criteria for PTSD in their initial intake. Those who had less severe PTSD in their initial intake showed significant recovery following their one, two, and three-month follow-ups. However, those who reported more severe PTSD did not recover (Rothbaum, 1992). This topic has increasingly become of interest to researchers focused on identifying risk factors for survivors, specifically, women.

According to the World Health Organization (WHO) World Mental Health Surveys (WMH), the relationship between sexual assault and PTSD has continued to be significant among women who report a history of victimization (Scott et al., 2018). In the World Mental Health study, data was collected through an interview process where the participants were asked about their prior history of sexual assault and their thoughts and feelings about the assault. Researchers were attempting to identify whether PTSD was more prevalent among those who

have experienced revictimization rather than a single occurrence of being victimized. Ultimately, those who had experienced more than one sexual assault in their lifetime exhibited a higher likelihood of developing PTSD compared to those who had only experienced a single sexual assault. This is significant in that, it shows the impact that assault has on the creation and maintenance of PTSD in survivors of assault; specifically, those who are revictimized. Additionally, analyzing this relationship can assist in identifying those who are at a higher risk for developing PTSD in their lifetime.

Identifying this relationship is important because PTSD can be problematic for individuals who are attempting to return to their lives following an assault. Furthermore, understanding this relationship can be beneficial in terms of finding ways to foster more positive outcomes following their assault. While there has previously been a significant amount of research on the potential negative outcomes following a sexual assault, recently, there has been a shift in discovering potential positive outcomes for survivors.

Posttraumatic Growth

Trauma, as noted previously, can include a wide variety of events and experiences (e.g., sexual assault, motor vehicle accidents, natural disaster). These experiences challenge an individual's adaptive abilities leading to either positive or negative changes (Tedeschi & Calhoun, 2004). Posttraumatic Growth (PTG) refers to a transformation following a trauma that initiates positive change

(Grunbaugh & Resick, 2007). The term was created to describe individuals who had the ability to facilitate positive adaptive growth following their trauma despite the increased risk of negative psychological issues (Tedeschi & Calhoun, 2004). Positive change can consist of multiple factors, such as emotional growth and increased confidence in an individual's ability to appreciate life and their relationships (Tedeschi & Calhoun, 1996). Additionally, individuals often create new morals and values to live by, such as an increased focus on finding a purpose in life as well as exploring a spiritual connection. Researchers view PTG as a mechanism of self-monitoring when a distressing experience occurs (Ramos & Leal, 2013). For example, those who have the ability to identify their needs and find resources to manage their difficult emotions, thoughts and feelings through healthy outlets can positively influence the way they perceive their trauma thus increasing the potential for positive growth. Therefore, individuals who can self-regulate distressing emotional and cognitive reactions to aversive experiences, may foster greater PTG.

PTG encompasses positive changes in the cognitive, emotional, and social facets of one's life. Tedeschi & Calhoun (1996) created a questionnaire to assess five areas of positive growth: new possibilities, personal strength, appreciate of life, spiritual/existential change, and relating to others. These concepts were identified as important facilitators of PTG; thus, identifying such factors, can assist in understanding the development of PTG. This includes identifying factors that reinforce PTG qualities and determining areas of strength

which can be used as a motivating factor towards increased PTG. For example, some individuals may report greater amounts of growth in areas such as personal strength compared to emotional growth thus making personal strength a tool to increase PTG for them.

Additionally, identifying other factors that have an influential impact on growth in individual's can increase our understanding of PTG's role in developing or not developing healthy adaptive responses to trauma. Tedeschi and Blevins (2015) discuss a model of PTG that focuses on the importance of purposeful rumination (hyper-focus on one's distressing thoughts, feelings) and its association with growth. Purposeful rumination and focusing on one's responses to trauma allows individuals to evaluate one's thoughts and feelings to potentially take a different, possibly more adaptive perspective on the traumatic experience. They suggest that observing one's thoughts and feelings surrounding the traumatic experience through purposeful rumination allow for positive reappraisal of the negative experience.

Minimal research is available on PTG among sexual assault populations. However, there has been some evidence that there is a significant relationship between the two variables (Ullman, 2014). Researchers analyzed a group of women who volunteered to be sampled through a mail survey from the Chicago, IL area. The women in the sample all had experienced a non-consensual sexual experience after the age of 14, were over the age of 18, and had disclosed their experience to another individual. Participants were given a modified version of

the Sexual Experiences Survey (SES) to determine the nature of the sexual assault experience that the participants had experienced, as well as measures assessing their maladaptive coping strategies, cognitive and social responses and PTG. The purpose of the study was to determine factors that are highly correlated with PTG. Researchers reported that higher rates of self-reported PTG were observed among women of color, as well as those who were older and less educated women (Ullman, 2014). Furthermore, greater reliance on maladaptive coping strategies, such as avoidance, was associated with reduced levels of PTG within this sample. This is consistent with prior research that suggests adaptive coping strategies are more effective in cultivating growth. For example, they found that adaptive individual coping (i.e. coping that involves taking active steps towards coping with stress) was significantly more impactful on increasing levels of growth compared to the maladaptive strategies that are often associated with increased levels of distress. This study is important because it establishes clear correlates of PTG among sexual assault survivors, and sheds light on areas for future research.

Additionally, Cole and Lynn (2010) analyzed a group of undergraduate students at Binghamton University who were enrolled in a psychology class. Participants were given the Sexual Victimization Survey to identify those who have experienced a non-consensual sexual experience. They were also given surveys to identify coping strategies, resilience, and depressive symptoms. To assess their levels of PTG, they were given the Benefit Finding Scale (BFS)

which is a 15 item self-report measure to determine whether survivors of sexual assault perceive PTG in themselves following their traumatic experience. Additionally, there was a significant interest in identifying healthy, adaptive coping strategies that are utilized to better determine how those who have higher or lower rates of PTG, cope with trauma and stress. Participants were asked to identify how they have been currently coping following their non-consensual sexual experience. Researchers found that among those who identified having experienced a non-consensual sexual experience, approximately 74% reported perceiving some degree of PTG within themselves. In addition, among the sample, it was found that specific types of coping strategies were identified as having a significant impact on those who experienced some form of growth. Specifically, there was a significant relationship between acceptance coping and perceived growth. Forms of acceptance coping have been shown to have a significant relationship with developing growth; however, it is unclear why this is the case. This is a significant finding in the relationship between PTG and sexual assault survivors because it identifies a predictor that can be further researched since acceptance coping appears to play an important role in the development of PTG. The relationship between PTG and sexual assault is present; however, as PTSD is a significant negative outcome following a sexual assault, it would be beneficial to research the potential relationship between PTG and PTSD.

There is very little research on the relationship between PTG and PTSD which are both possible outcomes following a sexual assault or other significant

trauma. One association that has been made is that the severity of PTSD symptoms has a significant impact on levels of PTG. Specifically, PTSD symptom severity has been associated with PTG, particularly in situations where a trauma survivor experiences moderate to severe PTSD symptoms. In fact, studies have shown that higher levels of PTG were associated with moderate to high levels of PTSD (Hall et al., 2008). This finding supports researchers' suggestion that there is a curvilinear relationship between the two variables (Kleim and Ehlers, 2009). This indicates that for growth to be significant, the individual needs to experience some form of distress following the trauma for it to be identified as a significant, life-changing event in their life. We expect to identify distress in growth in survivors of sexual assault which this paper will focus on primarily.

