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Posttraumatic Growth, Purpose, and Trauma in Survivors of Sexual Assault


A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of

Philosophy in Counseling, Clinical, and School Psychology


by


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September 2019

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Posttraumatic Growth, Purpose, and Trauma in Survivors of Sexual Assault

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ABSTRACT

Posttraumatic Growth, Purpose, and Trauma in Survivors of Sexual Assault

by

Taylor Damiani

Most research on traumatic events such as sexual assault tends to focus solely on the negative consequences. However, overlooking potential positive outcomes post-trauma limits survivors' healing processes and treatment outcomes. This study explored the association between trauma, posttraumatic growth, and sense of purpose in life in university student survivors of sexual assault. The following variables were measured: posttraumatic growth, trauma history (including high magnitude stressors, traumatic stressors, and persisting posttraumatic distress), and sense of purpose. Utilizing a primarily quantitative study with a qualitative component, survivors of sexual assault were asked to complete a survey and open-ended questions about their life experiences.

Exploratory analysis showed the spread of the distribution of the Purpose in Life subscale with this sample. Thematic Analysis revealed how survivors understand their purpose in life. Qualitative themes and sub-themes that emerged from the domain, Sense of Purpose in Life, included: I Have a Sense of Purpose, I Don't Have a Sense of Purpose, I Don't Know My Purpose, and Purpose is Constructed. Within I Have a Sense of Purpose, 2 secondary themes emerged: Self-oriented and Beyond the Self. Within Self, there were 8 sub-themes: Self-actualization, Education, Career, Health, Happiness, Financial, Interests, and Safety. Within Beyond the Self, 5 sub-themes emerged: Generally Improve the World at Large, Solve Societal Problem, Improve the Lives of Others, Spirituality and Relationships (sub-themes from Relationships were Family and Honoring Parents).

Thematic Analysis also revealed how survivors view purpose impacting their life and healing post-assault. Qualitative themes and sub-themes that emerged from the open-ended question included: Impacts of Sexual Assault (SA) (sub-themes: Mental Health, Sense of Self, Relational, Consequences, Positive Effects), Purpose Helps Me (sub-themes: Purpose Helped Me Cope, Purpose Helped Me Grow, Purpose Helped Me Take Action Outside Myself), Purpose Harms Me, Purpose Has No Impact, SA Increased My Purpose, SA Decreased my Purpose, SA Did Not Impact My Purpose.

Results from hierarchical multiple regression showed that, controlling for age and education, purpose in life and trauma history are significantly related to posttraumatic growth. These results suggest the usefulness of focusing on one's sense of purpose when designing interventions for survivors of sexual assault. The results from this study can be used to inform future research on PTG and to inform mental health practitioners' treatment in promoting better client outcomes for survivors.

Keywords: posttraumatic growth, purpose, sexual assault, trauma.

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## Introduction

Most research on traumatic experiences tends to overlook growth as a possible outcome and instead focuses on the negative consequences. However, doing so can lead to an incomplete understanding of posttraumatic reactions, limiting the potential for posttraumatic growth outcomes. A range of post-trauma outcomes are possible, and a growing body of evidence demonstrates that positive psychological changes can result after a trauma (Joseph & Linley, 2008; Tedeschi & Calhoun, 2004). For example, in their research, Joseph and Butler (2010) show that between 30-70% of people who experienced trauma report positive change and growth resulting from their traumatic experience. Therefore, the field needs a more integrative way of understanding the human experience and a reconceptualization of adaptation to traumatic events (Joseph & Linley, 2008). Similarly, it may be beneficial for researchers and practitioners to consider a more holistic way of conceptualizing trauma and trauma treatment. Doing so can better help mental health practitioners facilitate survivors' path to recovery and growth. Additionally, an integrative conceptualization can further theoretical development, empirical research, and therapeutic intervention.

## Literature Review

### Sexual Violence

Sexual violence is a public health issue impacting millions of lives in the United States with devastating physical and mental health consequences (Breiding et al., 2014; Toofanian, 2012). According to the Department of Justice's 2010-2014 National Crime Victimization Survey, someone in the United States over the age of 12 experiences sexual assault every 1.6 minutes (NCVS, 2015). Sexual assault refers to a continuum of unwanted or non-consensual sexual contact or behavior - visual, verbal, or physical - including

penetration, attempted penetration, fondling or touching, voyeurism, unwanted exposure to pornography, exhibitionism, or display of private images. Rape, a form of sexual assault, is defined as any nonconsensual oral, anal, or vaginal penetration (National Institute of Justice [NIJ], 2016; Rape, Abuse, & Incest National Network [RAINN], 2016).

The National Intimate Partner and Sexual Violence Survey (NISVS, 2010) conducted by the Center for Disease Control (CDC) estimated that 19.3% of women and 1.7% of men have experienced rape in their lifetimes, while 43.9% of women and 23.4% of men experienced other forms of sexual violence during their lifetimes. These percentages vary by race and ethnicity with about "11.4% of multiracial women, 9.6% of non-Hispanic white women, 8.8% of non-Hispanic black women, and 6.2% of Hispanic women" experiencing rape by an intimate partner during their lifetimes (Breiding et al., 2014). The NISVS (2010) also found that rates of sexual violence are much higher for the LGBTQ community, with bisexual women experiencing rape at a 29% higher rate than heterosexual women, and gay and bisexual men experiencing rape at a 19% and 26% higher rate than heterosexual men, respectively (Human Rights Campaign, 2016; NISVS, 2010). Additionally, about 50% of people in the transgender community are estimated to experience sexual assault at least once in their lifetime (Office of Victim Services, 2014).

Risk of sexual violence on college campuses is also pervasive. In 2015, the Association of American Universities commissioned a study assessing sexual assault on college campuses in which they surveyed over 150,000 students at 27 colleges and universities nationally. Findings showed that 11.7% of students experienced some kind of nonconsensual sexual contact, and 27.2% of female college seniors reported experiencing some type of unwanted sexual contact since entering college (Cantor et al., 2015).

**Sexual Assault Sequelae**

The effects of sexual assault can last a lifetime. Physical symptoms may occur such as muscle aches, fatigue, gastric and physical discomfort, sexually transmitted infections, pregnancy, physical injury, and chronic physical health problems (Breiding et al., 2014; NIJ, 2016; Tedeschi & Calhoun, 2004). Other physical consequences may include pelvic pain, fibromyalgia, headaches, and irritable bowel syndrome (Luce, Schrager, & Gilchrist, 2010).

When people face major life crises, they also suffer psychological pain. Reactions may include sadness, guilt, anger, or intrusive or repetitive thoughts and images (Tedeschi & Calhoun, 2004). Sexual assault may be associated with depression, disassociation, eating disorders, sleep disorders, sexual dysfunction, paranoia, anxiety, suicidal thoughts, self-harming behaviors, and PTSD (Breiding et al., 2014; Luce, Schrager, & Gilchrist, 2010; NIJ, 2016; RAINN, 2016). Other psychological effects may include substance abuse problems (Campbell et al., 2009), sense of vulnerability and helplessness (Kleim & Ehlers, 2009), decreased beliefs about goodness of other people and safety and fairness of the world (Frazier, Conlon, & Glaser, 2001), shattering of basic assumptions about the world (Janoff-Bulman, 1989), and dysfunctional cognitive patterns (Tedeschi & Calhoun, 2004).

**Posttraumatic Stress Disorder**

Post-traumatic stress disorder (PTSD) is another potential consequence that can occur in the aftermath of sexual assault and other such traumatic events like accidents, extreme violence, natural disasters, life-threatening diseases, or combat (Schubert, Schmidt, & Rosner, 2015). According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, (DSM-5; American Psychiatric Association, 2013), Criterion A of PTSD states that the traumatic event must be experienced directly, witnessed, experienced indirectly (such as

learning that a family member or close friend experienced a trauma), or repeatedly

experienced indirectly (such as first responders or counselors who might experience

vicarious trauma). PTSD is a trauma and stressor-related disorder characterized by persistent

intrusive thoughts and memories, avoidance of trauma-related thoughts and feelings, negative

changes in cognitions and mood, and changes in arousal and reactivity. For a PTSD

diagnosis, these symptoms must persist longer than one month and yield distress or

functional impairment (American Psychiatric Association, 2013).

**PTSD and Survivors of Sexual Assault**

The prevalence of PTSD differs depending on the type of trauma; however, research

on a national U.S. probability sample of women has shown that the highest rates of PTSD

were associated with sexual assault (Breslau et al., 1991; Klump, 2006; Resnick et al., 1993).

This is due to the stigma and intentional perpetration of sexual assault compared to the

accidental or impersonal nature of other types of trauma (Frazier & Berman, 2008). The high

rate of PTSD for sexual assault survivors demonstrates a need for more effective treatment

for related PTSD (Chivers-Wilson, 2006). Understanding the pathology and preexisting and

ensuing factors of sexual assault that increase survivors' probability of developing PTSD can

help with this effort. Psychological risk factors associated with PTSD development include

perception of positive support from others, avoidance of others, negative appraisal of

symptoms, individual cognitions, coping strategies used, timing of reaction to trauma,

dissociation, and anger (Chivers-Wilson, 2006; Klump, 2006). Societal and cultural factors

also play an important role in PTSD development. Society perpetuates "rape culture" in

which rape myths persist and survivors are either not believed or are blamed for their own

assaults. The stigma attached to sexual assault can deeply impact an individual's healing

journey and can contribute to their development of PTSD (Chivers-Wilson, 2006).

Understanding the individual and cultural factors associated with PTSD can inform effective

treatment for survivors (Klump, 2006).

**Posttraumatic Growth**

Most research tends to focus on psychopathology, negative symptomatology and

consequences that occur after a trauma. However, a growing body of literature highlights that

individuals may experience positive psychological changes after trauma (Tedeschi &

Calhoun, 2004), an experience referred to as posttraumatic growth (PTG). PTG is defined as

"the experience of positive change that occurs as a result of a struggle with highly

challenging life crises" (Tedeschi & Calhoun, 2004, p. 1). PTG is psychological growth that

would otherwise not occur except for a traumatic event (Tedeschi & Calhoun, 2004). This

process involves growing beyond a person's previous levels of well-being and operating in

life, while having the trauma serve as the trigger for that change (Joseph & Linley, 2008).

The idea that positive change can emerge from suffering came about long before Tedeschi

and Calhoun labeled it; is an ancient idea stemming from Hebrew, Greek, Christian,

Buddhist, and Islamic teachings (Tedeschi & Calhoun, 2004; Tedeschi, Park, & Calhoun,

1998). For example, Christians believe that in dying there is eternal life in heaven with God.

Buddhist tradition espouses the idea that opportunity can come from any crisis (Goshen-

Gottstein, 2014). Additionally, some Jewish denominations embrace the concept "tikkun

olam," meaning that humanity is called to help repair a broken and fallen world (Jacobs,

2007).

Tedeschi and Calhoun (2004) state that the term posttraumatic growth captures the

essence of positive change after trauma for several reasons. First, it focuses on major crises

rather than lower level stress conditions. Second, it emphasizes true transformational change as opposed to the illusion of change. Third, this process is different from a coping mechanism to cope with trauma - instead it is reported as a process or outcome. Finally, PTG includes a severe threat or shattering of worldview coinciding with psychological distress, which "thriving" and "flourishing" do not suggest.

The term posttraumatic growth holds many potentially misleading associations. First, many people, including researchers and clinicians, tend to conceptualize PTSD and PTG as separate entities that occupy opposite ends on a continuum (Joseph & Linley, 2008). However, individuals can experience both simultaneously shows that distress and PTG are not mutually exclusive, but can coexist (Laufer & Solomon, 2006; Lev-Wiesel, Amir, & Besser, 2005; Morris et al., 2005; Taku et al., 2008). Additionally, Tedeschi and Calhoun's (1996) conceptualization does not state that the traumatic event necessarily has to meet Criterion A for PTSD in the DSM-5 (i.e., the person was exposed to: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence), or that someone who experiences PTG must have a PTSD diagnosis (Joseph & Linley, 2008). In fact, Silverstein and colleagues (2016) suggest that traumatic events and "nontraumatic stressful events" alike may elicit similar levels of PTG. In their study, they explored whether posttraumatic growth was trauma-specific. Results from factorial invariance suggest that stressor severity is not essential to PTG, and that PTG does not occur only for people exposed to trauma. If DSM-5 Criterion A does not accurately delineate conditions capable of eliciting PTG, they argue, further research on this topic is needed to identify which conditions are necessary for PTG to occur (Silverstein, Lee, Witte, & Weathers, 2016). Silverstein and colleagues' findings (2016) have remarkable implications for research and

practice in regards to PTG. Their research implies that, despite the many different definitions of trauma (Weathers & Keane, 2007) a certain threshold of trauma may not need to take place in order to experience posttraumatic growth. How researchers conceptualize posttraumatic growth may change based on how a precipitating event is defined. This study focuses on participants who have experienced a trauma (i.e., sexual violence) as classified by Criterion A of PTSD in the DSM-5 (APA, 2013).

**Conceptualizing PTG.** PTG is conceptualized as a significant cognitive and emotional life change that occurs in the wake of a traumatic event that has the potential to be transformative (Tedeschi, Park, & Calhoun, 1998). It has been described as both a process and outcome (Tedeschi, Park, & Calhoun, 1998). Growth does not necessarily mean that someone experiences less distress or more well-being (Grubaugh & Resick, 2007; Tedeschi & Calhoun, 2004). Instead the growth exists in conjunction with distress (Tedeschi, Park, & Calhoun, 1998). Researchers suggest that the struggle with trauma is crucial for PTG and that distress not only sparks the growth but maintains and motivates it (Tedeschi & Calhoun, 2004; Ulloa et al., 2014).

An example of how PTG could be conceptualized is through a therapeutic lens, such as Acceptance and Commitment Therapy (ACT). The aim of ACT is to create a rich, meaningful life, while accepting the inevitable pain that comes along with it (Harris, 2009). Via this lens, a survivor uses mindfulness and acceptance as tools to manage their trauma and pain. By accepting their pain and making room for it in their life instead of fighting with it, they are then able to dedicate their time and energy toward exploring what is most important to them, clarifying their values, and taking action toward a life that is meaningful and congruent with their values, therefore leading to PTG. Although the trauma is painful,

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Tedeschi and Calhoun (2004) claim that the struggle with trauma is crucial for PTG. From an ACT standpoint, pain is what reminds the survivor of what they truly value and serves as an impetus to catapult them forward in actively pursuing values-congruent goals.

**PTG Model**. Understanding more about PTG and how it works can help researchers and practitioners gain a more holistic perspective into survivors' journeys through and beyond sexual trauma. There are several theories on adversarial growth. Tedecshi and Calhoun developed a comprehensive model conceptualizing the process of PTG (Calhoun, Cann, & Tedeschi, 2010). They propose that people function from a set of beliefs and assumptions about the world that guide their actions and understanding, and can provide a sense of meaning and purpose. Trauma can threaten, challenge, or destroy a person's assumptive beliefs about the world. However, it is possible for survivors to come to terms with their trauma and rebuild their assumptive beliefs about the world to be stronger and more resistant to being shaken or destroyed by future hardship. Tedeschi and Calhoun (2004) use an earthquake metaphor in that an earthquake can shatter and destroy foundations. So too, an individual's worldview may be shattered, but in rebuilding, foundations can be built with greater strength, accounting for past occurrences, personal strength and resilience, and new world views, that can all inform a stronger infrastructure (Tedeschi & Calhoun, 2004; The Growth Initiative, 2012).