Shakespeare-Finch and Armstrong (2010) evaluated psychological outcomes among a group of trauma survivors who had experienced various forms of trauma (e.g., motor-vehicle accidents, sexual abuse, and bereavement). Data was derived from a larger data set comprised of college students and members of the community. Within their study, the researchers wanted to determine whether specific trauma groups would differ in their display of either growth or distress. Researchers found that among those who were experiencing traumatic events related to bereavement reported higher levels of growth compared to the groups who have experienced sexual abuse. In addition, those who experienced sexual abuse reported the highest rates of distress, reaffirming

that there is a possible relationship between higher rates of PTSD and sexual abuse. This study suggests those who have experienced significant sexual trauma often struggle more with developing growth than other forms of trauma. This indicates that there is an increased need for developing strategies to increase growth development targeting survivors of sexual abuse.

Grubaugh and Resick (2007) analyzed the relationship between PTG and sexual assault in a sample of treatment-seeking female assault survivors with approximately 90% of the sample meeting criteria for PTSD. They were given the measures in person after a phone interview was conducted to assure that they met the requirements for the study. This study did not find a significant relationship between growth outcomes and PTSD. However, a limitation of their study was the variance of PTSD severity levels. Much of their study consisted of individuals who met full criteria for PTSD (approximately 9%) and therefore may not be showing any growth-like behaviors, thoughts, or feelings. However, this is inconsistent with other findings that have suggested a curvilinear relationship between the two variables. In fact, we would have expected that with moderate to high PTSD severity there would be an increase in growth, which was not found (Kleim and Ehlers, 2009). This serves as a reminder that there are mixed findings on the relationship between PTSD and PTG thus research needs to continue to attempt to identify what characteristics in individuals contribute to a significant relationship between the two.

However, some researchers have attempted to identify PTG as a moderator between revictimization and PTSD in victims of violence (Kunst, Winkel, & Bogaerts, 2010). Kunst and colleagues (2010) examined Dutch participants who were victims of violence with approximately 16.8% of these being identified as victims of sexual assault (vast majority were victims of physical assault with 27.2% reporting so). Revictimization was assessed by the Dutch Safety Survey (DSM) where they were given the opportunity to report if they have experienced a single event or reoccurring victimization. The purpose of this study was to determine whether PTG served as a protective factor in individuals who were revictimized. Ultimately, researchers wanted to determine whether symptoms would increase following revictimization if participants reported lower levels of PTG. Although this study did not find PTG as a significant moderator between the two, there was a significant interaction between PTG and revictimization. Upon further analysis, they also found that individuals with lower levels of PTG reported more severe PTSD symptomology after being victimized again. One limitation of this study was their inability to determine how impactful the experience of revictimization was for the individual; therefore, the researchers suspected this may have influenced their findings. However, this study is significant in the research in that it identifies the need for more research to be conducted to determine whether PTG can serve as a protective factor from the development of PTSD symptomology. Such research has implications for the creation of preventative interventions when working with

survivors of sexual assault. Although this study did not have significant findings, other studies have successfully found moderators between PTG and PTSD.

Bitton and Laufer (2016) analyzed a group of Israeli mothers who have experienced significant trauma in their lifetime, specifically, exposure to rocket firing in their home county of Israel. This study assessed objective and subjective perceptions of their exposure to traumatic events, their PTSD symptomology, levels of PTG, and types of coping styles utilized in the aftermath. Most of the women in the sample reported experiencing the rocket wounding someone they knew (69.1%) and almost half reported a death by rocket of someone they knew (48%). Additionally, a small amount of the participants met criteria for clinical PTSD. The goal for the study was determine whether specific coping styles moderated the relationship between PTSD symptoms and PTG. Researchers found that there was an interaction between PTSD symptoms and the use of problem-focused coping in PTG. Specifically, the more someone reported using problem-focused coping in their life and the more severe the PTSD symptomology was, the more likely it was to predict their levels of PTG. This suggests that problem-focused coping, which consists of addressing the distress through behavioral changes, has been found to have a positive correlation with PTSD and PTG. Therefore, researchers could now predict potential growth through analysis of varying coping strategies that are being utilized in individuals with higher levels of distress. This study hopes to identify this relationship among survivors of sexual assault.

As shown above, there has been some research identifying that there is a relationship between PTG and PTSD; however, the current paper intends to identify key factors that contribute to this relationship. In fact, some variables have been identified throughout the years as potential moderators of the relationship. For example, religion and spirituality have been analyzed and identified as variables that increase likelihood of PTG (Shaw, Joseph, & Linley, 2005). As mentioned previously, spirituality is a key component of the ideology behind PTG as many find spirituality when searching for a purpose in life.

Additionally, social support has been found to also have a significant connection to PTG (Prati & Piertrantoni, 2009). Social support in this context is described as perceived social support by the survivor or individual experiencing a traumatic event (Senol-Durak & Ayvasik, 2010). Perceived social support has been found to decrease the amount of negative feelings appraised towards traumatic events. Additionally, it was determined that social support was utilized as an aspect of coping with traumatic events and stress. Researchers have found that social support along with resiliency can significantly predict PTG levels, specifically, in a sample of Chinese women who struggle with fertility (Yu et al., 2014). In addition, when looking at the relationship between PTSD and PTG, social support was found to have a direct predictive relationship with PTG but not with PTSD, specifically, in a sample of individuals who survived the traumatic Ya'an earthquake (Zhou, Wu, & Zhen, 2016). Furthermore, the role of "expressive suppression" (decreased want to share and express emotions) was

analyzed to determine whether it had a significant role in the relationship between PTG and PTSD. They found that those who reported high levels of social support often had decreased expressive suppression. Researchers suggested that this was because those who had a good social support felt comfortable sharing emotions, thus reducing PTSD severity (Zhou, Wu, & Zhen, 2016).

As such, it is important to understand factors that influence posttraumatic growth to better improve outcomes for women who have experienced sexual violence. There is a clear indication that posttraumatic growth can improve the outcomes following trauma, however, little is known about what exactly is influencing this relationship. Potential factors are understanding coping strategies and identifying areas that negatively impact growth such as experiential avoidance.

Experiential Avoidance

Experiential avoidance (EA) is the avoidance of events, situations, emotions, memories, etc. that can create negative physical and/or emotional responses (Hayes, 2004). When individuals experience distressing and uncomfortable emotions, they may attempt to manage these emotions by avoiding the aversive feeling. Individuals who frequently utilize experiential avoidance are focused on preventing themselves from experiencing negative reactions from these experiences. Initially, in the short-term, experiential

avoidance can provide a sense of peace, however over time the long-term consequence of avoidance strategies can be problematic as this temporary removal of discomfort serves as a negative reinforcement and inhibits the ability to effectively process emotions and develop adaptive cognitive and behavioral responses. The more frequent one practices experiential avoidance, the higher the likelihood increases of developing psychological issues. For instance, individuals who have experienced a rape in their lifetime and score significantly high on experiential avoidance are more likely to attempt to disassociate themselves from the experience by avoiding its memory and emotions that remind them of the trauma (Boesch, Koss, Figueredo, & Coan, 2001). With the increase for negative psychological outcomes among rape survivors, there is an increased need to research and develop interventions to combat individuals who utilize experiential avoidance to cope with their trauma. Many researchers and clinicians have begun to identify ways to decrease the occurrence and utilization of EA following traumatic events. Behavioral interventions, such as Acceptance and Commitment Therapy, have been created and recently implemented to assist those struggling with experiential and emotional avoidance (Hayes, 2004).

As mentioned previously, experiential avoidance has been found to increase the likelihood of psychological concerns (Hayes, 2004). One of these possible psychological concerns is the association between experiential avoidance and PTSD symptomology (Marx & Sloan, 2005). Researchers have discovered a strong relationship between PTSD and experiential avoidance

(Marx & Sloan, 2005). In fact, when attempting to measure other variables, such as peritraumatic (around the time of the traumatic event) association, experiential avoidance had the most predictive relationship with PTSD in a sample of college students who reported experiencing a traumatic stressor (sexual or physical assault, life-threatening illness, serious accident, physical threat to life, or witnessing/ learning about traumatic event). This is consistent with other findings of experiential avoidance having a significant relationship with PTSD, particularly in survivors of sexual assault and rape.

A recent study analyzed the impact of experiential avoidance on rape survivors (Boeschen et al., 2001). Specifically, women who were employed through a medical facility and/or college setting. These women were mailed surveys where they were asked whether they had experienced a rape. Following the surveys, participants were asked to participate in an interview if they met selection criteria for having experienced a rape in their lifetime. Researchers found that forms of avoidance, such as cognitive avoidance, were noted as problematic for severity levels of PTSD following the rape. Cognitive avoidance, an instance of experiential avoidance, involves cognitive efforts to avoid distressing thoughts or memories associated with a traumatic event. This supports what previous researchers have found, in that avoidance serves as a negative coping strategy that maintains PTSD symptomology, thus with increasing severity more avoidance strategies are used as long-term coping strategies.

More recently, experiential avoidance has been examined in relation to PTG. Kashdan and Kane (2011) examined the relationship between posttraumatic distress and PTG among a sample of college students that reported exposure to at least one traumatic event. Participants were administered self-report measures assessing trauma history, posttraumatic distress, and levels of experiential avoidance. Results showed that participants who reported higher levels of distress and lower reliance on experiential avoidance had a higher likelihood of reporting PTG. This finding was also identified in participants who reported higher reliance on experiential avoidance which led to little PTG. This is a significant finding for literature about PTG and the characteristics that can moderate its relationship with PTSD. Specifically, in populations such as in sexual assault survivors, findings imply that with some level of distress and little reliance on experiential avoidance, they can foster an environment for the development of PTG.

Moreover, emotional avoidance, a type of experiential avoidance, has been shown to maintain and further the development of PTSD symptomology in trauma survivors (Tull et al., 2011). Emotional avoidance is the specific avoidance of any emotional material that elicits a negative response. Emotional avoidance can have many negative consequences for individuals in emotional, cognitive, physiological, and psychological areas. A recent study of 207 college students who reported past trauma exposure were asked to rate their PTSD symptomology as well as rate whether they tend to utilize negative coping

strategies such as avoiding emotions. They found that those who reported more severe PTSD symptomology also reported using emotional avoidance to cope with their worry related to the traumatic event. Understanding both experiential and emotional avoidance has led to the increase in attempting to conceptualize the importance of mindfulness and its ability to increase acceptance following a significant traumatic event.

Both experiential and emotional avoidance have been noted as key factors in prolonging negative outcomes following a trauma (Boeschen et al., 2001; Tull et al., 2011). This can be significantly difficult and detrimental to individuals who have experienced trauma as it impacts their well-being and increases probability for negative mental health outcomes such as PTSD. Furthermore, those who have experienced sexual violence have an increased risk to utilize these negative coping strategies for the short-term benefit of avoiding aversive thoughts, feelings, behaviors (Boeschen, et al, 2001). Identifying factors that foster positive outcomes and increase positive coping strategies can be significantly impactful on those struggling to manage their lives following experiences of sexual violence. One area that researchers have identified as something with the potential to increase positive outcomes following trauma is the role of mindfulness on increasing the ability to develop posttraumatic growth (Tedeashci & Blevins, 2011).

Role of Mindfulness

Mindfulness is defined as the ability to increase one's awareness of their individual experiences through acceptance and self-compassion (Cardaciotto, Herbert, Forman, Moitra, & Farrow, 2008). Mindfulness emphasizes the focus on one's present awareness, rather than focusing on past or potential future worries. An individual who accepts their present experience will thus not avoid or attempt to change that experience, difficult or not. Tedashci and Blevins (2011) discussed the potential for a relationship between growth and emotional well-being following trauma. They suggested that being mindful to the thoughts and feelings that appear following trauma, individuals can then process that experience in a more adaptive way, therefore, creating the potential to grow in various ways. In fact, emotional awareness has been found to serve as protective factor towards healing from significant trauma. Researchers have found that women who experience trauma, are able to label and explain their current emotional distress often have a better outcome in managing the impact of trauma and an increased ability to avoid revictimization (Zamir & Lavee, 2015).

Researchers have identified key factors in individual's potential for mindfulness as well as its role in treating psychological distress. One symptom of psychological distress that often occurs following a distressing event is the potential for rumination (Im & Follette, 2016). Researchers, in an attempt to identify the role of rumination on the relationship between psychological distress and mindfulness, conducted a study where they analyzed a group of non-clinical

college students who have experienced multiple forms of trauma and reported rumination as a potential issue. They found that rumination was inversely related to mindfulness and contributed to negative outcomes. This relationship suggests that mindfulness has the potential to have a positive impact on psychological distress following trauma.

Additionally, Mahoney, Segal, and Coolidge (2015) attempted to identify whether age has a significant impact on levels of mindfulness. In a sample comparing older adults from a community center and younger adults from a local university, key differences were identified. The younger adults were found to have greater levels of anxiety and experiential avoidance, which researchers concluded was due to higher likelihood of emotional dysregulation in younger adults. In addition, the older participants showed much greater trait mindfulness (characteristics related to mindfulness) compared to the younger adults, which researchers concluded was due to the increase in emotional management skills as people age. This is important to note because our study will consist of college student who will potentially fall into the young adult category. As we gather our data, this will be an important piece of information to consider if mindfulness is found to be less present in those who are the typical college aged students (young adults). Furthermore, there has been some research on the connection between mindfulness and experiential avoidance.

Some studies have attempted to identify the relationship between experiential avoidance and mindfulness (Mimansgruber, Beck, Höfer, Schüßler,

2009). Researchers have found that this relationship can impact overall well-being. Participants were pulled from a college level course at a medical school and asked complete questionnaires that asked them to self-report levels of mindfulness, psychological well-being, and satisfaction with life. They discovered that experiential avoidance and mindfulness might have an equivalent impact on overall well-being in individuals. In fact, they found that among the medical students that reported high acceptance of one's feelings had a similar impact on well-being compared to those who actively avoided negative feelings. However, the researchers have some notable limitations, such as the utilization of a non-clinical sample. This could greatly impact the way well-being and levels of avoidance are represented in the sample, as we have established that those with some psychological distress on average have higher levels of avoidance (Tull et al., 2011; Hayes, 2004).