**Domains of PTG.** In their review of the literature on perceived benefits after trauma, Tedeschi and Calhoun found that three general dimensions of PTG emerged: changes in self perceptions, changes in relationships with others, and changes in life philosophy (1995). After conducting a factor analysis on the 21-item Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996), five factors, or domains emerged - beyond the three dimensions

- that most comprehensively described the experience of PTG. The first of these five factors is that growth can manifest itself in greater life appreciation and changed priorities. Some people may shift in what they find most important and valued in life. A second area of growth is having closer relationships with others. Some people may be more willing to connect, rely on, trust, and have compassion for others; instead of isolating themselves, they see the value in connecting with people. A third area of growth is increased sense of personal strength. This might look like increased confidence in self and in ability to handle difficult situations, as well as increased mental strength by accepting outcomes that cannot be changed. A fourth area of growth is increased sense of spirituality. People may have stronger faith or beliefs in a religious or spiritual sense. A fifth area of growth is the recognition of new possibilities in life; for example, some may be better able to see and take action on new opportunities for their life (Posttraumatic Growth Research Group, 2014; Tedeschi & Calhoun, 1996; Tedeschi & Calhoun, 2004).

**PTG and Related Constructs**

There is some lack of clarity in the literature about the distinction between PTG and other related constructs. For example, several terms have been used to describe related constructs, including thriving, resilience, flourishing, positive life change, positive reinterpretation, stress-related growth, perceived benefits, benefit-finding, drawing strength from adversity, and transformational coping to name a few (Frazier & Berman, 2008; Tedeschi & Calhoun, 2004). However, PTG is a unique experience, and it is important to distinguish PTG from similar constructs to reduce confusion and increase clarity. Tedeschi and Calhoun (2004) distinguish PTG from these other words because PTG is the only

construct that captures the essence of the struggle with trauma, and the growth that emerges due to that trauma.

**Resilience**. Carver (1998) defines resilience as a recovery or homeostatic return to a baseline level of psychological functioning after hardship or adversity. In other words, a person might bend but not break in the midst of a stressor (Lepore & Revenson, 2006), much like a tree that bends to the wind but regains its original stature. Foa and colleagues (2005) characterize someone who is resilient as requiring a great deal of stress in order to cause significant functioning impairment, as opposed to someone who is vulnerable and may experience emotional dysfunction after even minor stresses. In this way, resilience is conceptualized as a resistance or threshold (Morland, Butler, & Leskin, 2008). People who are characterized as resilient may be less likely to experience PTG given that they may not be rocked to their core after a traumatic event (Tedeschi & Calhoun, 2004). The impact of trauma on these individuals may be less severe, therefore, not allowing for the opportunity to rebuild their worldview as in PTG.

**Thriving**. O'Leary (1998) defines thriving as growing beyond the original level, or baseline, of psychosocial functioning after a challenge (O'Leary, 1998, p. 429). Psychological thriving may indicate growth in aspects such as confidence, skills, knowledge, and security in relationships (Carver, 1998). This definition differs, however, from Tedeschi and Calhoun's (2004) definition of PTG in that with thriving, there is not a reconstructing of a worldview or reorganization of the self. Another difference between thriving and PTG is that thriving most likely does not depend on a traumatic event or long-term trauma, though these events could prompt thriving (Carver, 1998).

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**PTG and PTSD**

Research has found positive, negative, and no associations between psychological distress and PTG (Cobb, Tedeschi, Calhoun, & Cann 2006; Frazier, Conlon, & Glaser, 2001; Grubaugh & Resick, 2007; Park, 1998; Park & Lechner, 2006; Tedeschi & Calhoun, 2004). Results from a systematic review of the literature (Schubert, Schmidt, & Rosner, 2015) show evidence for a positive correlation between PTG and PTSD. Schubert, Schmidt, and Rosner (2015) analyzed 19 selected studies out of an initial 140 in their review of the PTG and PTSD literature. Studies were selected if they had samples with trauma survivors with a PTSD diagnosis and used PTG measures; 17 out of the 19 studies used the Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996) to measure PTG. Results of their synthesis suggest positive correlations between PTG and PTSD such that trauma survivors with a PTSD diagnosis show higher PTG compared with those without PTSD. This also supports Tedeschi and Calhoun's argument that distress maintains growth. However, like all research, the findings from this study should be considered in combination with its limitations. One important limitation is that this study included trauma survivors of all kinds, not just survivors of sexual assault. Second, the selected studies in this systematic review were designed with the DSM-IV before the DSM-V was released, which impacts the definition of PTSD. Therefore, future studies that use the DSM-V definition of PTSD are needed in order to understand PTG in PTSD.

Conversely, research suggests that there is a negative association between depressive symptoms and growth (Frazier et al., 2001; Frazier et al., 2006) and PTSD and growth (Frazier et al., 2006). One study in particular had a sample of adult sexual assault survivors (N = 1,863) and used the PTGI-Short Form to measure PTG (Ullman, 2014). Results from a

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multiple regression analysis showed that posttraumatic stress disorder (PTSD) symptoms were associated with less PTG. This study included many participants who had experienced child sexual abuse prior to age 14. Research still needs to be conducted on whether the age at which a trauma occurs impacts findings on PTG in any way.

Some scholarship suggests a curvilinear relation between level of distress experienced from trauma and amount of PTG. Ulloa et al. (2014) propose that too little distress would not be motivating enough to facilitate growth and too much distress could be crippling, and growth would likely decrease. This could also be reconceptualized from the perspective of psychological fitness, such that those who are already very "fit" might not grow from the trauma very much, and those who do not have sufficient psychological resources may be unable to benefit from the trauma; those who are in the middle range may be in a position to benefit greatly post-trauma (Tedeschi & Calhoun, 2004). Research shows empirical evidence for a curvilinear association between PTG and PTSD, such that intermediate levels of PTSD were associated with the highest growth (Butler et al., 2005; Dekel, Mandl, & Solomon, 2011). Growth increased as PTSD symptoms increased up until a certain point when growth began decreasing with increased PTSD symptoms.

In related research, scholars have investigated the association between PTG and PTSD symptoms. Kleim and Ehlers (2009) found empirical support for a curvilinear association between PTG and PTSD symptoms. They conducted a study with 180 assault survivors (99% physical assault, 1% sexual assault) and found that having no or high levels of PTG was associated with lower levels of PTSD symptoms, while those with medium levels of PTG reported higher levels of PTSD symptoms. The authors conclude that their sample - young, urban people with low socioeconomic status and education levels –

contributed to the modest PTG levels because those with more favorable life circumstances may be more likely to have PTG. They also note that their findings may not generalize to other traumas, such as sexual trauma. In regards to the group reporting low symptoms and low growth, Kleim and Ehlers (2016) note that some people may fail to regard the trauma as a crisis and that only those who assign significance to the trauma may be driven to find new meaning and direction in life. In regards to the group reporting high symptoms and moderate growth, the authors provide two potential explanations. First, as Maercker and Zoellner (2004) have hypothesized, posttraumatic growth may be linked to denial, avoidance, or wishful thinking. Additionally, research shows that people faced with a life-threatening illness typically respond with slightly distorted positive or optimistic self-perceptions (Taylor & Armor, 1996). For example, gay men who tested seropositive for HIV were more optimistic about not developing AIDS than those who tested seronegative, rating statements such as "I feel safe from AIDS because I've developed an immunity" and "I think my immune system would be (is) more capable of fighting the AIDS virus than that of other gay men" more optimistically (Taylor et al., 1992). Second, Kleim and Ehlers (2016) highlight Hobfoll and colleagues' (2007) point that growth action, not just growth cognition or having thoughts related to growth, may be essential for PTG (e.g., becoming politically active after being assaulted). Therefore, survivors with high symptoms and moderate growth may be engaging in growth cognition, but not growth action, which could explain the moderate level of growth. Other research posits that there is no relation between PTG and PTSD symptoms (Cordova, Cunningham, Carlson, & Andrykowski, 2001; Grubaugh & Resick, 2007; Lehman et al., 1993; Wild & Paivio, 2004). Grubaugh and Resick (2007) found that measures of depression and PTSD were not significantly related to posttraumatic growth in a sample of

treatment-seeking female physical and sexual assault victims. Research on the association

between PTG and PTSD is still in its infancy (Schubert, Schmidt, & Rosner, 2015; Ulloa et

al., 2014). More research is needed to shed light on this relation, particularly to help mental

health providers who facilitate the coping process for those experiencing traumatic

circumstances in understanding how healing might take place (Tedeschi & Calhoun, 2004).

**PTG in Sexual Assault Survivors**

        **Positive Correlates of PTG.** Research demonstrates that survivors of trauma report

several factors that are associated with PTG. Because the process by which trauma births

growth is empirically unclear, it is undetermined whether certain constructs associated with

PTG fall under the category of predisposing factor, correlate, or consequence of PTG

(Milam, Ritt-Olson, & Unger, 2004). Thus, it is important to understand what these

associated factors are and how they relate to PTG in order to further the research on this topic

and build effective interventions to treat survivors. Ulloa et al.'s, literature review (2014)

highlights the importance of control in the coping process for sexual assault survivors.

Internal locus of control, the belief that a person has control over their own life, is a large

factor in survivors' development of PTG. Kunst (2011) suggests that high internal locus of

control and low external locus of control contribute to ineffective coping. Another study

found that the perception of having control over the recovery process, versus the assault,

yielded reported positive life change in survivors (Frazier, Tashiro, et al., 2004)

        In addition to locus of control, there are a myriad of factors that increase PTG. Other

positive correlates of PTG include sexual assault disclosure, acceptance coping - accepting

trauma as reality instead of denying that it happened or avoiding it (Cole & Lynn, 2010),

hope (Gwynn, 2008), religiosity (Kleim and Ehlers, 2009), and social support (Schubert,

Schmidt, & Rosner, 2015). Kennedy, Davis, and Taylor (1998) found that 47% of 70 mostly African American survivors reported higher well-being, and 60% reported a higher sense of spirituality after their trauma than before their trauma on a self-report survey. Participants were recruited from rape crisis centers, victim services programs, and District Attorney's Offices and were surveyed once 9 to 24 months post-assault about the state of their current and pre-trauma spirituality. Another factor associated with PTG is journaling. Journaling about perceived benefits after a stressful event is associated with better health outcomes, such as fewer medical appointments, health center visits, and self-reported physical symptoms (Stanton et al., 2002). Results from a multiple regression analysis showed that demographics, such as older age, ethnic minority race, and less education were significantly associated with greater posttraumatic growth. Women older in age may have more time to process their assault and grow from it, or perhaps they have a certain level of cognitive maturity necessary for PTG (Shakespeare-Finch & de Dassel, 2009; Ullman, 2014). Future research is needed to examine why women of color and those with less education were found to have higher PTG than white women and those with more education. Ullman (2014) speculates that different trauma histories and coping mechanisms may play a role, as religious coping has been found to be prominent in various racial groups (Ahrens, Abeling, Ahmad, & Hinman, 2010). Other factors associated with greater PTG include positive reactions from others, adaptive individual coping (adaptive, active form of individual coping such as "I thought hard about what steps to take"), and disrupted core beliefs (beliefs about oneself, others, and the world) (Ullman, 2014).

Research shows that posttraumatic growth is associated with various personality characteristics and behaviors. In a cross-sectional replication study with survivors of sexual

assault, PTG was positively associated with less neuroticism, more extraversion, perceived control over recovery process, social support, life satisfaction, perceived health, emotional expression, cognitive restructuring (Frazier, Conlon, Steger, Tashiro & Glaser, 2006), and greater social and political action (Burt & Katz, 1987). Frazier and Burnett (1994) examined the relation of survivors' symptomatology and coping mechanisms three days after their assault (N = 67, mean age = 27). Results showed positive changes in reference to caution (they were more cautious and alert), appreciation of life, relationships (feeling closer to loved ones), self-care, assertiveness, evaluating life and priorities, realization of strengths, and spirituality. Interestingly, researchers labeled the coping mechanisms that were reported three days post-rape (e.g., positive thinking, suppressing negative thoughts, and keeping busy) as avoidant. They argue that while an avoidant approach may be beneficial to coping immediately after the assault, in order move toward resolution of trauma, an approach coping strategy may be more beneficial (Frazier & Burnett, 1994). An approach coping strategy is acknowledging and addressing the problem as opposed to avoiding it.

Research shows that survivors can report positive life changes in as little as two weeks post-assault. Frazier, Conlon, and Glaser (2001) showed that two weeks post-assault, 91% of survivors reported a positive life change. Rape crisis nurses collected demographic data from participants at the ER and then participants completed self-report surveys at a follow-up meeting. Common positive changes included empathy for others in similar situations, improved relationships, and increased life appreciation. Within this time frame, it was also found that PTG was associated with social support, approach and religious coping, control over the recovery process, and being more cautious (Frazier, Tashiro, Berman, Steger, & Long, 2004).

**Negative correlates of PTG**. Research shows that a number of factors have a negative association with PTG. Growth has a negative relation with increased education (Grubaugh & Resick, 2007; Ullman, 2014). The meaning of this finding is unclear and more research is needed, though Grubaugh and Resick (2007) surmise that those with less education are better able to see the "silver lining" in a negative occurrence. Additionally, neuroticism (Kunst, 2011), avoidant coping and self-blame (Frazier, Tashiro, Berman, Steger, & Long, 2004), maladaptive coping, self-blame, and negative reactions from others (Ullman, 2014) were associated with less posttraumatic growth. Frazier, Conlon, and Glaser (2001) found that negative changes included a decrease in mental health and sense of safety and fairness in the world.

**Timing**. Research on PTG consistently shows that it is important to consider the timeframe of when trauma occurs in a participant's lifetime. Though research has shown growth can occur soon after trauma (e.g., three days, see Frazier & Burnett, 1994), some theories assume that growth occurs as part of a long recovery process and that the number of positive life changes increases over time (Frazier & Berman, 2008). However, Kennedy, Davis, and Taylor, (1998) found no association between passage of time and growth. The evidence is inconclusive on how timing impacts PTG. More research is needed on the topic.

**PTG and Psychological Well-being**

Joseph and Linley (2008) propose that PTG is essentially about how a person cultivates psychological well-being (PWB), or grapples with existential challenges of life and understands their place and significance in the world. Ryff's theory of psychological well-being (1989) aims to capture the essence of positive psychological functioning or health. Ryff posits that psychological well-being consists of six domains: purpose in life (having

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sense of direction and goals in life), autonomy (independence, relying on self to make important decisions), environmental mastery (having resources or capacity to adapt to challenges or meet the needs of the given environment), personal growth (seeing growth and improvement in self over time), positive relations with others (trusting, satisfying relationships with others), and self-acceptance (positive attitude toward the self).

Joseph and Linley (2008) suggest that changes characteristic of PTG are reflective of PWB. For example, the three dimensions of PTG are related to the six dimensions of PWB, such that changes in life philosophy (PTG) are associated with purpose in life and autonomy (PWB); changes in self perceptions (PTG) are associated with self-acceptance, environmental mastery, and personal growth (PWB); changes in relationships with others (PTG) are associated with positive relations with others (PWB). In other words, perhaps someone's psychological well-being primes them for PTG. Perhaps, they suggest, how someone grapples with existential challenges of life and understands their place and significance in the world influences changes characteristic of PTG.

If psychological well-being and posttraumatic growth are associated, this means that purpose, a sub-component of psychological well-being, by extension is also theoretically related to PTG. However, not much empirical research has been conducted on this association. The present study will explore the association between purpose and PTG.

**Psychological Well-being and Purpose**

Ryff's theory of psychological well-being (1989) proposes that having a sense of purpose in life is one of six components contributing to psychological well-being and positive psychological functioning. "Purpose" and "purpose in life" are used interchangeably in this dissertation. Ryff and Singer (2008) highlight purpose in life to be one of the most

important components to positive mental health. Ryff and Keyes (1995) describe someone with purpose as having goals and a sense of direction in life that make it meaningful and give them a reason for living. Purpose has also been defined as a goal that is both meaningful to the person and impacts the world beyond the self (Damon, Menon, & Cotton Bronk, 2003).

Having purpose in life improves physical and mental health (Bronk, 2012; Koshy & Mariano, 2011), yet about only one in four people endorse having a sense of purpose (Moran, 2009). Purpose is associated with reduced risk of disability (Boyle, Barnes, Buchman, & Bennett, 2009), a stronger immune system (Fredrickson et al., 2013), and lower risk for certain diseases, as well as increased happiness (Burrow & Hill, 2011) and greater life satisfaction (Cotton Bronk, Hill, Lapsley, Talib, & Finch, 2009). Purpose is also associated with improving work engagement and motivating social impact. Having purpose is related to increased creativity and innovation (Grant & Berry, 2011) as well as increased persistence, performance, and productivity (Grant, 2008).

In the early stages of the positive psychology movement, Peterson and Seligman (2004) published the Values in Action Classification which delineated 24 character strengths including purpose. Character strengths, their research shows, are malleable across the lifespan and are not fixed traits. This means that purpose, like other strengths, can be developed throughout someone's lifetime.

**Growth, Purpose, and Trauma**

There are multiple pathways to growth and purpose in life. For instance, growth, as it is represented in the PTGI's five domains, may be experienced due to having particular experiences over time and not from one single event (Tedeschi & Calhoun, 2004). Positive experiences may serve as another catalyst for change in the domains of posttraumatic growth.

Such positive events would have to be significant enough to challenge existing schemas and life narratives so as to produce a new worldview (Tedeschi & Calhoun, 2004).

Trauma is another possible pathway to growth and purpose in life. Janoff-Bulman and Frantz (1997) argue that trauma forces people to re-examine assumptions about the world and themselves and face questions about their life's purpose. In this process, they re-evaluate their core assumptions, priorities, and values. According to Janoff-Bulman (1992) the three core assumptions we have are about ourselves, the world, and the relationship between the two. Shattering of these assumptions can create self-blame and thinking that the world is a terrible, unsafe place and a survivor's initial questions may revolve around whether the world makes sense; however, over time these questions may switch to whether their life is meaningful and purposeful (Janoff-Bulman & Frantz, 1997). After a trauma, survivors' life experiences are perceived through a new framework. Previously underappreciated aspects of life may now be appreciated. Values that a survivor may or may not have previously prioritized may now be valued and acted upon more intentionally. Purpose in life may stem from trauma. For example, Mothers Against Drunk Driving (MADD) and Stop the Madness were founded by a mother who lost their child due to a drunk driver and a mother whose child was killed by gunshot, respectively (Janoff-Bulman & Frantz, 1997). These mothers transformed their traumatic events into purposeful existences.

Others, however, posit that purpose in life may be a tool used to heal from the trauma. Stocks and Gow (2012) suggest that purpose and meaning in life is an important component of adaptation after a trauma and that purpose plays an important role in helping an individual in gaining insight and reintegrating back into their life after a trauma. There is little empirical

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research on the relationship between purpose and trauma, specifically in survivors of sexual assault. The present study aims to explore that relationship.

**Study Rationale**

Psychology has traditionally conceptualized people using a medical model, focusing on peoples' deficits, problems, and shortcomings. Similarly, most research on traumatic experiences tends to focus on the negative consequences and overlooks growth as a possible outcome. However, doing so can lead to a biased understanding of posttraumatic reactions, limiting the potential for posttraumatic growth outcomes for trauma survivors. Therefore, the field needs a more integrative way of understanding the human experience and a reconceptualization of adaptation to traumatic events (Joseph & Linley, 2008).

A more holistic conceptualization of post-trauma reactions is necessary to understanding survivors' healing process, as well as to improve treatment and facilitate survivors' growth and recovery (Joseph & Linley 2008). It would also be beneficial for researchers and mental health practitioners to consider a more balanced way of thinking about trauma and trauma treatment that includes some of the growth experiences that may occur. What treatment providers focus their attention on leads to what they ultimately assess; their assessment impacts clinical treatment, and their treatment impacts survivor outcomes. If we only focus on negative outcomes of sexual assault (which are still crucial), and not on the potential for growth and hope as well, we severely limit survivors' outcomes and healing process.

Positive psychology acknowledges that people want more than just an end to suffering in their life – people also want to live full, meaningful, and purposeful lives. Positive psychology highlights the necessity of seeing mental health as more than just

helping people survive, but also grow and thrive in their lives. The benefit of conceptualizing people - and their responses to trauma - holistically is that it can help researchers and mental health practitioners help survivors facilitate a path to recovery and growth. Additionally, understanding how PTG operates can ultimately help mental health practitioners implement practices, therapies, and techniques that facilitate posttraumatic growth. Research on PTG can inform therapeutic interventions that can help survivors who may not otherwise experience growth from their trauma. This research can also serve to encourage mental health professionals to take a strengths-based perspective in therapeutic work in order to promote growth-oriented outcomes and hope that trauma can be overcome. The more pathways to recovery, growth, meaning, and thriving that psychologists can help trauma survivors find, the more survivors will be empowered to live lives that are meaningful and purposeful to them.

**Rationale for exploring purpose**. Janoff-Bulman (1992) notes that a traumatic event such as sexual assault is said to shatter an individual's world view or core beliefs. PTG indicates a reconstruction of those core beliefs and worldview - how they see the world and themselves within that world - so that it is stronger than it was before (Tedeschi & Calhoun, 1995). Theoretically, if someone's worldview grows to be different and stronger post-trauma, reasonably their purpose - an overarching higher order life goal or perspective - would also change or may even precede changes indicating posttraumatic growth, such as relating to others, new possibilities, personal strength, spiritual change, appreciation of life (i.e. domains of the Posttraumatic Growth Inventory). Additionally, Klump (2006) argues that understanding the individual and cultural factors associated with post-trauma reactions can inform effective treatment for survivors; therefore, as purpose is an individual factor, it is

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important to study its association with PTG. Furthermore, Joseph and Linley (2008) argue that PTG is about how people cultivate psychological well-being or how they grapple with existential challenges of life and understand their place and significance in the world, which is essentially their sense of purpose in life. As such, there is sufficient theoretical support for the relationship between PTG and purpose, yet little empirical research has explored this association in survivors of sexual assault.

       **Rationale for using Purpose in Life subscale**. The Purpose in Life (PIL) subscale (Ryff, 1989) has been used with many different populations (Ryff, 2014; see Methods section for psychometric properties of PIL). However, it has not been used specifically with a population of university student survivors of sexual assault. It will be important to determine if the PIL is reliable for this population. It will also be important to determine prevalence of purpose in this population, however, Ryff (1989) advises against setting a cut-off score to determine high or low purpose and instead instructs using quartiles and standard deviations to determine high and low purpose. Therefore, the distribution landscape of survivors' purpose in life will be examined. Normal distribution needs to be established in order to determine which statistical analyses can be done. If normal distribution is shown, researchers can do more sophisticated analyses; it also shows the range of the purpose construct within the population. Research shows the PIL is most likely normally distributed, but given that it is not certain the norming will hold on this population, it could be skewed. Therefore, the distribution spread of the PIL will be examined.

**The Current Study**

       The main purpose of this study is to provide a deeper understanding of the post-assault experiences associated with sexual assault from the perspective of university student

survivors. The study will address gaps in the research by examining purpose, posttraumatic growth, and trauma in survivors of sexual assault in order to inform future directions in research on posttraumatic growth in survivors and post-assault treatment of survivors in therapeutic settings. Drawing on existing literature, the following research questions and hypotheses will be explored (see Appendix A for a table summarizing the research questions, hypotheses, and proposed data analysis plan for the current study):

**Research Question 1a**. What is the spread of the distribution of the Purpose in Life subscale with this sample? The hypothesis is that the subscale will be normally distributed.

**Research Question 1b**. What does "purpose in life" mean to university survivors of sexual assault? Responses will be analyzed using Thematic Analysis.

**Research Question 2**. Is the Purpose in Life subscale (Ryff, 1989) reliable for a population of university student survivors of sexual assault? The hypothesis is that the Purpose in Life subscale will demonstrate good reliability ($\alpha > .80$) in this population.

**Research Question 3**. Are sense of purpose and trauma history related to posttraumatic growth (controlling for age and education)? The hypothesis is that, controlling for age and education, sense of purpose and trauma history (i.e., high magnitude stressors experienced, trauma stressors experienced, and persistent posttraumatic distress) will be related to posttraumatic growth, with purpose being the most significantly related to posttraumatic growth.

**Research Question 4**. What role does purpose in life play in the experiences of survivors of sexual assault? Responses will be analyzed using Thematic Analysis.

**Method**

**Participants**

Participants were undergraduate and graduate students who were recruited via 1) email through departmental email services, campus organizations, and student clubs at a large public university in Central California 2) the university's social media platforms 3) the university's Graduate School of Education subject pool, and 4) Amazon Mechanical Turk to complete an online survey. In order to participate in this study, participants were required to be undergraduate or graduate students, and have experienced sexual assault at or after the age of 18. As participants were survivors of sexual assault, they automatically meet Criterion A for PTSD, as the DSM-5 states that a person meets Criterion A if they are exposed to actual or threatened sexual violence (APA, 2013).

**Power analysis.** An a priori power analysis for a multiple regression (linear multiple regression: random model – Exact, with purpose, PTG, high magnitude stressors, traumatic stressors, and persisting posttraumatic distress, and two covariates: age and education) was conducted in G*Power to determine a sufficient sample size using an alpha of 0.05, a power of 0.80, and a small effect size ($f2 = 0.05$; Faul et al., 2013). The test was one-tailed to imply a directional hypothesis. Based on the aforementioned assumptions, the desired sample size is 253. The effect size used to inform the power analysis was the effect size for PTG associated with PTSD symptoms in sexual abuse, .05 (CI: -.12 - .22; Liu, Wang, Li, Gong, & Liu, 2017).

**Measures**

**Demographics Questionnaire**. Demographic information to describe the sample was collected (see Appendix B), including age (i.e., "Please indicate your age"), gender (i.e.,

"Please indicate your gender identity"), race/ethnicity (i.e., "Please indicate your ethnic/racial identity"), sexual orientation (i.e., "Please indicate your sexual orientation"), education (i.e., "What year of school are you in?"), treatment (i.e., "Have you been in therapy specifically to process sexual assault? If so, for how long?"), primary and secondary language (i.e., "What was the first language you learned to speak?"), and generation status (i.e., "Please indicate your generational status"). Participants chose from a list of possible responses with the option of writing in an "other" response if desired.

**Purpose**. The Purpose in Life subscale is a subscale of the Scales of Psychological Well-Being (Ryff, 1989). It is a 14-item self-report measure assessing the extent to which people hold beliefs that give life meaning (see Appendix D). Example items include, "Some people wander aimlessly through life, but I am not one of them" and "I don't have a good sense of what it is I'm trying to accomplish in life" (reverse scored). Participants rate responses on a 6-point Likert scale (1= *Strongly Disagree* to 6= *Strongly Agree*). Responses to negatively scored items are reversed in the final scoring so that high scores indicate high self-ratings. Higher scores indicate that the responder has goals in life, a sense of directedness, feels meaning in life, holds beliefs that give life purpose, and has aims and objectives for living. Lower scores indicate a lack of sense of meaning in life, few goals or aims, does not see purpose of past life, and has no outlook or beliefs that give life meaning. Internal consistency of the 14-item Purpose in Life subscale is .88, indicating good reliability (Ryff, n.d.; Ryff, 1989). The 14-item scale correlation with the 20-item parent scale for Purpose in Life is .98 (Seifert, 2005); the 20-item Purpose in Life scale has strong test-retest reliability (.82) and internal consistency (.90; Ryff, 1989). Overall, the Scales of Psychological Well-being have convergent validity (correlations with measures of positive

functioning ranging from .25 to .73) and discriminant validity (correlations with measures of negative functioning ranging from -.30 to -.60; Ryff, 1989).

**Trauma.** The Trauma History Screen (THS; Carlson et al., 2011) is a brief 14-item survey that measures an individual's trauma history (see Appendix E). Specifically, the THS measures exposure to high magnitude stressor (HMS) events and events associated with significant and persisting posttraumatic distress (PPD). Participants will respond either "Yes" or "No" to whether they have experienced each particular HMS event. If they mark "Yes," they then indicate how many times they have experienced that event. Examples items include, "A really bad car, boat, train, or airplane accident" and "Forced or made to have sexual contact - as an adult." Next, participants respond to a series of questions pertaining only to the event(s) that really bothered them emotionally. Examples of these items include, "What age did this happen?" and "When this happened, did you feel very afraid, helpless, or horrified?" and "After this happened, how long were you bothered by it?" Test–retest reliability of HMS and PPD event reports in four samples (homeless veterans, hospital trauma, university students, and young adults) was acceptable to excellent ($r = .73 - .95$) (Carlson et al., 2011). Support for construct validity and strong convergent validity is demonstrated by correlations of HMS scores on the THS and the Traumatic Life Events Questionnaire, another measure of trauma exposure, with ($r = .73 - .77$) (Carlson et al., 2011). Three variables were used from the THS: total HMSs experienced, total Traumatic Stressors (TSs) experienced, and PPD. TSs are defined as HMSs that really bothered participants emotionally. PPD events are defined as "the number of events that involved actual or threatened death or injury (Criterion A1); experience of fear, helplessness, or horror

(Criterion A2); duration of distress of 1 month or more; and severity of distress of much or very much" (Carlson et al., 2011, p. 466).