Additionally, some have attempted to measure whether experiential avoidance could accurately predict levels of PTSD with mindfulness serving as an additional predictor (Thompson & Waltz, 2010). Researchers found that components of mindfulness (i.e. acceptance) did have some predictive value in determining severity of avoidance. However, they found that their utilization of self-report measures as a limitation in measuring this connection because those who report levels of experiential avoidance must have some awareness that they are actively using avoidance as a coping strategy. In addition, as experiential avoidance is often related to forms of psychological distress (such as PTSD), it's

important to identify whether mindfulness (specifically, acceptance), has the potential to have a positive influence on those who have experienced trauma.

Although minimal, there has been some research analyzing the relationship between mindfulness-based acceptance and PTSD symptoms in those who have experienced significant trauma. Researchers have found that mindfulness and acceptance improved one's ability to manage trauma (Thompson, Arnkoff, & Glass, 2011). Some studies have attempted to identify how mindfulness assists individuals in healing and managing the negative effects of trauma (Vujanovic, Youngwirth, Johnson, & Zvolensky, 2008). One study examined a group of individuals who reported experiencing traumatic life events (serious accident, natural disaster, sexual assault, etc.) and have found ways to manage some of the negative outcomes following their trauma, such as PTSD. Results revealed that individuals who reported higher levels of acceptance had lower levels of PTSD symptomology. This further adds to the literature and suggests that there is a relationship between mindfulness' key concept of acceptance and PTSD.

Mindfulness and its relationship with PTG has appeared in the literature more frequently; however, there is still a lack of consistency of its presence in relation to trauma research. Hanley, Peterson, Canto, and Garland (2015) analyzed participants online who were provided various self-report measures to determine trauma history, trait mindfulness, and levels of PTG. Among their participants they found that those who reported higher trait mindfulness also

reported higher levels of PTG. This connection indicates that characteristics related to mindfulness can influence levels of PTG. Specific qualities that were shown to have a relationship with PTG was awareness and “behavior regulation” (Hanley et al., 2015). This suggests that one of the key concepts of mindfulness, present awareness, has a significant relationship with PTG.

CHAPTER TWO: THE PRESENT STUDY

Present Study

Mindfulness, specifically the role of acceptance and awareness have been found to have a significantly positive impact on those who have experienced trauma (Hanley et al., 2015; Thompson et al., 2011). The researcher has identified that mindfulness can contribute to better outcomes and decrease negative psychological outcomes (i.e. rumination and experiential avoidance) which can decrease the likelihood of PTSD (Tull et al., 2011; Im & Follette, 2016). The goal of the present study was to identify potential moderating variables of the relationship between PTSD and PTG. Mindfulness-based interventions that encourage awareness and acceptance of trauma-related emotions have become increasingly popular for treating trauma related distress. Accordingly, the present study aimed to explore the role of trait mindfulness of emotional awareness and acceptance in the relationship between PTSD symptoms and PTG. Specifically, we were interested in determining if mindfulness moderated the relationship between PTSD symptom severity and PTG among survivors of a sexual assault. We hypothesized that within mindfulness, the concepts of emotional awareness and acceptance, would significantly moderate the relationship between PTSD symptoms and PTG. Specifically, we expected that when there were high levels of PTSD symptoms and high emotional acceptance and awareness present, there would be greater

PTG. As such, this could suggest that mindfulness plays an important role in the relationship between PTSD symptoms and PTG.

Method

Participants

Our sample was comprised of 86 undergraduate students at a local university enrolled in Psychology courses who reported a history of sexual victimization. We had one male participant but removed him due to the lack of representation of males in the dataset, leaving our final participant number at 85 females. Our participant mean age was 23.41 ($SD = 6.29$). Additionally, in terms of ethnicity, participants primarily identified as Hispanic or Latina ($n = 71$, 82.6%). Also, within our sample, 55 out of 85 (64%) participants reported having experienced a sexual assault in their lifetime, while 80 out of 85 participants (93%) reported having experienced an unwanted sexual experience based on their responses to items on a trauma checklist. Additional demographic information is presented in Table 1.

Measures

Demographics Form: This form was utilized to record demographic information which included the participant's age, gender, ethnic and racial background, and marital status.

Life Events Checklist – 5 (LEC; Weathers et al., 2013). The LEC-5 is a checklist of 17 common types of traumatic events in which participants are asked

to indicate whether the event had happened to them, witnessed the event, or whether the event had not happened to them. We utilized a modified version that provided participants with only the option of checking whether they directly experienced any of the events listed or not. Items number eight and nine were used to identify eligible participants and assessed prior exposure to a sexual assault or other unwanted sexual experience to provide a broader range of experiences. An additional item was also included in this measure to assess which event was the most stressful, if they experienced the event within the last five years, and if at the time of the event they experienced extreme helplessness and horror. The LEC-5 displays strong reliability, with kappa coefficients $> .50$ ($p < .001$), and strong convergence with measures emphasizing trauma-related psychopathology ($r = .55$, $p < .001$; Gray, Litz, Hsu, Lombardo, 2004).

Philadelphia Mindfulness Scale (PHLMS; Cardiciotto, Herbert, Foreman, Morita, Farrow, 2008). The PHLMS is a 20-item self-report questionnaire used to assess the two aspects of mindfulness: Present-moment awareness and acceptance. Respondents are asked to rate on a 5-point Likert-scale on how often they experience traits of mindfulness within the past week ($1 = \textit{never}$, to $5 = \textit{Very often}$). Sample items included: "I am aware of what thoughts are passing through my mind" and "I try to distract myself when I feel unpleasant emotions". The psychometric properties consists of strong internal consistency for both the awareness subscale ($\alpha = .85$) and acceptance subscale ($\alpha = .87$) and good test-retest reliability ($r = .80$; Cardiciotto, Herbert, Foreman, Morita, & Farrow, 2008).

In our sample, the PHLMS subscale of acceptance and awareness both displayed strong reliability ($\alpha = .82$ and $\alpha = .91$ respectively)

Posttraumatic Stress Check List (PCL-5; Blevins, Weathers, Davis, Witte, & Domino, 2015). The PCL-5 is a 20-item self-report measure that assesses DSM-5 symptoms of PTSD. Respondents are asked to rate on a 5-point Likert-scale ($0 = \textit{not at all}$, $4 = \textit{extremely}$) the amount of distress experienced within the past 30 days resulting from PTSD symptoms. Sample items include: “Repeated, disturbing, and unwanted memories of the stressful experience?” and “Repeated, disturbing dreams of the stressful experience?”. The PCL-5 displays strong internal consistency ($\alpha = .94$) and test-retest reliability ($r = .82$; Sveen, Bondjers, & Willebrand, 2016). In our sample, the PCL-5 displayed strong reliability ($\alpha = .94$).