In regards to self-reporting experiences of such traumatic events, it is possible that some survivors may have experienced shame and fear of stigma and blame surrounding disclosure of sexual assault in particular. Participation in this study was voluntary and participants may have ended participation at any time if they felt uncomfortable. However, it is unlikely that participants were re-traumatized from being asked these survey questions. In a research study regarding survivors of interpersonal violence, participants were surveyed via telephone about their experience of violence, whether surveys should ask questions about violence to the survivors, and whether they felt upset or afraid by being asked these questions (Black, Kresnow, Simon, Arias, & Shelley, 2006). Ninety two percent (92%) of the participants reported that these questions should be asked. The majority were willing to answer the survey questions and were not afraid or upset by them. Participants in the present study were provided with resources for mental health services should they have been interested in receiving support. Therefore, participants may have actually seen more benefit than risk from this study, given that this information may have aided survivors in finding help for themselves. This could be especially helpful if they have not previously been connected to mental health resources.

**Posttraumatic Growth**. The Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996) is a 21-item self-report survey that measures the degree to which change in someone's life occurred as a result of their crisis - in this case their sexual assault (see Appendix F). Five categories contributing to PTG are examined: relating to others, new possibilities, personal strength, spiritual change, and appreciation of life. Example items

include, "I have a greater feeling of self-reliance" and "I put more effort into my

relationships." Participants rate responses on a 6-point Likert scale (0 = *I did not experience*

*this change as a result of my crisis* to 5 = *I experienced this change to a very great degree as*

*a result of my crisis*). A total score can be summed (as can five separate factor scores).

Higher scores indicate greater well-being. The PTGI has high internal consistency (a = .90)

and acceptable test-retest reliability (*r* = .71; Tedeschi & Calhoun, 1996). It also has good

construct validity of its factor structure such that its loadings were between .575 and .840

indicating that they are fitting measures of their respective factors (Taku, Cann, Calhoun, &

Tedeschi, 2008). The PTGI is appropriate to use with survivors of sexual assault; in a study

with survivors ages 18 years and older, the PTGI and its subscales demonstrated adequate

reliability with Cronbach alphas ranging from .74 to .92 (Shakespeare-Finch & Armstrong,

2010). In terms of convergent and discriminant validity, the PTGI was significantly

positively correlated with optimism, religiosity, openness, extraversion, agreeableness, and

conscientiousness and was not related to social desirability or age (Tedeschi & Calhoun,

1996). The PTGI has high internal consistency (a = .90) on all five factors for female

childhood survivors of sexual assault (Lev-Wiesel, Amir, & Besser, 2005).

**Exploration of Purpose and Trauma**. Participants were asked open-ended questions

in order to better understand their experiences of posttraumatic growth and purpose within

the context of trauma (see Appendix C). Participants recorded their responses on the survey.

Questions included, "Given the following definition of purpose in life, tell me about purpose

in your life. Having purpose in life is defined as: *having goals in life and a sense of*

*directedness; feeling there is meaning to present and past life; holding beliefs that give life*

*purpose; having aims and objectives for living* (Ryff, 1989)" and "What role has purpose in

life played in your life post-sexual assault? These questions informed research questions one and four.

**Procedures**

Various college and university online surveys on sexual assault, such as the College Sexual Assault study (Krebs et al., 2007), Massachusetts Institute of Technology's Community Attitudes on Sexual Assault survey (2014), and the Association of American Universities' Climate Survey on Sexual Assault and Sexual Misconduct (Cantor et al., 2015) had response rates ranging from 19.2% to 42%. In order to get 250 student responses (see above for power analysis) study recruitment materials would need to reach 5,000 - 11,130 students (accounting for the 19.2% to 42% survey response rate and the 11.7% sexual assault rate in the university population; Cantor et al., 2015).

To determine eligibility, participants were initially asked their age and if they have experienced sexual assault. Exclusion criteria included: students under the age of 18 and students who have not experienced adult sexual assault. After feedback from the IRB (stating that no one should be excluded from this study based on the fact that they had or had not experienced a particular traumatic event), the only eligibility question asked to university students was "Are you 18 or older?" Participant data were used for this study if the participant endorsed experiencing adult sexual assault on the Trauma History Screen. All participants completed an online Qualtrics survey. Participants accessed the study link via an email from university faculty, staff, campus organization or student club representative, from the Graduate School of Education participant pool, from mTurk, or from university social media platforms (i.e., Facebook). Data collection went from Winter 2018 – Winter 2019. The

survey included the following measures: demographics, Trauma History Screen, Purpose in Life, and the PTGI. It also included open-ended questions.

Students accessed the study via an online survey website. Students were presented with the eligibility criteria before beginning the survey. If students met study criteria, they were brought to a webpage that said they were welcome to participate in the study and were presented with information regarding the study and informed consent. If students consented to the study, they were directed to the first webpage of the study. For completing the survey, participants recruited via email and university social media platforms were eligible to win one of ten $10 e-gift cards. If participants wanted to receive an e-gift card they were directed to a brief separate survey for the collection of their contact information. The separate survey ensured the research data remained anonymous. After feedback from the IRB, this was later changed to offering to donate $1 to a local sexual violence prevention organization. Participants recruited via subject pool were offered course credit. Participants recruited via mTurk were rewarded with a payment consistent with typical mTurk rewards for similar task completions ($1/completed survey). MTurk participants were able to participate if they were 18 or above, were in undergraduate or graduate school in the U.S., and had experienced sexual assault at or over the age of 18.

The original research plan was to exclude participants who experienced childhood sexual abuse, however, these participants were ultimately not excluded due to 1) the fact that the study is already about survivors of adult sexual assault given that all participants have experienced adult sexual assault, 2) participants who experience other forms of trauma on the Trauma History Screen are not being excluded, and 3) all forms of trauma will be recorded

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via the Trauma History Screen and descriptions and comparisons of those who have and have not experience childhood sexual assault/abuse can be made.

Participants recruited at the large public university in Central California were excluded from the study if they were under the age of 18 or if they had never experienced adult sexual assault. MTurk participants had the same exclusion criteria, and additionally were excluded if they were not an undergraduate or graduate student in the United States.

Additionally, given the sensitive and potentially distressing nature of the information being asked, resources for local mental health services (i.e., Campus Advocacy, Resources & Education office, campus Counseling and Psychological Services, a community Counseling & Psychological Services Clinic, and a local sexual violence prevention center) were provided at the end of the survey if participants were interested in receiving support. MTurk participants were provided with national hotlines, text lines, organizations, and websites that they could contact if they wanted support.

**Study Design**

**Quantitative Approach with a Qualitative Component.** The present study takes the stance of theoretical plurality, using a primarily quantitative design with a qualitative component (open-ended questions). Creswell, Plano Clark, Gutmann, and Hanson (2003) argue that there are many benefits of theoretical plurality and that various components of a study can be guided by various paradigms. This approach is beneficial for several reasons. Research questions are often complex, and neither quantitative nor qualitative methods may be sufficient in capturing the complexity of certain phenomena. Therefore, using different methods and pieces of information can yield a more complete understanding of the phenomena (Creswell, Fetters, & Ivankova, 2004; Creswell & Plano-Clark, 2011; Greene &

Caracelli, 1997). As all methods have limitations, qualitative and quantitative methods can also complement and strengthen each other, neutralizing each other's pitfalls. For example, quantitative data can offer breadth, while qualitative data can offer depth and contextual information (Greene & Caracelli, 1997; Jick, 1979). Quantitative methods may not capture the nuances of the data, whereas open-ended questions may identify novel perspectives. Open-ended questions also allow the participants to voice their thoughts without being as restricted by researcher bounds and biases. Additionally, a researcher may want to explain or build on initial results, broaden understanding, generalize exploratory findings, or propose a theoretical stance (Creswell, 2009; Creswell & Plano-Clark, 2011).

In this study, the primarily quantitative design with a qualitative component is used to better understand the associations between trauma, sense of purpose, and posttraumatic growth in survivors of sexual assault. Such a design is fitting for studying complex phenomena, such as studying post-assault healing in college age survivors. As a global epidemic (World Health Organization [WHO], 2002), sexual assault is an intricate social issue and creative methods are necessary to help researchers and practitioners understand it and the healing process (Campbell, Patterson, Bybee, 2011; Jordan, 2009). To this end, this quantitative and qualitative approach can be a particularly advantageous design for integrating numerical and anecdotal accounts of survivors' experiences. The qualitative data can enrich the survey results and provide a deeper understanding of survivors' sense of purpose in life and how they view purpose's role in their healing from sexual assault (Plano Clark & Ivankova, 2016). Moreover, because there is much research on PTSD and PTG in this population, but not much research on the relation between PTG and purpose, this approach is reasonable to build on existing literature and explore new territory.

This study uses a concurrent triangulation approach in which both qualitative and quantitative data are collected simultaneously via a survey with closed and open-ended questions. The goal of concurrent triangulation is to collect and synthesize complementary data for a more holistic conceptualization of a phenomenon. The concurrent approach is more manageable, convenient, and less time consuming than a sequential approach in which data are collected in multiple phases (Creswell, 2009). The triangulation aspect of the approach indicates that quantitative and qualitative data are given equal weight, as opposed to an embedded approach in which one method is given more weight than the other. The mixing of the data in a triangulation approach is usually found in an interpretation or discussion section (Creswell, 2009). In this study, the data will be merged by comparing the results of the two databases side by side in the discussion section. The quantitative and qualitative results are integrated so that a more complete understanding surfaces, rather than one from either just qualitative or quantitative results alone (Creswell, Plano Clark, Gutmann, & Hanson, 2003). Specifically, the aim of this approach is to gain a more complete understanding of survivors' experiences of purpose in life, healing, trauma, and posttraumatic growth post-sexual assault by integrating both qualitative and quantitative data.

**Qualitative Analysis.** Thematic analysis (TA) is a method for identifying, examining, and communicating patterns in data (Braun & Clarke, 2011). There are several ways of conducting thematic analysis, but Braun and Clarke (2011) offer an accessible, six-phase guide that will be used here. First, data are collected in a consistent manner across individuals, usually done in interviews, but in this study, via written responses. Their responses are transcribed and the researcher looks across cases to try to understand patterns of what was written and records initial ideas. Second, initial codes are generated that describe

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a basic element of the raw data. Third, once all data are coded, the codes are sorted into broader, potential themes. Fourth, themes are reviewed and refined. Fifth, themes are defined and named. The final and sixth step is that a report is produced (Braun & Clarke, 2011).

There are several advantages to thematic analysis. It is a flexible tool that can be used across several methods and research questions (Braun & Clarke, 2011). It is beneficial for conducting participatory research, highlighting similarities and differences in data, and generating unanticipated insights (Braun & Clarke, 2011). From a philosophical standpoint, TA is predominantly constructivist with the goal being to give voice to the participants' experiences. This method, like other qualitative methods also does well to give voice to participants' experiences and to disempowered individuals, such as survivors of sexual assault, who often have their voices quelled due to rape culture, in which victims are blamed and belittled. Additionally, the advantages of using Braun and Clarke's method (2011) is that it is easy to learn and use, and is more accessible to researchers with little or no qualitative research experience. Given these considerations, this method of analysis was chosen.

In terms of philosophy of science, the ontological perspective is constructivist acknowledging that meaning is constructed and there are multiple truths. There are many different ways that purpose in life and healing from sexual assault can be understood. The epistemological perspective is postpositivist, as both author and research assistant (multiple raters) came to consensus on identified themes and codes (Ponterotto, 2005). I chose to work with research assistant instead of working alone because there was a large amount of participant responses to analyze (over 200 participants responses), therefore, I wanted to work on a team in order to manage the large amount of qualitative data, sort through it, code data, and categorize themes, as well as to minimize researcher bias through consensus. An

inductive approach was also taken. The inductive approach is data-driven; themes identified are closely linked to the data (Patton, 1990). Researchers code the data without trying to fit the data into a pre-existing theoretical framework (Braun & Clarke, 2006). This analysis included the primary researcher and a research assistant. The research assistant was trained in thematic analysis by the researcher.

**Analyses**

    **Research Question 1a.** *What is the spread of the distribution of the Purpose in Life subscale with this sample?* Carol Ryff, author of the Purpose in Life subscale, has not tested the prevalence of purpose, or high, medium, and low levels of purpose in the general population. This is most likely because she directly states in her scoring instructions *not* to use cut-off scores for her scale. Instead, Ryff reports rates of purpose by reporting means. Based on prior research, it is very likely that purpose in life will be normally distributed, and that university student survivors of sexual assault have a range of purpose just like any other population. To determine if this hypothesis is supported, descriptive statistics (e.g., range, mean, median, standard deviation, kurtosis/skew, quartiles) were examined. All statistical analyses were run using SPSS v.23. If normal distribution is achieved, this would allow researchers to test if purpose is related to posttraumatic growth.

    **Research Question 1b.** *What does "purpose in life" mean to university student survivors of sexual assault?*

    This open-ended question was asked to participants to gain deeper understanding about how they perceive "purpose in life" in their own lives. The purpose of this question is to add perspective to the quantitative data collected from the Purpose in Life subscale, which asks participants certain questions about purpose in their lives. This open-ended question,

however, gives participants an opportunity to share how they define purpose in life. Responses were analyzed using the thematic analysis approach described by Braun and Clarke (2006).

**Research Question 2.** *Is the Purpose in Life subscale (Ryff & Keyes, 1995) reliable for this population?* A reliability analysis was conducted to calculate Cronbach's alpha.

**Research Question 3.** *Are sense of purpose and trauma history related to posttraumatic growth (controlling for age and education)?* Age and education were covariates because, in previous research on survivors of sexual assault, these two demographic variables were found to be significantly correlated with posttraumatic growth and were entered together in the first step of the hierarchical regression (Grubaugh & Resick, 2007). A hierarchical regression (Warner, 2008) was used since there is theoretical rationale for the order of entering the predictor variables. In the present study, the demographic variables, age and education, were entered in the first step of the hierarchical regression procedure, followed by purpose in life and trauma history respectively.

*Handling missing data*. Mean substitution was used for missing values for PTGI and Purpose in Life measures when only a few items in each measure were blank. However, some participants did not complete the entire PTGI measure (see discussion section for further discussion on this matter). Little's MCAR test showed this data to be missing at random. The amount of missing PTGI data was around 5%, which according to Tabachnick and Fidell (2007), is an acceptable percentage of data to drop.

*Assumptions.* Relevant assumptions were tested before conducting a hierarchical multiple regression (The Open University, n.d.). The first assumption is that the relation between the independent variables and the dependent variable is linear. Overall, scatter plots

showed that the association between the independent variables and dependent variable did have linear relationships overall. Although for two variables (TS and PPD) the association was not as clearly linear (i.e., some points were further away from the trend line). The second assumption is that there is no multicollinearity in the data. This assumption was met, as VIF scores were well below 10, and tolerance scores above 0.2. The third assumption is that the values of the residuals are independent. The Durbin-Watson statistic showed that this assumption was met; the value was close to 2 (Durbin-Watson = 1.75). The fourth assumption is that the variance of the residuals is constant (i.e., homoscedasticity). The plot of standardized residuals versus standardized predicted values showed the spread of the residuals to be fairly constant across the linear model, suggesting the assumption of homoscedasticity was met. The fifth assumption is that the values of the residuals are normally distributed. The P-P plot for the model suggested that the assumption of normality of the residuals may have been violated. However, there were no extreme deviations from normality, which means it is not likely to have a significant impact on the findings, and the results are probably still valid. The sixth assumption is that there are no influential cases biasing the model. Cook's Distance values were all under 1, indicating no multivariate outliers unduly influencing the model.