Posttraumatic Growth Inventory (PTG; Tedeschi & Calhoun, 1996). The PTGI is an instrument for assessing perceived positive outcomes of traumatic events and consists of 21 items that inquire about new possibilities, relations with others, personal strength, spiritual change, and appreciation of life post trauma. Respondents are asked to rate the degree to which changes occurred in their life as a result of their “worst event” on a 6-point Likert scale (ranging from $0 = \textit{“I did not experience this change as a result of my crisis”}$ to $5 = \textit{“I experienced this change to a very great degree as a result of my crisis”}$). It scored by summing each response. Sample items include: “my priorities about what is important in life” and “an appreciation for the value of my own life”. The PTGI has displayed

strong internal consistency ($\alpha = .90$) and good test-retest reliability ($r = .71$; Silva, Ramos, Donat, de Oliveira, Gauer, & Kristensen, 2018). In our sample, the PTGI displayed strong reliability ($\alpha = .95$).

Design and Analysis

The present study relied on cross-sectional data collection. To analyze the results we employed a moderation analysis through PROCESS by Hayes on SPSS (Hayes, 2012). A moderation analysis was utilized to determine whether mindfulness of acceptance and emotional awareness moderates the relationship between PTSD severity and PTG. If the interaction is supported, once graphed then the moderation will be analyzed to determine the specific moderation effect.

Procedure

All participants were pre-screened for a history of sexual assault through an online mass testing procedure administered through online survey management tool. Participants who reported prior exposure to sexual assault or other unwanted sexual experiences were granted permission to participate in the study. Consenting participants were given access to the measures online via Qualtrics. The measures included a series of self-report questionnaires designed to assess demographic information, trauma history, mindfulness strategies, PTSD symptom severity, and levels of PTG level. The LEC-5 was administered first to re-assess and confirm trauma history and subsequent measures were presented in random order. At the end of the study, participants were presented with post-study information and a list of mental health resources. Participants'

responses remained anonymous such that no identifying information was collected. All students were awarded with credit in exchange for their participation that could be used towards extra credit in their participating classes. All participants were treated in accordance with the Ethical Principles of Psychologist and Code of Conduct (APA, 2019)

Data Analytic Strategy

Correlational analyses were conducted to determine the relationship between variables of interest. Specifically, we predicted that emotional acceptance and awareness will be positively associated with PTG and negatively associated with PTSD symptoms. With regard to PTG and PTSD symptoms, we expected to find a relationship between these two variables, given the prior research suggesting a curvilinear relationship and the high level of distress reported by the majority of participants in our sample. A moderation analysis was also implemented to determine whether emotional awareness and acceptance (independent variables) moderated the relationship between PTG and PTSD. We predicted emotional awareness and acceptance would significantly moderate the relationship between PTSD and PTG, such that increased PTSD will be only related to PTG when emotional acceptance and awareness are high. This will suggest that mindfulness plays a significant role in the relationship between PTSD and PTG and may serve as buffer from PTSD symptom severity or foster increased growth. Additionally, it could determine whether mindfulness will serve

as a factor that fosters the development of PTG and decreases the likelihood for PTSD.

CHAPTER THREE: RESULTS

Correlational Analyses

Data was analyzed by using SPSS statistical software. The mean total score for PTSD symptom severity was 38.5 ($SD = 18.74$) which suggests we had a moderately distressed sample based on the cutoff score of 31-33 for probable PTSD (U.S. Department of Veterans Affairs). Mean score for mindfulness acceptance was 22.8 ($SD = 8.72$). Pearson correlation analyses were conducted to determine the strength of relationships between variables (see Table 2). Results revealed a significant negative relationship between PTSD symptoms and the mindfulness subscale acceptance ($r = -.45, p > .05$).

Moderation Analysis

A moderation analysis was conducted through a SPSS Macro program PROCESS (Hayes, 2012) to identify whether mindfulness significantly moderated the relationship between PTSD severity and post-traumatic growth. Our independent variables were PTG and PTSD ($M = 38.5, SD = 18.74$) while our moderators were two subscales of mindfulness. The two subscales of mindfulness were analyzed as moderators: acceptance ($M = 22.80, SD = 8.72$) and awareness ($M = 37.09, SD = 6.58$). Our study found that there was no significant moderation effect for emotional awareness (CI: $-.04 - + .07$) or

acceptance (CI: -.06 - + .01) on the relationship between PTSD severity and PTG.

Assumptions of normality and independence have been met through observations of residual data. Based on the observations the coefficients for skewness for PTG (-.339), PTSD (-.038), awareness (-.153), and acceptance (.535) were less than one, suggesting they were within reasonable limits (Tabachnick & Fidell, 2013). Additionally, kurtosis for PTG ($z = -1.19$), PTSD ($z = -.621$), acceptance ($z = -.221$) and awareness ($z = -.158, p < .001$) were all considered normal ($z < 3.33$). This suggests that our data was normally distributed.

CHAPTER FOUR: DISCUSSION

Summary of Findings

Based on our findings, there was no significant relationship between PTSD symptom severity and PTG. As mentioned previously, there is mixed research on the potential relationship between the two (Kleim & Ehlers, 2009). Furthermore, it was found that there was no direct association between acceptance/awareness and growth which was an unexpected finding considering that acceptance and awareness are often considered key aspects of growth. Initially, we hypothesized that mindfulness would moderate the relationship between PTSD and PTG; specifically, that when there is an increase in mindfulness there will be a decrease in PTSD severity and an increase in growth. Our hypothesis stemmed from multiple findings that were highlighted in the literature. For example, experiential avoidance and mindfulness have been shown to have clear relationship on distress and growth (Mimansgruber, Beck, Höfer, & Schüßler, 2009; Thompson & Waltz, 2010). In fact, experiential avoidance has been found to sustain PTSD symptomology for longer periods of time. In contrast, mindfulness often serves as a protective factor against distress increasing likelihood for growth (Thompson & Waltz, 2010). We assumed because of this inverse relationship between mindfulness and experiential avoidance that we would find a significant moderation when assessing mindfulness as a moderator between growth and distress. Unfortunately, we did

not find any significant relationships or moderation between growth, distress, and mindfulness awareness, which could have been due to a variety of factors.

This study was conducted through a university campus rather than in a clinical setting. Thus, our sample did not reflect an accurate depiction of those who have experienced sexual assault and/or unwanted sexual experiences while also struggling with PTSD symptomology. Duan, Guo, and Gan (2015) suggest in their study that there are clear differences between clinical and non-clinical samples when analyzing distress and growth. Most college students are suggested to have a higher level of functioning since pursuing higher education requires an individual to have the ability to manage a college lifestyle, most notably in low-income college students of color (the large majority of our sample) who are perceived as significantly more resilient (Morales, 2010). This could have resulted in the findings that suggest that there was no relationship between PTSD and PTG as no clinical samples were utilized.

Additionally, our population was primarily Hispanic women (82.6%) which has not been widely researched in the PTG literature. Since our data consisted of Hispanic women it is important to consider the differences in how Hispanic women perceive or report PTG which could have influenced our results. For example, research has found that in previous Hispanic samples, levels of distress were not significantly related to increased likelihood for growth (Berger & Weiss, 2006). Furthermore, it was found in their sample of Hispanic immigrants, that they only reported moderate distress; however, reported high levels of PTG.

Our own sample had more than half who reported moderate levels of distress (cut-off scores of approximately 31-33), yet there was no association between distress and PTG (U.S. Department of Veterans Affairs).

Although these results do not support consistent findings, one concept that should be explored in the future is the use of religious coping as a way to moderate the relationship for increased growth among Hispanic populations. Mesa (2008) found that in a sample of Latina women in college, growth was present in those that utilized positive religious coping. This finding was consistent in samples that were primarily female which could indicate that women rely more heavily on positive religious coping to foster growth (Gerber, Boals, & Schuettler, 2011). In addition to religious coping, spirituality has been shown as a predictor for increased thriving in Hispanic populations (Morgan Consoli, Dulucio, Noriega, & Llamas, 2015). It is believed that having deeper connections improve one's ability to have an increased opportunity to thrive in life. Our own sample did not identify these factors specifically, thus, our sample was unable to determine if there was a lack of religious coping or spirituality among Latina women or if it significantly influenced our outcome.

Furthermore, another factor that has been shown to serve as a predictor for growth and resiliency was hope. Researchers defined hope as one's drive to succeed, thus in a sample of Hispanic undergraduate students, it contributed to increased resiliency and thriving towards their academic success (Morgan Consoli, Dulucio, Noriega, & Llamas, 2015). This is an area that should be further

researched to explore one's perceived hope in Hispanic and Latinx populations. In addition, it would be important to explore the potential role it plays in contributing to growth in ethnic minority populations.

Additionally, Latinx populations often perceive and express trauma differently than non-Latin populations. In fact, it has been found that Latinx populations often express mental health concerns through somatization (Escovar et al., 2018). This could have influenced our sample's sense of awareness about how trauma has impacted them. If their somatic symptoms are not perceived as a negative outcome of their trauma, they may have no sense of awareness of how trauma has impacted them. This should continue to be researched to determine whether Hispanic students are aware of their somatization as a negative outcome of their trauma.

One significant finding was that there was a negative relationship between acceptance and PTSD symptomology. Specifically, it was found that among our sample, we had lower rates of mindfulness acceptance among those that reported higher severity of PTSD symptomology. This is an important finding because it enhances the research on how increased acceptance of trauma can have the potential to protect against PTSD. Researchers have found that acceptance can serve as treatment strategy to mitigate PTSD symptomology (Shipherd & Salters-Pedneault, 2008). They suggest that this occurs because those with high PTSD severity often practice experiential avoidance which reinforces negative coping behaviors (i.e. avoiding thoughts, feelings, places,

people) thus increasing the likelihood of negative psychological outcomes. However, as mentioned previously, this provides only short-term relief. Our findings highlight the importance of encouraging research on acceptance-based interventions that are being introduced in clinical settings. In fact, ACT, a mindfulness-based treatment modality, has been found to have a profound impact on college students with complex PTSD (You & Son, 2018). After participating in ACT, students in one study reported significantly decreased PTSD symptoms as well as increased acceptance and growth compared to the control sample. Aside from ACT, other mindfulness-based interventions should continue to evolve and be studied for treatment of high distress and trauma.

In contrast, our second moderator, mindfulness awareness, did not have a significant relationship with PTSD. This is an interesting result because there have been mixed results in the literature about this relationship. Wahbeh, Lu, and Oken (2011) analyzed whether there was a relationship between mindful awareness, mindful non-judging, and PTSD in a sample of combat veterans. Similar to our results, they found that mindful awareness did not have a significant relationship with PTSD. Based on their findings, they suggested that perhaps mindful awareness is not enough to mitigate PTSD symptoms, rather, the perception of it may matter more. For example, they suspected that someone with awareness may judge their thoughts and feelings that they are aware of, creating and reinforcing negative beliefs about the event. However, mindful non-judging, or the ability to not judge one's own past experiences, was found to be

significant. This finding reflects the important role perceptions or attitude towards trauma and trauma-related reactions may have on. These outcomes suggest that there should more research that explores perceived attitude towards survivor's traumatization to better understand how perceptions influence or perpetuate increased distress.

The present research, therefore, contributes to a growing body of evidence on the potential relationship between mindfulness acceptance and PTSD as well as the need for additional research on the relationship between mindfulness awareness and PTSD. Research should continue to move forward in analyzing these relationships and their potential for increasing growth. Additionally, more research should continue among those of Hispanic descent to increase minority representation in the literature. Despite our limitations in this study, this can hopefully encourage more researchers to analyze potential methods of increasing growth in those who have experienced trauma, specifically, in those who have been sexually assault and/or raped.

APPENDIX A: INFORMED CONSENT

Consent to Participate in Research

PROJECT TITLE: Acceptance and Awareness

INVESTIGATOR:

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APPROVAL STATEMENT:

This study has been approved by the Department of Psychology Institutional Review Board of the California State University, San Bernardino. The University requires that you give your consent before participating in this study.

DESCRIPTION:

Some individuals who experience stressful life events adjust fairly well, while others have more emotional difficulties. The purpose of this study is to investigate factors that may contribute to some people having the ability to adjust well after such events, as compared to those who may have more difficulties. In this manner, it may be possible to identify factors that promote posttraumatic growth. Participation in this study will require no more than 45 minutes. You will be asked to complete surveys about stressful life experiences, emotional difficulties that you may be experiencing, and strategies that you use to deal with difficult situations. Please note that there is no deception in this study, and we could not make this statement if there were any deception.

RISKS AND BENEFITS:

The benefits of participation include the gratifying experience of assisting in research which might have implications for the treatment of emotional disorders and difficulties. You will also receive a list of campus and community resources that may help you with emotional difficulties that you may be experiencing. If you are a CSUSB student, you may receive 1.5 points of extra credit in a selected Psychology class at your instructor's discretion. Minimal risks are possible with your participation in this study and include the possibility of short-term emotional distress resulting from recalling and completing surveys about stressful life experiences. It is very unlikely that any psychological harm will result from participation in this study. However, if you would like to discuss any distress you have experienced, do not hesitate to contact the CSUSB Psychological

Counseling Center
(909 537-5040).

VOLUNTARY PARTICIPATION:

Your participation in this study is entirely voluntary. You are free to withdraw your participation at any time during the study, or refuse to answer any specific question, without penalty or withdrawal of benefit to which you are otherwise entitled.

CONFIDENTIALITY STATEMENT:

As no identifying information will be collected, your name cannot be connected with your responses and hence your data will remain completely anonymous. All information gained from this research will be kept confidential. The results from this study will be submitted for professional research presentations and/or publication to a scientific journal. When the study results are presented or published, they will be in the form of group averages as opposed to individual responses so again, your responses will not be identifiable. Results from this study will be available from Dr. Christina Hassija, after June 2019. Your anonymous data will be sent to the researcher in an electronic data file and stored for a period of 5 years on a password protected computer in a locked office and may only be accessed by researchers associated with this project.

RIGHT TO WITHDRAW:

You are free to refuse to participate in this study or to withdraw at any time. Your decision to withdraw will not result in any penalty or loss of benefits to which you are entitled. You may withdraw your participation by simply clicking the appropriate button to exit the study. If you choose to withdraw from the study you will still receive credit for your participation. Alternatively, you may also choose to leave objectionable items or inventories blank.