Given that the majority of assumptions were met, and given the large sample size, multiple regression was selected as an appropriate method for analyzing the data. Additionally, nonparametric bootstrapping with 1000 bootstrapped samples was utilized to account for any violated assumptions. This statistical method provides a bias-corrected confidence interval, and significant effects are indicated if the confidence interval does not include a zero value.

*Hierarchical multiple regression*. A three stage hierarchical multiple regression was conducted with posttraumatic growth as the dependent variable. Age and education were entered at stage one of the regression to control for both variables. Purpose in life was entered at stage two and the trauma variables (total of high magnitude stressors experienced, traumatic stressors, and persisting posttraumatic distress) were entered at stage three. The purpose in life and trauma variables were entered in this order as one's sense of purpose is an over-arching value people use to organize their life, and it is hypothesized that purpose will impact posttraumatic growth more so than the trauma variables. Intercorrelations and regression statistics are shown in Tables 6 and 7.

**Research Question 4.** *What role does purpose in life play in the experiences of survivors of sexual assault?* This question was explored via an open-ended question to participants and was analyzed using Thematic Analysis.

## Results

### Participants

Six hundred and eighty-three ($N = 683$) undergraduate and graduate students consented to participate in this study. Out of 683, 35 withdrew, several did not experience adult sexual assault (and therefore were not qualified to participate in this study), and several only completed the pre-eligibility questions and nothing else. From 683, 438 undergraduate and graduate students were counted as participants in this study. Participants were recruited from a large public university in Central California (54.1%) as well as from Amazon Turk (mTurk) (45.9%) from February 2018 to January 2019. Participants recruited from the large public university in Central California were recruited via email (43.2%) and a psychology subject pool (11.0%).

After removing participants who had not completed the survey fully (e.g., they had only completed the demographic questions or did not complete all the measures in question), the final number of participants included in analyses was 278. The average age was 25.13 years (SD = 1.28). In terms of gender identity, 69.8% identified as women, 27.7% as men, 1.8% as gender nonconforming or gender queer, 0.4% as transgender women, and 0.4% identified as other. In terms of racial/ethnic background, 1.1% identified as American Indian/Alaska Native, 12.2% as Asian/Pacific Islander/Native Hawaiian, 11.5% as African American/Black, 54.3% as Caucasian/White, 2.5% as Chicana/o/x, 3.2% as Hispanic, 2.2% as Latina/o/x, 2.9% as Multiracial, and 9.0% identified as other. In terms of sexual orientation, 74.1% identified as heterosexual, 1.8% as asexual, 16.9% as bisexual, 2.5% as gay, 1.1% as lesbian, 2.2% as queer, and 1.4% as other. Sixty-seven percent (67.2%) were undergraduates and 30.6% were graduate students. 47.5% endorsed being in therapy for sexual assault at least one time in their lives. Of those who responded "yes," the average amount of time spent in therapy was 8.26 months. In terms of first language spoken, 84.2% spoke English, 5.8% Spanish, 2.2% Chinese, 1.1% Korean, 0.7% Armenian, and 6.1% other. In terms of second language spoken, 19.8% spoke English, 20.5% Spanish, 2.5% Chinese, 0.7% Korean, 5.8% French, 16.5% none, and 5.4% other. The average amount of years that participants lived in the U.S. was 23.83 years (SD = 7.81). In terms of generational status, 14.4% identified as first generation (born outside the U.S.), 25.9% as second generation (born in U.S., and at least one parent born outside the U.S.), 23.4% as third generation (born in U.S., both parents born in US, and at least one grandparent born outside the U.S.), and 35.3% as fourth generation (born in U.S., parents born in U.S., grandparents born in U.S., and at least one great-grandparent born outside the U.S.). The average amount of years that

people who identified as first generation lived in the U.S. was 17.42 years (SD = 10.37). The most commonly experienced high magnitude stressor (HMS) (indicated on the Trauma History Screen) by participants was forced sexual contact as an adult; the second most common was the sudden death of a family member or friend. Many (82.7%) endorsed that they were really bothered emotionally from at least one of the high magnitude stressors they experienced (see Table 1). The average amount of HMSs experienced was 21.2 (SD = 33.61); the average amount of PPD events was .92 (SD = 1.24) (see Table 2).

Several participants did not complete the survey. Some participants completed the demographic information but did not complete the rest of the survey. These participants were dropped from the study because no analysis could be done. Independent t-tests were done to compare survey "completers" (those who completed the entire survey) with "non-completers" (those who did not complete the entire survey). Results show that there was not a significant difference between completers and non-completers on age, gender, sexual orientation, racial/ethnic background, generational status, Purpose in Life, Traumatic Stressors, and Persisting Posttraumatic Distress, however there was a significant difference between completers (20.02 ± 31.32) and non-completers (41.85 ± 59.50 ) ($t(238) = 2.297$, $p = 0.022$) on Total of High Magnitude Stressors experienced. Since non-completers had a higher average of High Magnitude Stressors experienced, perhaps this was overwhelming or triggering and they did not want to finish the rest of the study. This matter is discussed in detail in the discussion section.

Table 1

*Frequency of Endorsement of Each Type of High Magnitude Stressor on the Trauma History Screen Measure*

| High Magnitude Stressor (HMS) | $N^1$ | *Percent²* |
|---|---|---|
| Forced Sexual Contact as Adult | 199 | 72.6% |
| Sudden Death Family/Friend | 142 | 51.8% |
| Horrifying Event | 126 | 46.0% |
| Natural Disaster | 118 | 43.1% |
| Abandonment | 97 | 35.4% |
| Forced Sexual Contact as Child | 83 | 30.3% |
| Witness Death/Injury | 82 | 29.9% |
| Transportation Accident | 79 | 28.8% |
| Hit/Kicked as Child | 77 | 28.1% |
| Sudden Move/Loss | 77 | 28.1% |
| Hit/Kicked as Adult | 64 | 23.3% |
| Accident at Work/Home | 53 | 19.3% |
| Attack with Weapon | 44 | 16.1% |
| Military Service - horrible event | 23 | 8.4% |

*Note. N =*274
1. Number of participants who endorsed experiencing this HMS at least once.
2. Since multiple traumas occur, the percentage totals to more than 100%.

Table 2

*Reported Rates of High Magnitude Stressor (HMS) and Persisting Posttraumatic Distress (PPD) Events*

| Measure | Statistics |
| --- | --- |
| HMS mean | 21.2 |
| SD | 33.61 |
| HMS mode | 6 |
| HMS range | 1-217 |
| PPD events mean | 0.92 |
| SD | 1.24 |
| PPD events median | 1 |
| PPD events mode | 0 |
| PPD events range | 0-7 |

*Note.* HMS ($N = 240$); PPD ($N = 236$)

**Research Question 1a**

Research question 1a: What is the spread of the distribution of the Purpose in Life (PIL) subscale with this sample? Two hundred and seventy-eight ($N = 278$) participants completed the PIL subscale. Descriptive statistics are shown in Table 3. The hypothesis that the data would be normally distributed was supported. PIL scores were reported as means, not sum totals. The mean score for Purpose in Life is 4.12; the range is 4.6 (minimum score = 1.4, maximum score = 6.0). The shape of the distribution (see Figure 1) is unimodal and appears symmetrical and normally distributed. Statistical data show a skewness of -0.15, though it falls within reasonable range of normality. Data did not reveal significant outliers. The Q-Q plot and Box plot both appear within range of normality as well (see Figures 2 and 3). The interquartile range is 1.4.

Table 3

*Descriptive Statistics for Purpose in Life Subscale (N = 278)*

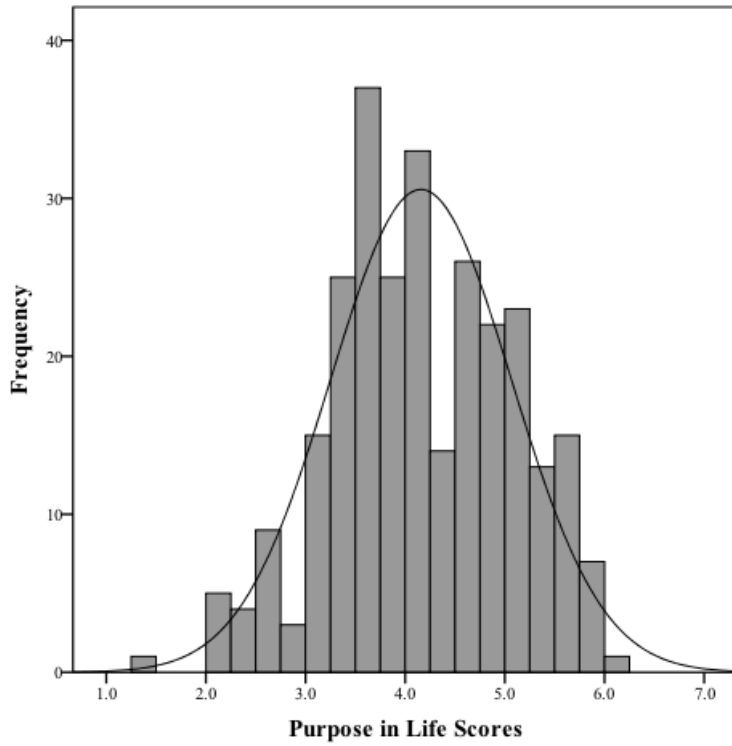|  | Statistic | Standard Error |
|---|---|---|
| Mean | 4.16 | .05 |
| 95% Confidence interval for mean |  |  |
|    Lower bound | 4.05 |  |
|    Upper bound | 4.27 |  |
| 5% Trimmed mean | 4.17 |  |
| Median | 4.14 |  |
| Variance | .82 |  |
| Std. Deviation | .91 |  |
| Minimum | 1.4 |  |
| Maximum | 6.0 |  |
| Range | 4.6 |  |
| Interquartile Range | 1.4 |  |
| Skewness | -.15 | .15 |
| Kurtosis | -.42 | .28 |
| 25th Percentile | 3.50 |  |
| 50th Percentile | 4.14 |  |
| 75th Percentile | 4.93 |  |

*Figure 1*. Histogram of Purpose in Life.
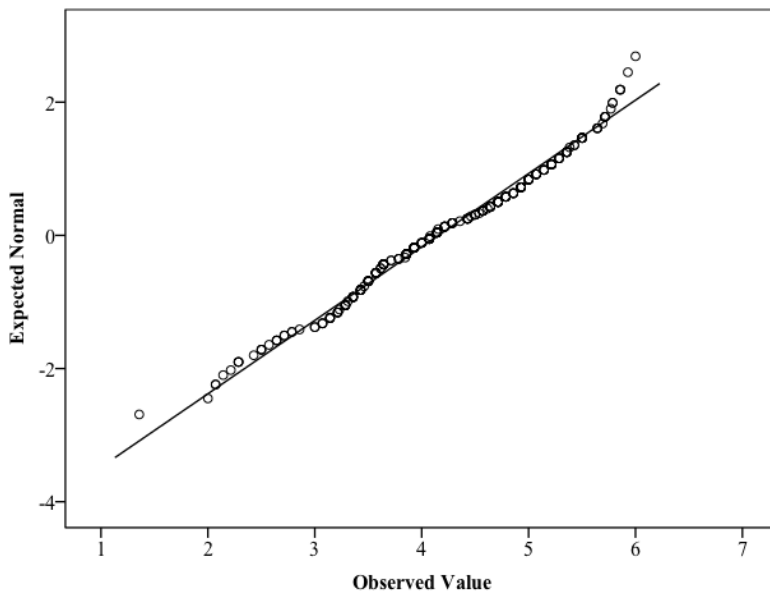


*Figure 2*. Normal Q-Q plot of Purpose in Life.

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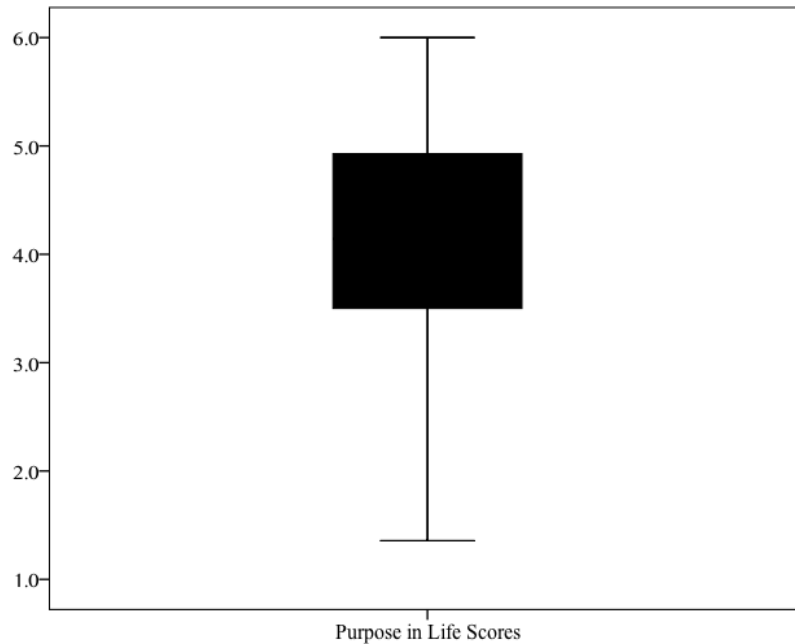
*Figure 3*. Box plot of Purpose in Life.

**Research Question 1b.**

Research question 1b: What does "purpose in life" mean to survivors of sexual assault? The researcher and research assistant followed Braun and Clarke's approach to Thematic Analysis (2006). First, the author and research assistant read through data and became familiar with it, then recorded initial impressions. Second, codes were created based on all the data and researchers came to a consensus on which codes best accounted for participants' responses. Third, similar codes were grouped into overarching themes. Fourth, themes were reviewed, some themes were condensed, some themes were split into two, some were eliminated; sub-themes were also created and organized. Fifth, themes were defined and organized to reflect how they relate to each other and how the sub-themes relate to their themes. The last phase is to write a report.

The coding scheme was comprised of themes and subthemes and operational definitions for each theme. It reflects ways that participants describe their purpose in life as

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well as whether or not they have a sense of purpose. Participants were given the following definition of purpose in life and asked to share their purpose in life, "Having purpose in life is defined as: having goals in life and a sense of directedness; feeling there is meaning to present and past life; holding beliefs that give life purpose; having aims and objectives for living (Ryff, 1989)." Table 4 shows a theme flowchart and Table 5 shows themes and their definitions. Some people commented on whether or not they have a sense of purpose, while most others commented on what their purpose in life is.