QUESTIONS OR CONCERNS:

If you have any questions or concerns regarding this study, please feel free to contact the Human Subjects office at California State University, San Bernardino (909) 537-7588 if you have any further questions or concerns about this study.

I acknowledge that I have been informed of, and understand the true nature and purpose of this study, and I freely consent to participate. I acknowledge that I am at least 18 years of age.

Please indicate your desire to participate by selecting the appropriate response below..

APPENDIX B: TABLES

Table 1. Demographic and other characteristics of the sample (N=85)

Variable	M(SD)	N(%)	Range
<i>Age</i>	23.41(6.29)		19-53
<i>Year in College</i>			
Freshman		2(2.3)	
Sophomore		12(14.0)	
Junior		37(43.0)	
Senior		35(40.7)	
<i>Marital status</i>			
Single		42(48.8)	
In a committed relationship		28(32.6)	
Living with significant other		8(9.3)	
Married		6(7.0)	
Divorced, Separated, or Widowed		2(2.3)	
<i>Ethnic background</i>			
Hispanic or Latino		71(82.6)	
Not Hispanic or Latino		13(15.1)	
Unknown		1(1.2)	
<i>Racial background</i>			
Caucasian or White		39(45.3)	
<i>Trauma history</i>			
Sexual assault		55(64%)	
Other unwanted uncomfortable sexual experience		80(93%)	
<i>PTSD Symptom Severity</i>	38.5(18.74)		
<i>Posttraumatic Growth</i>	54.38(27.71)		0-101
<i>Mindfulness</i>			
Acceptance	22.80(8.72)		10-46
Awareness	37.09(6.58)		18-50

Table 2. Pearson correlations between mindfulness: acceptance and awareness, posttraumatic growth, and measures of psychological distress ($N = 85$).

	MAW	MAC	PTSD	PTG
MAW				
<i>r</i>	1.00	-.379**	.137	.129
Sig. (2-tailed)		.004	.314	.353
MAC				
<i>r</i>		1.00	-.454**	-.042
Sig. (2-tailed)			.000	.763
PTSD				
<i>r</i>			1.00	-.003
Sig. (2-tailed)				.985
PTG				
<i>r</i>				1.00
Sig. (2-tailed)				

Note: * $p < .05$, ** $p < .001$; MAW = Mindfulness Awareness, MAC = Mindfulness Acceptance, PTSD = PTSD symptom severity, and PTG = Posttraumatic growth

APPENDIX C: MEASURES

Demographics Questionnaire

Demographic Questionnaire

Please answer each question to the best of your knowledge.

1. Age: _____

2. Gender: M ___ F ___ (please check only one)

3. What is your ethnic background:

___ Hispanic

___ Not Hispanic

___ Unknown

4. What is your racial background?

Caucasian (White) _____

Asian (Asian American) _____

African American (Black) _____

American Indian or Alaskan Native _____

Native Hawaiian/other Pacific Islander _____

Other _____ (please specify) _____

4. What is your current marital status? (please choose only one)

___ Single

___ In a committed relationship

___ Living with a significant other

___ Married

___ Divorced or Widowed

6. Student Yearly Income: \$0 - \$14,999 _____ \$15,000-\$29,999 _____

_____ \$30,000-\$44,999 _____ \$45,000-\$59,999 _____

_____ \$60,000-\$74,999 _____ \$75,000-\$89,999 _____

_____ \$90,000-\$99,999 _____ Over \$100,000 _____

8. Year in College: ___ Freshman ___ Sophomore ___ Junior ___ Senior

9. Religious Orientation: _____

Life Events Checklist (LEC)

Listed below are a number of difficult or stressful things that sometimes happen to people. For each event check one or more of the boxes to the right to indicate that: (1) it happened to you personally or (0) it did not happen to you. Be sure to consider your entire life (growing up as well as adulthood) as you go through the list of events.

1. Natural disaster (i.e., flood, hurricane, tornado, earthquake).
2. Fire or explosion.
3. Transportation accident (i.e., car accident, boat accident, train wreck, plane crash).
4. Serious accident at work, home, or during a recreational activity.
5. Exposure to toxic substance (i.e., dangerous chemicals, radiation).
6. Physical assault (i.e., being attacked, hit, slapped, beaten up, kicked).
7. Assault with a weapon (i.e., being shot, stabbed, threatened with a knife, gun, bomb).
8. Sexual assault (i.e., attempt to rape, made to perform any type of sexual act through force or threat of harm).
9. Other unwanted or uncomfortable sexual experience.
10. Combat or exposure to a war zone (in the military or as a civilian).
11. Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war).
12. Life threatening illness or injury.
13. Severe human suffering.
14. Sudden, violent death (for example, homicide, suicide).
15. Sudden accidental death.
16. Serious injury, harm, or death you caused to someone else.
17. Any other stressful event or experience. (Specify: _____)

a) Which was the WORST event?

b) Did this event happen within the last 5 years?

YES (1) NO (2)

c) Did you experience extreme fear, helplessness or horror during this event?

YES (1) NO (2)

Weathers, F.W., Blake, D.D., Schnurr, P.P., Kaloupek, D.G., Marx, B.P., & Keane, T.M. (2013) The life events checklist for DSM-5 (LEC-5)- standard. National Center for PTSD. Retrieved from https://www.ptsd.va.gov/professional/assessment/documents/LEC5_Standard_Self-report.PDF

Posttraumatic Stress Disorder Checklist (PCL)

Instructions: Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Think about the impact that YOUR MOST stressful life event (from the last survey) has had on you and respond to the following items as they relate to that event. Please read each one carefully, then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

1 = Not at all 2= A little bit 3=Moderately 4=Quite a bit

1. Repeated, disturbing, and unwanted memories of the stressful experience?
2. Repeated, disturbing dreams of the stressful experience?
3. Suddenly acting or feeling as if the stressful experience were happening again (as if you were back there reliving it)?
4. Feeling very upset when something reminded you of the stressful experience?
5. Having strong physical reactions (e.g., heart pounding, trouble breathing, sweating) when something reminded you of the stressful experience?
6. Avoiding memories, thoughts, or feelings related to the stressful experience?
7. Avoiding external reminders of the stressful experiences (for example, people, places, conversations, activities, objects, or situations)?
8. Trouble remembering important parts of the stressful experience?
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)?
10. Blaming yourself or someone else for the stressful experience or what happened after it?
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?
12. Loss of interest in activities that you used to enjoy?
13. Feeling distant or cutoff from other people?
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?
15. Irritable behavior, angry outbursts, or acting aggressively?
16. Taking too many risks or doing things that could cause you harm?
17. Being “superalert” or watchful or on guard?
18. Feeling jumpy or easily startled?
19. Having difficulty concentrating?
20. Trouble falling or staying asleep?

Philadelphia Mindfulness Scale- Revised (PHLMS-R)

Instructions: Please circle how often you experienced each of the following statements within the past week.