Table 4

*Research Question 1b Theme Chart*

| Domain | Theme | Secondary Theme | Tertiary Theme | Quaternary Theme |
|---|---|---|---|---|
| Sense of Purpose in Life | | | | |
| | I have a sense of purpose | | | |
| | | Self-oriented | | |
| | | | Self-actualization | |
| | | | Education | |
| | | | Career | |
| | | | Interests | |
| | | | Financial | |
| | | | Health | |
| | | | Happiness | |
| | | | Safety | |
| | | Beyond the self | | |
| | | | Generally improve the world at large | |
| | | | Solve societal problem | |
| | | | Improve others' lives | |
| | | | | Specific Group |
| | | | | By Doing X |
| | | | Relationships | |
| | | | | Family |
| | | | | Honoring Parents |
| | | | Spirituality | |
| | I don't have a sense of purpose | | | |
| | I don't know my purpose | | | |
| | Purpose is constructed | | | |

**Sense of Purpose in Life**

Sense of Purpose in Life is the domain defined as participants' thoughts on whether or not they have a sense of purpose in life. Four primary themes emerged from the data identifying whether or not they had a sense of purpose. Themes are presented in the order of salience as described by the participants. Salience includes frequent mention (themes including codes that recur) or significant impact (the theme is important to advancing the understanding of the topic even though it may not recur), or both. The themes were: I Have a Sense of Purpose, I Don't Know My Purpose, I Don't Have a Sense of Purpose, and Purpose is Constructed.

**I Have a Sense of Purpose.** The majority of participants stated that they had a sense of purpose in life and described various things that brought their lives meaning. I Have a Sense of Purpose was described as the experience of having purpose in life. Participants stated, "I feel like I have purpose," and "I have strong purpose in my life."

**I Don't Know My Purpose.** A minority of participants shared that they weren't sure what their purpose in life was. I Don't Know My Purpose was described as being unsure about what one's purpose in life is. Two participants stated that they do not often think about purpose. Others noted, "I feel lost. I do not know what I should aim for" and "I don't know my purpose just yet. I'm just here living life and discovering new things."

**Purpose is Constructed.** A minority of participants indicated that purpose does not really exist except in people's minds. Purpose is Constructed was described as the belief that purpose is an idea that is socially constructed. One noted that people shouldn't need a purpose to live a fulfilling life. Others noted, "I also believe that I can give life any meaning I

want, since I can think abstractly," and "I don't know if there is a predetermined purpose of one's life, rather life is what you make of it and you have to make it purposeful and worth it."

**I Don't Have a Sense of Purpose.** A small minority of participants stated that they did not have a sense of purpose in life. I Don't Have a Sense of Purpose was described as the experience of not having purpose in life. Some participants indicated that they do not find purpose in life or that they are merely existing. One noted, "I believe that life is meaningless and everything is a result of random chance." Another stated, "I have always felt like there is no real purpose in life, especially as someone who considers herself asexual. I don't want to reproduce so why do I even exist evolutionarily or biologically?"

## I Have a Sense of Purpose

I Have a Sense of Purpose is defined as participants' thoughts on what gives them purpose in life. Two secondary themes emerged here: Self and Beyond the Self. Self is identified as purposes that are self-oriented. Beyond the Self is identified as purposes related to things that transcend the self. Themes are presented in the order of salience (frequent mention or significant impact) as described by the participants. Most participants had multiple purposes, or many things that brought them purpose in life. The majority of participants mentioned beyond-the-self purposes. Those who mentioned self-oriented purposes also mentioned beyond-the-self purposes. Only a handful of participants solely mentioned self-oriented purposes.

**Beyond the Self.** The majority of participants described purposes that were not self-related, but that were dedicated to causes that were larger than themselves. Beyond the Self is defined as purposes related to things that transcend the self. One participant noted, "I think that my purpose in life is to use my skills and experiences to benefit others." Within Beyond

the Self, five tertiary themes emerged: Generally Improve the World at Large, Solve Societal Problem, Improve the Lives of Others, Relationships, and Spirituality.

***Generally Improve the World at Large.*** Many participants described wanting to make a difference in the world, impact positive change, and serve humanity. Generally Improve the World at Large was defined as a general desire to make the world a better place. Some participants noted generally wanting to spread such things as kindness, love, positivity, and knowledge. Others indicated wanting to leave the world a little better than they left it, contribute to society, or give back to their community. Many noted that they wanted to do charity work, volunteer, or get involved in "something bigger" such as activism or community organizing. One participant said they want to "try to make the world a better place in any capacity I can."

***Solve Societal Problem.*** Many participants described that their purpose in life was related to solving a specific problem in the world. Solve Societal Problem was defined as wanting to contribute to solving a societal or environmental issue. Participants described wanting to better the world via education, address climate change, improve the environment, and empower women. Others wanted to fight biases in the justice system, work with anti-racist organizations, address abuse and assault, and treat anorexia. Some expressed desire to contribute to mental health and trauma issues, the foster care system, and oppressed communities.

One participant said:

> My purpose in life is to try and speak up for others when they need it, work towards helping a disproportionately oppressed community hopefully trying to change things institutionally, hopefully through government participation and involvement. I am

tired of the status quo and want to change it in the minds of individuals and hopefully, someday, society.

**Improve Others' Lives.** Many participants described that their purpose in life was to specifically help other people. Improve Others' Lives was defined as wanting to make a difference in and improve the quality of life for others. Several participants stated that they wanted to bring others happiness and joy, and alleviate others' pain. Others noted wanting to inspire, empower, and give to other people. One participant reported, "My purpose in life is to find meaning within helping others. I have been going through a mental health journey and a few years ago my younger sister developed schizophrenia. After seeing what this disease did to her and the suffering of others I decided that kindness and helping others is my goal." Two sub-themes emerged from Improve Others' Lives: Specific Group and By Doing X.

*Specific Group*. Some participants described specific groups that they wanted to help as part of their life's purpose. Specific Group was defined as a purpose that includes helping a specific population or sub-community. Many participants described wanting to help children, abused children, survivors of sexual assault, or those impacted by trauma, mental health issues, or genetic disorders. One participant stated, "I wanted to […] improve prospects for others with genetic disorders. Another noted, "I want to graduate and go on to work with children and teenagers dealing with mental health issues. My goal has always been to help others in some way, even before my assault but even more so after because of the help that I was able to get."

*By Doing X*. Some participants described specific professions or activities they would take up in order to enact their purpose of improving others' lives. By Doing X was defined as a purpose that describes specifically how they will improve the lives of others. Some

described that they would improve the lives of others by working in bilingual communities, doing pro bono legal work, or becoming an educator.

One participant indicated:

> I am a caretaker. My purpose is to take care of people, love, help, bring soothing and support to others. I am for example thinking of becoming a foster care parent after I graduate to help children in need and hopefully make them avoid the rampant abuse and violence in foster care families at large.

*Relationships.* Many participants described that their purpose in life was to have meaningful relationships with the people in their lives. Relationships was defined as a purpose related to having loving, positive relationships with friends and family. Several participants stated that their purposes were to "love and be loved" and to spend quality time with loved ones. For example, one noted, "Basically I just think my purpose in life is to love others and be loved, in every way possible." Others noted wanting to be a good family member and friend to the people in their lives. One participant wrote, "I also want to be a good friend, daughter, sister, etc. to the people in my life." Two sub-themes emerged from Relationships: Family and Honoring Parents.

*Family*. Several participants specifically mentioned the importance of family to their sense of purpose. Family was defined as the desire to create, take care of, or support one's family. Some participants mentioned wanting to have a family, get married, have and raise kids. Others mentioned wanting to financially support their existing and future family. One participant stated, "My purpose in life is to stay strong no matter what comes at me because I have to support my family at the end of the day."

*Honoring Parents.* A small fraction of participants described wanting to justify their parents' sacrifices and give back to their family. Honoring Parents was defined as wanting to honor or make one's parents proud. One participant stated, "I have to make my parents['] migration worth the alienation they feel here and accomplish what they wish they had themselves and wanted for me."

***Spirituality.*** Some participants described that their purpose in life was related to their relationship with or belief in a higher power and/or the greater world. Spirituality was defined as purpose regarding one's faith or spirituality. One participant indicated, "My purpose in life is to serve Allah (God) through my deeds." Another reported, "Along this journey I will encounter people who will try to break me and that might happen but what's important for me is that I never lose hope. Hope is the single emotion that is greater than fear."

**Self.** Many participants described purposes that were self-oriented. Self is identified as purposes related to things that deal with improving oneself or one's own life. For example, one participant stated, "My purpose in life is to be happy." Within Self, there were 8 subthemes: Self-actualization, Education, Career, Health, Happiness, Financial, Interests, and Safety.

***Self-actualization.*** Many participants described wanting to realize their full potential. Self-actualization was defined as the desire to improve oneself, grow, and become a better person. Some participants described wanting to achieve their dreams, utilize their strengths, and attain knowledge, intellectual growth, and truth. Others indicated wanting to change themselves, and reflect on and learn from past mistakes.

One participant said:

I believe my purpose in life is to reflect on the experiences I am given and use them to direct my choices in the future... The past is what happens to us, it's what we do with it that defines who we are.

*Education.* Some participants expressed that their purpose in life was to attain education. Education was defined as wanting to further one's education. Participants described wanting to graduate college, go to graduate school, and do well in school. One person noted, "Purpose in my life revolves around education, family, friends and faith. Education gives me a drive to better myself and to give my life purpose as it will determine what I will do with my life."

*Career.* Many participants described wanting to have a meaningful and/or successful careers. Career was defined as a sense of purpose related to one's work. Many described particular professions that they would like to go into that would bring them purpose: education, research, mental health, science, medicine, law. For example, one person said they wanted to "become the best elementary school teacher I possibly can."

*Health.* Health was defined as finding purpose in having healthy mental and/or physical health. Some people mentioned wanting to maintain their own mental health and boundaries while helping others. For example, one participant indicated that their purpose was, "To be happy and healthy and try to make the world a better place in any capacity I can, while still promoting my own self-preservation."

*Happiness.* Some participants described a purpose related to finding happiness in life. Happiness was defined as seeking happiness, joy, positivity, pride, or passion in one's life. One participant stated, "I believe that my purpose in life is overall to be happy, to make myself proud."

*Financial.* Some participants described wanting to have stable and sufficient financial means. A few described wanting to make a lot of money; others wanted financial independence. One participant expressed, "My goal is to work in a well paid job…" Another stated, "It is also my goal to provide a financial stable environment for my family."

*Interests.* Some participants described purposes related to doing things that interested them. Interests is defined by finding purpose in one's hobbies and interests, such as travel or sports. One participant noted, "I hope to travel the world (ideally every country at least once), leading a semi-nomadic lifestyle, teaching English and experiencing life in general."

*Safety.* A final self-oriented theme related to personal safety. Safety is defined as wanting to keep oneself safe and avoid harm. For example, one person said their purpose in life was, "[I] don't want to experience any extreme events."

Table 5

*Research Question 1b Qualitative Themes and Definitions*

| Themes Related to Sense of Purpose in Life | Definitions |
| --- | --- |
| I Don't Have a Sense of Purpose | The experience of not having purpose in life |
| I Don't Know My Purpose | Being unsure about what one's purpose in life is |
| Purpose is Constructed | The belief that purpose is an idea that is socially constructed |
| I Have a Sense of Purpose | The experience of having purpose in life |
| Self-oriented | Purposes that are self-oriented |
| Self-actualization | The desire to improve oneself, grow, and become a better person |
| Education | Wanting to further one's education |
| Career | A sense of purpose related to one's work |
| Health | Finding purpose in having healthy mental and/or physical health |
| Happiness | Seeking happiness, joy, positivity, pride, or passion in one's life |
| Financial | Wanting to have stable and sufficient financial means |

| | |
|---|---|
| Interests | Finding purpose in one's hobbies and interests, such as travel or sports |
| Safety | Wanting to keep oneself safe and avoid harm |
| Beyond the Self | Purposes related to things that transcend the self |
| Generally Improve the World at Large | A general desire to make the world a better place |
| Solve Societal Problem | Wanting to contribute to solving a societal or environmental issue |
| Improve Others' Lives | Wanting to make a difference in and improve the quality of life for others |
| Specific Group | A purpose that includes helping a specific population or sub-community |
| By Doing X | A purpose that describes specifically how they will improve the lives of others |
| Relationships | A purpose related to having loving, positive relationships with friends and family |
| Family | The desire to create, take care of, or support one's family |
| Honoring Parents | Wanting to honor or make one's parents proud |
| Spirituality | Purpose regarding one's faith or spirituality |

**Research Question 2**

Research question 2: Is the Purpose in Life (PIL) subscale (Ryff & Keyes, 1995) reliable for this population? The hypothesis was that Cronbach's alpha for the PIL subscale would be .80 or higher, indicating good internal consistency. A reliability analysis was carried out on the PIL subscale comprising 14 items (see Table 7 for item statistics). The PIL subscale appears to have good internal consistency with this specific sample ($\alpha = .88$) as shown in Table 6. All items appeared to be worthy of retention; the greatest increase in alpha would come from deleting item 3, but removal of this item would only increase alpha by .004. All items correlated with the total scale to a good degree (lower $r = .31$).

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Table 6

*Item Statistics*

| Item | | Mean | Standard Deviation |
|---|---|---|---|
| 1. | I feel good when I think of what I've done in the past and what I hope to do in the future. | 4.43 | 1.27 |
| 2. (-) | I live life one day at a time and don't really think about the future. | 3.96 | 1.51 |
| 3. (-) | I tend to focus on the present, because the future nearly always brings me problems. | 3.74 | 1.50 |
| 4. | I have a sense of direction and purpose in life. | 4.51 | 1.32 |
| 5. (-) | My daily activities often seem trivial and unimportant to me. | 3.80 | 1.54 |
| 6. (-) | I don't have a good sense of what it is I'm trying to accomplish in life. | 3.99 | 1.58 |
| 7. (-) | I used to set goals for myself, but that now seems like a waste of time. | 4.18 | 1.57 |
| 8. | I enjoy making plans for the future and working to make them a reality. | 4.51 | 1.29 |
| 9. | I am an active person in carrying out the plans I set for myself. | 4.48 | 1.24 |
| 10. | Some people wander aimlessly through life, but I am not one of them. | 4.16 | 1.37 |
| 11. (-) | I sometimes feel as if I've done all there is to do in life. | 4.33 | 1.63 |
| 12. | My aims in life have been more a source of satisfaction than frustration to me. | 3.97 | 1.41 |
| 13. | I find it satisfying to think about what I have accomplished in life. | 4.20 | 1.39 |
| 14. (-) | In the final analysis, I'm not so sure that my life adds up to much. | 3.86 | 1.73 |

*Note.* (-) indicates reverse scored items.

Table 7

*Item Analysis From SPSS Output*

|  | N of Items | Mean | Variance | Standard Deviation |
|---|---|---|---|---|
| Statistics for Scale | 14 | 58.11 | 163.23 | 12.78 |

|  | Scale Mean If Item Deleted | Scale Variant If Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| PIL1 | 53.68 | 145.05 | .54 | .47 | .872 |
| PIL2 | 54.14 | 147.51 | .37 | .48 | .881 |
| PIL3 | 54.37 | 149.73 | .31 | .41 | .884 |
| PIL4 | 53.60 | 140.46 | .67 | .63 | .866 |
| PIL5 | 54.31 | 138.24 | .62 | .46 | .868 |
| PIL6 | 54.11 | 136.56 | .65 | .47 | .866 |
| PIL7 | 53.93 | 135.78 | .68 | .56 | .865 |
| PIL8 | 53.59 | 141.54 | .65 | .55 | .867 |
| PIL9 | 53.63 | 143.27 | .62 | .54 | .869 |
| PIL10 | 53.95 | 143.26 | .55 | .44 | .872 |
| PIL11 | 53.78 | 145.48 | .38 | .35 | .881 |
| PIL12 | 54.14 | 145.92 | .45 | .44 | .876 |
| PIL13 | 53.91 | 141.44 | .60 | .55 | .869 |
| PIL14 | 54.25 | 134.35 | .65 | .50 | .866 |

|  | Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items |
|---|---|---|
| Reliability Coefficients for Item | .880 | .883 |

**Research Question 3**

Research question 3: Are sense of purpose and trauma variables (high magnitude stressors, traumatic stressors, and persisting posttraumatic distress) related to posttraumatic growth (controlling for age and education)? This original research question was "Are sense of purpose, trauma, and time in treatment related to posttraumatic growth (controlling for age and education)? The reason this question changed is that the actual population differed from the originally proposed population (treatment seeking survivors of sexual assault to university student survivors of sexual assault).

The hierarchical multiple regression revealed that at stage one, age and education contributed significantly to the regression model, $F (2,214) = 6.82$, $p < .01$ and accounted for 6.0% of the variation in posttraumatic growth. Introducing purpose in life explained an additional 3.5% of variation in posttraumatic growth and this change in $R^2$ was significant, $F (1,213) = 7.47$, $p < .001$. Adding trauma variables to the regression model explained an additional 7.4% of the variation in posttraumatic growth and this change in $R^2$ was significant, $F (3,210) = 7.12$, $p < .001$. When all independent variables were included in stage three of the regression model, neither education nor persisting posttraumatic distress were significantly associated with posttraumatic growth, but age, purpose in life, high magnitude stressors, and traumatic stressors were. Together the six independent variables accounted for 16.9% of the variance in posttraumatic growth.

Table 8

*Means, Standard Deviations, and Intercorrelations of the Measures (N = 217)*

| Subscale | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. Posttraumatic growth | - | 0.18 | 0.15 | -0.22 | -0.4 | 0.24 | 0.11 |
| 2. Purpose in life | | - | 0.08 | -0.03 | 0.04 | -0.03 | 0.09 |
| 3. High magnitude stressors | | | - | 0.31 | 0.37 | 0.07 | 0.07 |
| 4. Traumatic stressors experienced | | | | - | 0.69 | -0.15 | -0.09 |
| 5. Persisting posttraumatic distress | | | | | - | -0.06 | -0.02 |
| 6. Age | | | | | | - | 0.55 |
| 7. Education | | | | | | | - |
| *M* | 2.54 | 4.25 | 19.34 | 2.07 | 0.92 | 25.13 | 4.76 |
| *SD* | 1.28 | 0.92 | 30.55 | 1.6 | 1.24 | 5.86 | 2.81 |

*Note.* For Education, 1st year undergraduate=1, 2nd year undergraduate=2, 3rd year undergraduate=3, 4th year undergraduate=4, 5th year undergraduate=5, 1st year graduate=6 ... 7th year graduate=12

Table 9

*Summary of Hierarchical Regression Analysis for Variables predicting Posttraumatic Growth*

| | B | t | SE | R | R Square | R Square Change |
|---|---|---|---|---|---|---|
| Step 1 | | | | .25 | .06 | .06 |
| Age | .06 | 3.27** | .02 | | | |
| Education | -.01 | -.37 | .04 | | | |
| Step 2 | | | | .31 | .10 | .04 |
| Age | .06 | 3.60*** | .02 | | | |
| Education | -.03 | -.76 | .04 | | | |
| Purpose in Life | .26 | 2.88** | .10 | | | |
| Step 3 | | | | .41 | .17 | .07 |
| Age | .05 | 3.0** | .02 | | | |
| Education | -.03 | -.86 | .04 | | | |
| Purpose in Life | .22 | 2.5* | .09 | | | |
| TS | -.26 | -3.7*** | .07 | | | |
| PPD | .13 | 1.4 | .09 | | | |
| HMS | .01 | 2.6* | .00 | | | |

*Note. N* = 217. *p < .05, **p < .01, ***p < .001. Standard Errors (SE) are bootstrapped.

**Research Question 4**

Participants were asked "What role has purpose in life played in your life post-sexual assault?" Thematic analysis was used to analyze this question. Participants generally shared the impacts of sexual assault, how sexual assault impacted their sense of purpose, and how their sense of purpose impacted them post-sexual assault. There were seven primary themes: Impacts of Sexual Assault (SA), Purpose Helps Me, Purpose Harms, Purpose Has No Impact, SA Increased My Purpose, SA Decreased my Purpose, and SA Did Not Impact My Purpose. Table 10 shows a theme and sub-theme chart and Table 11 shows themes and their definitions. Themes are presented in the order of salience (frequent mention or significant impact) as described by the participants.

Table 10

*Research Question 4 Theme Chart*

| Theme | Secondary Theme |
|---|---|
| Impacts of Sexual Assault (SA) | |
| | Mental Health |
| | Sense of Self |
| | Relational |
| | Consequences |
| | Positive Effects |
| Purpose Helps Me | |
| | Purpose Helped Me Cope |
| | Purpose Helped Me Grow |
| | Purpose Helped Me Take Action Outside Myself |
| Purpose Harms Me | |
| Purpose Has No Impact | |
| SA Increased My Purpose | |
| SA Decreased My Purpose | |
| SA Did Not Impact My Purpose | |

**Impact of Sexual Assault.** In addition to writing about how their sense of purpose was impacted post-sexual assault, one of the most common responses was about how sexual assault impacted their life. Most of the effects mentioned were negative. One participant noted, "It was hard in the beginning. I've heard of people getting sexually assaulted at school, but I never thought it would happen to me. It made me more self-conscious and my confidence definitely went down a little bit. It made going to school a lot harder as well." Five secondary themes emerged from Impacts of Sexual Assault: Mental Health, Sense of Self, Relational, Consequences, and Positive Effects.

*Mental Health.* Many participants described experiencing various mental health symptoms and difficult emotions. Mental Health was defined as mental health difficulties

experienced post-sexual assault. Many participants recalled experiencing depression, trauma symptoms such as dissociation and confusion about the world, suicidal ideation, and increased substance use. One participant noted, "After being assaulted I became very depressed, with thoughts of suicide." Others reported feeling a range of emotions, from guilt and shame, to self-blame and hopelessness, to anxiety, panic and anger. Another participant stated, "I battled with guilt and self-blame for a long time. Truthfully, I still do."

***Sense of Self.*** Many participants described a negative change in how they view and relate to themselves. Sense of Self was defined as a loss of sense of self and/or a questioning of one's identity. Participants talked about not knowing themselves, questioning their morals, and having lowered self-esteem and self-worth.

One participant stated:

> It has been a struggle to define myself. I often find myself being defined and understood as a sexual object, rather than a person. I am nothing more than an object of desire, and I try really hard to instill in the young women I work with that they are so much more than what the world tells them. It has been a true battle for me to respect myself, and believe that others can see me as a person rather than an object, because my whole life I have been viewed as such.

***Relational.*** Many participants described difficulty with relationships and relating to others post-assault. Relational was defined as difficulty with intimacy and relating to others. Some participants described decreased trust in others, feeling wary in social situations, distancing from others, desire to stay away from men, and having an overall negative view of "mankind." Others disclosed doubts about finding love. One stated, "[I] feel[] like I have never, could never experience real love."

*Consequences.* Some participants described being entangled in legal battles with their perpetrator, struggling through the Title IX process, and working through the sexual assault in therapy. Consequences was defined as events that have taken place as a result of their sexual assault(s).

One participant said:

> Choosing to go through the Title IX process was one of the most difficult decisions I've made in my life. When my undergraduate university rejected the findings of the external firm they had hired to investigate the case, letting off the lecturer who had assaulted me and threatened another woman, it wrecked the faith I had held in institutions. My first year after I graduated, a year after my rape, was tainted by this long investigation, and while I'm sure I would have felt adrift no matter what, returning over and over to this past trauma held me back.

*Positive Effects.* A minority of participants described some positive impacts of their sexual assault such as increased self-growth and self-care. One participant stated that because of their healing process, "I am hopeful that this journey will lead me to my life purpose--in time."

**Purpose helps me.** A second theme was focused on how participants' sense of purpose helped them in various ways post-sexual assault. One participant indicated, "A purpose helps me to set the experience aside, and to keep me busy. With a purpose in mind, I tend to look at the bigger picture of my life and not to suffer too much about the past. A purpose would keep telling me there are many good things to be done and to be experienced with my life." Three secondary themes emerged: Purpose Helped Me Cope, Purpose Helped Me Grow, Purpose Helped Me Take Action Outside Myself.

***Purpose Helped Me Cope.*** Many participants described how their purpose helped them move forward from their sexual assault, gave them perspective about their life experiences, and helped them overcome challenges. Purpose Helped Me Cope was defined as the experience of one's purpose aiding them in their recovery of sexual assault. Several people noted that purpose served as an internal resource that helped them activate support networks, stay positive, "overcome demons," and keep resilient. Others stated their purpose helped them trust others, channel their anger, and feel less anxious.

One participant observed:

> I feel as though whatever my "purpose" consists of is drive enough to keep going sometimes because I have to prove to myself that my experiences do not define me. I get to choose how life shapes me and what I want to do with the damage that has been inflicted upon me. While that is not always easy, it does provide a glimmer of hope in otherwise bleak moments.

***Purpose Helped Me Grow.*** Many participants described how their purpose helped them build a sense of self-worth and autonomy, strive for their goals, and persist in the face of obstacles. Purpose Helped Me Grow was defined as the experience of one's purpose benefitting or generally helping them grow as a person. Several people stated their purpose inspires and empowers them, gives them direction, makes them stronger, and makes them realize they have much to contribute to the world. Others noted their purpose helped strengthen relationships with friends and family. Some reported that it helped them realize they can make the "choice to be good."

One recalled:

My purpose helps me move forward and continue to succeed. I have been through so

much already and I have not allowed myself to stay feeling worthless. In the same

way, I won't allow my sexual assault to diminish who I am. It has been tough. But I

look back and I see a survivor. I inspire myself!

***Purpose Helped Me Take Action Outside Myself.*** Many participants described how

their purpose made them more passionate about making a positive contribution to the world

and others. Purpose Helped Me Take Action Outside Myself was defined as the experience

of one's purpose motivating them to make an impact on others' lives. Several participants

wrote about wanting to share their story with others, wanting to educate people about sexual

assault and get involved in sexual assault prevention activism. One participant indicated,

"Purpose to me has changed in my life post-sexual assault because I am constantly wanting

to better myself and become stronger so that I can share my story and help others through

these horrible times." One participant reported, "I speak up more often against any types of

discrimination I see. Complacency puts you on the side of oppression." Another noted, "It

has made me realize that despite the fact that predators and advantageous people exist, I still

feel a compassion for people in a general sense. I still want to work for the oppressed."

**Purpose Harms.** Some participants described how their sense of purpose created

more cynicism and paranoia in their life. Purpose Harms was defined as the experience of

purpose having a negative impact on a participant.

One participant indicated:

If anything, my sense of purpose has declined. I wouldn't have been sexually

assaulted had I not been trying to appease strangers/acquaintances. Part of me blames

my sense of purpose for what happened.

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**Purpose Has No Impact.** Some participants described how purpose did not play any role in their life post-assault. Purpose Has No Impact was defined as the experience of purpose having no impact on a participant. One participant stated, "For a long time [purpose] played no role." Another simply answered, "none" to the open-ended question.

**Sexual Assault (SA) Increased My Purpose.** Many participants described how the experience of sexual assault either helped them find or strengthen their sense of purpose. SA Increased My Purpose was defined as having a heightened sense of purpose due to sexual assault. Several participants mentioned how their purpose became much more important or "extreme" to them. Others noted how their beliefs and values were reinforced and that they felt driven to take up certain causes. Still others reported that their purposes to love, help, and inspire others were crystalized. One participant wrote, "I was already passionate about intersectional work pre-sexual assault. This type of violence further emphasizes the importance."

**SA Decreased My Purpose.** Many participants described how they struggled to feel purpose post-assault, felt discouraged from achieving their life goals, and even feared their purpose and the barriers they'd face. SA Decreased My Purpose was defined as the experience of sexual assault weakening participants' sense of purpose or making them feel purposeless.

One participant noted:

> Before the sexual assault, I used to believe that there were meanings to life. That there is a greater value to life that I can achieve. Now I think that there is no greater purpose for life.

Another said:

My purpose in life has seemed farther out of reach after my sexual assault. At times my purpose in life gives me an end-goal and a way to move forward, but at times that purpose has seemed unattainable. I feel like if I can't get through my sexual assault trauma that I can't get on with my life and live the life I want.

**SA Did Not Impact Purpose.** Some participants described how sexual assault did not change their sense of purpose in life. One indicated, "I don't necessarily think it influenced my purpose in life." One wrote, "I don't know? I haven't thought about it much in that context. I don't think it changed anything for me, purpose-wise."

Table 11

*Research Question 4 Qualitative Themes and Definitions*

| Theme/Subtheme | Definition |
| --- | --- |
| Impacts of Sexual Assault (SA) | Impacts occurring as a result of sexual assault |
|    Mental Health | Mental health difficulties experienced post-sexual assault |
|    Sense of Self | A loss of sense of self and/or a questioning of one's identity |
|    Relational | Difficulty with intimacy and relating to others |
|    Consequences | Events that have taken place as a result of participants' sexual assault(s) |
|    Positive Effects | Positive impacts experienced post-sexual assault |
| Purpose Helps Me | The experience of one's purpose helping in their life |
|    Purpose Helped Me Cope | The experience of one's purpose aiding them in their recovery of sexual assault |
|    Purpose Helped Me Grow | The experience of one's purpose benefitting or generally helping them grow as a person |
|    Purpose Helped Me Take Action Outside Myself | The experience of one's purpose motivating them to make an impact on others' lives |
| Purpose Harms | The experience of purpose having a negative impact on a participant |
| Purpose Has No Impact | The experience of purpose having no impact on a participant |
| SA Increased My Purpose | Having a heightened sense of purpose due to sexual assault |

| | |
|---|---|
| SA Decreased my Purpose | The experience of sexual assault weakening participants' sense of purpose or making them feel purposeless |
| SA Did Not Impact My Purpose | The experience that sexual assault did not change sense of purpose in life |

## Discussion

The present study contributes to the literature by examining the relation of purpose in life, trauma history, and posttraumatic growth in university student survivors of sexual assault, using a quantitative approach with a qualitative component. This study examined the distribution spread of the Purpose in Life subscale in this sample. Predictors of posttraumatic growth were also explored. Finally, survivors' understandings of their purpose in life and the role of purpose and PTG in their healing process were examined. This section discusses participant recruitment and study completion, discussion on analysis results, study limitations, implications for future research, and recommendations for future therapy interventions based on study findings.