1 = Never 2 = Rarely 3 = Sometimes 4 = Often 5 = Very Often

1. I am aware of what thoughts are passing through my mind.
2. I try to distract myself when I feel unpleasant emotions.

3. When talking with other people, I am aware of their facial and body expressions.
4. There are aspects of myself I don't want to think about.
5. When I shower, I am aware of how the water is running over my body.
6. I try to stay busy to keep thoughts or feelings from coming to mind.
7. When I am startled, I notice what is going on inside my body.
8. I wish I could control my emotions more easily.
9. When I walk outside, I am aware of smells or how the air feels against my face.
10. I tell myself that I shouldn't have certain thoughts.
11. When someone asks how I am feeling, I can identify my emotions easily.
12. There are things I try not to think about.
13. I am aware of thoughts I'm having when my mood changes.
14. I tell myself that I shouldn't feel sad.
15. I notice changes inside my body, like my heart beating faster or my muscles getting tense.
16. If there is something I don't want to think about, I'll try many things to get it out of my mind.
17. Whenever my emotions change, I am conscious of them immediately.
18. I try to put my problems out of mind.
19. When talking with other people, I am aware of the emotions I am experiencing.
20. When I have a bad memory, I try to distract myself to make it go away.

Blevins, C.A., Weathers, F.W., Davis, M.T., Witte, T.K., & Domino, J.L. (2015) The posttraumatic stress disorder checklist for DSM-5 (PCL-5): Development and initial psychometric evaluation. *Journal of Traumatic Stress Disorder, 28* (6). doi: 10.1002/jts.22059.

Posttraumatic Growth Inventory (PTGI)

Indicate for each of the statements below the degree to which this change occurred in your life as a result of your traumatic experience, using the following scale.

0= I did not experience this change as a result of my traumatic experience.

1= I experienced this change to a very small degree as a result of my traumatic experience.

2= I experienced this change to a small degree as a result of my traumatic experience.

3= I experienced this change to a moderate degree as a result of my traumatic experience.

4= I experienced this change to a great degree as a result of my traumatic experience.

5= I experienced this change to a very great degree as a result of my traumatic experience.

1. I changed my priorities about what is important in life. ____
2. I have a greater appreciation for the value of my own life. ____
3. I developed new interests. ____
4. I have a greater feeling of self-reliance. ____
5. I have a better understanding of spiritual matters. ____
6. I more clearly see that I can count on people in times of trouble. ____
7. I established a new path for my life. ____
8. I have a greater sense of closeness with others. ____
9. I am more willing to express my emotions. ____
10. I know better that I can handle difficulties. ____
11. I am able to do better things with my life. ____
12. I am better able to accept the way things work out. ____
13. I can better appreciate each day. ____
14. New opportunities are available which wouldn't have been otherwise. ____
15. I have more compassion for others. ____
16. I put more effort into my relationships. ____
17. I am more likely to try to change things which need changing. ____
18. I have a stronger religious faith. ____
19. I discovered that I'm stronger than I thought I was. ____
20. I learned a great deal about how wonderful people are. ____
21. I better accept needing others

Tedeschi, R.G. & Calhoun, L. (1996) The posttraumatic growth inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9(3)*, 455-471. doi: 10.1002/jts.2490090305

APPENDIX D:
DEBRIEFING STATEMENT

Post-study Information Form

Traumatic experiences can occur in a wide array of settings including during combat, after a loved one passes away, during sexual victimization, and other distressing situations. Post-traumatic Stress Disorder (PTSD) is a common diagnosis after a trauma, which includes many debilitating symptoms ranging from cognitive impairments to physical limitations. Fortunately, there is a positive phenomenon that occurs for some individuals after a traumatic experience known as posttraumatic growth (PTG). This relationship could be moderated by mindfulness of emotional acceptance and awareness. The purpose of this study is to investigate this relationship in order to identify factors that could potentially foster PTG in sexual assault survivors.

There was no deception in this study, and we could not make this statement if there were any deception. The benefits of participation include the gratifying experience of assisting in research which might have implications for the treatment of emotional disorders and difficulties. If you are a CSUSB student, you will receive 2 points of extra credit in a selected Psychology class at your instructor's discretion. Minimal risks are possible with your participation in this study and include the possibility of short-term emotional distress resulting from recalling and completing surveys about stressful life experiences. If you would like to discuss any distress you have experienced, do not hesitate to contact the CSUSB Psychological Counseling Center (909 537-5040).

Results from this study will be available from Dr. Christina Hassija after June 2019. Any further questions concerning this study may be answered by Dr. Hassija at chassija@csusb.edu or 909-537-5481. You may also contact the Human Subjects office at California State University, San Bernardino (909) 537-7588

APPENDIX E:
INSTITUTIONAL REVIEW BOARD

March 5, 2019

CSUSB INSTITUTIONAL REVIEW BOARD
Administrative/Exempt Review Determination
Status: Determined Exempt
IRB-FY2019-142

Christina Hassija and
Department of CSBS - Psychology
California State University, San Bernardino
5500 University Parkway
San Bernardino, California 92407

Dear Christina Hassija :

Your application to use human subjects, titled "Overcoming Trauma: Utilizing Existential Anxiety to Stimulate Posttraumatic Growth" has been reviewed and approved by the Chair of the Institutional Review Board (IRB) of California State University, San Bernardino has determined that your application meets the requirements for exemption from IRB review Federal requirements under 45 CFR 46. As the researcher under the exempt category you do not have to follow the requirements under 45 CFR 46 which requires annual renewal and documentation of written informed consent which are not required for the exempt category. However, exempt status still requires you to attain consent from participants before conducting your research as needed. Please ensure your CITI Human Subjects Training is kept up-to-date and current throughout the study.

Your IRB proposal (**IRB-FY2019-142 - Overcoming Trauma: Utilizing Existential Anxiety to Stimulate Posttraumatic Growth**) is approved. You are permitted to collect information from **[105]** participants for **1.5 Units** from **[SONA]**. This approval is valid from **3-5-19** to **3-3-20..**

The CSUSB IRB has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval notice does not replace any departmental or additional approvals which may be required.

Your responsibilities as the researcher/investigator include reporting to the IRB Committee the following three requirements highlighted below. Please note failure of the investigator to notify the IRB of the below requirements may result in disciplinary action.

- Submit a protocol modification (change) form if any changes (no matter how minor) are proposed in your study for review and approval by the IRB before implemented in your study to ensure the risk level to participants has not increased,
- If any unanticipated/adverse events are experienced by subjects during your research, and
- Submit a study closure through the Cayuse IRB submission system when your study has ended.

The protocol modification, adverse/unanticipated event, and closure forms are located in the Cayuse IRB System. If you have any questions regarding the IRB decision, please contact Michael Gillespie, the Research Compliance Officer. Mr. Michael Gillespie can be reached by phone at (909) 537-7588, by fax at (909) 537-7028, or by email at mgillesp@csusb.edu. Please include your application approval identification number (listed at the top) in all correspondence.

If you have any questions regarding the IRB decision, please contact Dr. Joseph Wellman, Assistant Professor of Psychology. Dr. Joseph Wellman can be reached by email at Jwellman@csusb.edu. Please include your application approval identification number (listed at the top) in all correspondence. Best of luck with your research.

Sincerely,

Donna Garcia

Donna Garcia, Ph.D., IRB Chair
CSUSB Institutional Review Board

DG/MG

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