### Participant Recruitment

Recruiting participants for this study was quite difficult. The researcher sent out emails to over 500 professors and campus entities (some campus entities offered to post the study link to their social media platforms). A small percentage (around 5%) of faculty/staff responded. A potential limitation in this area was that the researcher was not recruiting in person, but online. Recruitment might have been stronger had the researcher been on campus and gone in person to faculty, staff, and student organizations to discuss the study and its potential benefits. Out of those who responded, the majority were positive and enthusiastic to help with a study regarding survivors of sexual assault, agreeing to send the email to their students. However, there were a handful of responders that stated that they would not send

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out a recruitment email. Some felt that their department was not an appropriate outlet for this subject matter, that they were not comfortable sending out the email, or that their superior should send the email, not them. One department stated that the recruitment email would be better sent out by the Counseling Center because of the subject matter. As this study came on the tail of the Me Too movement, it was interesting to see the range of responses from campus entities. Clearly, sexual assault is still a controversial topic and people have all sorts of opinions and emotions about the topic, and therefore, responses in being associated with a study of this subject matter.

This study generated all sorts of passion and interest from campus entities. One professor emailed shared her concern about the potential insensitive language being used in the recruitment email and the fact that a $10 e-gift card was being raffled off for participants. This professor's feedback was welcomed and changes were made accordingly. Another professor emailed asking for assistance in removing a statue of a "badly mutilated (face destroyed, parts of her arms are missing)" statue of a woman "lying awkwardly" on the ground near her department. This professor shared her concern, stating that it should not be on display and that it was donated to the university over 65 years ago, which she was sure had no women on its committee that chose the gift. The researcher referred this professor to several campus offices and organizations that she could ask for help about this matter. This professor's plea could reflect the non-normalization of this topic (violence towards women) such that she felt compelled to reach out to a graduate student for help with a university matter. It could also suggest that this professor (and most likely many others) do not feel as though there are many anti-violence against women allies on campus to turn to for help. It is interesting (and disappointing) that this statue has not been removed or repaired.

Due to the nature of this population, gathering participants was unsurprisingly very difficult. After a year of gathering data, the researcher recruited university students from Amazon Mechanical Turk in order to boost the amount of study participants. Participant recruitment for mTurk participants was much quicker, as there are many more people to sample from online.

**Lack of Survey Completion**

Many participants dropped out of the study after completing the demographic questions (which came immediately before the two open ended questions). There are several hypotheses for participant drop out. One hypothesis is that they found the open-ended questions too emotionally upsetting, causing them to feel triggered or overwhelmed. Another is that the open-ended questions might have been perceived as too time consuming or requiring too much effort and thought (versus passively clicking buttons for multiple choice questions). Another hypothesis has to do with the fact that the pre-eligibility questions asking if people had ever experienced sexual assault were removed due to IRB feedback. The IRB provided this feedback in response to a modification that I completed regarding additional participant recruitment methods. The IRB's feedback stated that no one should be excluded from this study based on the fact that they had or had not experienced a particular traumatic event, such as sexual assault. Therefore, part way through data collection, the only pre-eligibility question asked was "Are you 18 or older?" Thus, some people who had never experienced sexual assault may have started the survey. Once these people realized that the questions were in fact targeted at survivors of sexual assault (upon seeing the open-ended questions), perhaps they decided to stop participating in the survey.

Another issue that arose was that many participants did not answer the PTGI, which was the last measure in the survey. One hypothesis is that this is due to study design: the Trauma History Screen, which came right before the PTGI, had questions that were put on a loop (the same questions are asked if participants endorsed being "really bothered emotionally" by more than one traumatic event). Therefore, participants may have thought there was something wrong because a question was being repeated, or thought the study was over, and clicked out of the survey in order to end the study, not realizing there was a final measure to do (the PTGI).

**Variables Examined**

The original research proposal included a population of treatment seeking survivors who were receiving mental health services at a rape crisis center. Due to shifting to a population of university students, not all of which was treatment-seeking, the "time in treatment" variable was removed from the research question looking into predictors of posttraumatic growth. However, this could be an interesting direction for future research.

**Purpose in Life**

**Distribution spread.** The researcher hypothesized that the spread of the distribution of the Purpose in Life subscale would be normally distributed. The data supported this hypothesis. The distribution shows that scores ranged from 1.4 to 6. Responders with scores from 1.4 to 3.5 were in the first quartile (bottom 25%); scores from 3.5 to 4.14 were in the second quartile; scores from 4.14 to 4.93 were in the third quartile; scores from 4.93 to 6 were in the fourth quartile (top 25%) of the sample. According to Ryff, there are no cut-off scores to define low or high purpose; these distinctions are best sought from the spread of the data collected (2014).

**Internal consistency.** The hypothesis that Cronbach's alpha would be 0.80 or higher for the Purpose in Life subscale, indicating good internal consistency was supported. Findings are consistent with previous research with similar populations. Authors found that the PIL had good internal consistency (alpha = .84) with a sample of college students who had experienced at least one traumatic event (Banyard & Cantor, 2004).

**Thematic Analysis Results: Purpose in Life**

Qualitative findings reflected how participants understood their purpose in life. First, not all participants agreed that they had a sense of purpose. Although the majority did endorse a sense of purpose, a minority were either ambivalent, did not think purpose existed in the world, or denied having a sense of purpose.

**I Don't Have a Sense of Purpose.** Qualitative results from the open-ended questions identified that some participants did not feel they had a sense of purpose in life. It is possible that some participants did not have a sense of purpose prior to their trauma, while others' sense of purpose may have been impacted post-trauma. Janoff-Bulman and Frantz note that, for many trauma survivors, the world seems meaningless (1997). Therefore, some may feel there is nothing to create a sense of purpose with or for. It may also be that, because sexual assault can leave a survivor feeling stripped of their power and control, they may feel they have no agency and, therefore, may give up any belief of meaning and purpose in the world.

**I Don't Know My Purpose.** Participants described not knowing what their purpose in life was. Research shows this is common with emerging and young adults (e.g., undergraduate and graduate school students) who are at an age where they are reasonably engaging in self-exploration and figuring out what they want to do in life (Arnett, 2000). Not

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knowing what one's sense of purpose is is different from not having a sense of purpose, such that not knowing could imply an open-mindedness to the idea of purpose in life.

**Purpose is Constructed.** Participants described that purpose is a socially constructed idea and that everyone has a different definition of what purpose means to them. Some described that purpose is something they can control and choose to see or create throughout life. Some focused on a smaller day to day scale of purpose rather than an overarching purpose of life.

**I Have a Sense of Purpose.** However, the majority of participants endorsed having purpose. Purposes were split into self and beyond-the-self categories.

*Self-oriented Purpose*. Many participants endorsed purposes related to the self, such as importance of one's health, hobbies, career, financial stability, and happiness.

*Self-actualization*. Many participants described wanting to realize their full potential, improve themselves, grow, and become a better people. Given that some trauma survivors may experience a feeling of lack of control over their lives, self-actualization could serve as a framework that allows some degree of control over their life because they control the frame of reference by which they are evaluating themselves. Instead of comparing themselves to others, they are comparing themselves to their past self, gaining their self-worth from self-improvement.

*Education.* Participants described wanting to further their education. Some participants described education as an end in itself while others described it as a means to an end to better their lives. Given this sample is comprised of all students, it is fitting that they value education. In many cultures, education is valued as a gate-opener to opportunity and better life outcomes.

*Career*. Many participants described as a sense of purpose related to their work and wanting to have a meaningful and/or successful careers. Participants cited some desired professions that would be able to give them purpose through their perceived important role in society (e.g., elementary school teacher, doctor, etc.).

*Health*. Participants identified finding purpose in having healthy mental and/or physical health. Considering Maslow's hierarchy of needs (Maslow, 1943) it is possible that those who already have healthy physical and mental health do not consider health as something that gives them purpose, and may instead associate their purpose in life with something higher up on the hierarchy of needs. Whereas others who do not have healthy physical and mental health may see health as a primary concern and their most motivating goal.

*Happiness*. Participants described a purpose related to finding happiness, joy, positivity, pride, or passion in their life. Happiness may be seen as an end in itself, compared to other themes (education, career) which ultimately may lead to happiness. Research shows a strong association between happiness and purpose in life (Robak & Griffin, 2000).

*Financial*. Some participants described wanting to have stable and sufficient financial means. Some described wanting to have financial means as an end in itself, while others described wanting to be financially stable as a means to an end, such as taking care of their family, or being financially independent. Contrary to this study's findings, some research has found no association between purpose in life and having goals of financial well-being (Hill, Burrow, Brandenberger, Lapsley, & Quaranto, 2009).

*Interests*. Some participants described finding purpose in their hobbies and interests (e.g., travel or sports). It might be the case that the things that interest them are the things that bring them joy and motivate them to keep living.

*Safety.* Participants described wanting to keep themselves safe and avoid harm. This again calls to mind Maslow's hierarchy of needs (1943), such that it could be that, due to trauma, safety is first and foremost on these survivors' minds.

***Beyond the Self Purpose.*** Many purpose researchers have created purpose measures that do not include a beyond-the-self aspect (Crumbaugh & Maholick, 1967; Hutzell, 1995; Reker & Peacock, 1981; Sayles, 1994). Only until relatively recently has the beyond-the-self aspect of purpose been introduced into research in order to differentiate "purpose" from internal meaning (Damon, Menon, & Cotton Bronk, 2003).

The majority of participants endorsed beyond-the-self purposes such as contributing their community and the lives of others, solving a social issue, helping friends and family, or committing to their spiritual beliefs. Beyond the self endeavors such as close relationships, spirituality, and social causes are chosen by trauma survivors because they allow them to look past their person and connect with something greater than themselves (Janoff-Bulman & Frantz, 1997). Calhoun and Tedeschi assert that priorities change post-trauma: the million-dollar stock portfolio is no longer as important as spending time with family (2014). Things that are intrinsically valued (hearing a toddler's laugh) become more important than extrinsically valued things (making a lot of money; Calhoun & Tedeschi, 2014).

*Generally Improve the World at Large*. Participants described a general desire to make the world a better place: wanting to make a difference in the world, impact positive change, and serve humanity. These participants did not specify a particular problem they

wanted to solve or way to improve the world, they just focused on having an abstract positive impact.

*Solve Societal Problem.* Participants described that their purpose in life was related to solving a specific problem in the world, including a societal or environmental issue. In contrast to the Generally Improve the World at Large group, these participants chose a specific issue they valued and were passionate about.

*Improve Others' Lives.* Participants described that their purpose in life was to specifically help other people, make a difference in and improve the quality of life for others, as opposed to an abstract or non-people-oriented purpose. The two subthemes were Specific Group and By Doing X.

Specific Group. Participants described specific groups or populations that they wanted to help as part of their lives' purpose. It may be that participants wrote about wanting to help people who had either experienced the same thing the participant had experienced, or help communities that they had personal ties to (e.g., knowing someone who had suffered from abuse, mental illness, or some other struggle).

By Doing X. Participants described specific professions or activities they would take up in order to enact their purpose of improving others' lives. These participants focused on the special value they could provide the world via this specific role (e.g., being a caretaker, educator, foster parent).

*Relationships.* Participants described that their purpose in life was to have meaningful, loving, positive relationships with friends and family.

Family. Participants specifically mentioned the importance of family to their sense of purpose (e.g., creating, taking care of, or supporting their family). It is possible that some

participants came from cultures that have a family-oriented rather than individualistic value system. Cross culturally, many people derive purpose from being providers or caretakers for those they consider family. Research has shown that people with family-focused goals were more likely to have positive well-being than those with self-focused goals (Salmela-Aro & Nurmi, 1997).

Honoring Parents. Some participants described wanting to justify their parents' sacrifices, give back to their family, and honor or make their parents proud. It seems as though participants acknowledged that their parents made a lot of sacrifices raising them and were driven to repay a sense of debt or show gratitude.

*Spirituality.* Participants described that their purpose in life was related to their relationship with or belief in a higher power and/or the greater world. Research highlights the positive association between religiosity/spirituality and purpose in life (French & Joseph, 1999). Research also shows religion and spirituality may be used as helpful coping mechanisms after trauma (Fallot & Heckman, 2005; Peres, Moreira-Almeida, Nasello, & Koenig, 2007). Trauma sometimes urges people to connect with the existential to find hope and meaning in what is believed to be a broken world. This connection with a higher power may help restore one's worldview that life has justice and meaning.

**Multiple Regression Predictors of Posttraumatic Growth**

Findings from the multiple regression showed that age, purpose in life, total high magnitude stressors (HMS) experienced, and total traumatic stressors (TS) experienced were significantly associated with PTG, while education and persisting posttraumatic distress (PPD) were not.

Findings for purpose in life are consistent with research that suggests that purpose in life is associated with PTG. Military veterans who scored higher on purpose in life were more likely to have higher PTG (Aldwin, Levenson, & Spiro, 1994; Tsai, & Pietrzak, 2017). Tsai and Pietrzak surmise that people with a greater sense of purpose are perhaps able to find meaning in their trauma, which may promote PTG (2017). However, research has also found the opposite. For example, with Vietnam prisoners of war, purpose in life scores did not significantly predict posttraumatic growth (Feder et al., 2008).

Age had a significant association with PTG; these variables were also positively correlated. Findings for age are consistent with research suggesting that age is associated with PTG. The association between age and PTG varies depending on the study (Feder et al., 2008). For example, research shows that both older age (Shakespeare-Finch & de Dassel, 2009; Ullman, 2014) and younger age (Wu, Kaminga, Dai, Deng, Wang, Pan, & Liu, 2018) are associated with higher PTG. An argument for those of older age is perhaps they are more mature, confident, perspective on life (Shakespeare-Finch & de Dassel, 2009; Ullman, 2014). An argument for those of younger age is perhaps there is more optimism and hope associated with one's life post-trauma and the idea that there is much time ahead in life left to grow and heal.

Education did not have a significant association with PTG possibly because the sample was already undergraduate and graduate students, so there was little variation on how much education participants had. Perhaps if participants had a broader range of educational backgrounds (ranging from elementary school graduates to graduate school students) there may have been different outcomes and education may have been a significant predictor of PTG.

Next, it seems that experiencing HMSs and TSs (which are high magnitude stressors that are perceived as emotionally bothersome) significantly contributed to the variation in PTG, but experiencing PPD from the traumatic stressor did not impact PTG. Specifically, the number of high magnitude stressors experienced was related to more PTG. Traumatic Stressors were negatively related to PTG, meaning that the more high magnitude stressors that were perceived as emotionally bothersome, the less PTG participants experienced. Last, PPD (perceived or real threat/death, level of distress, and amount of time one is in distress after a TS - all criteria for PPD) did not significantly contribute to PTG. Although there was not a significant association between PPD and PTG, it is noteworthy that PPD was the most negatively associated with PTG, meaning that the more PPD a participant experienced, the less PTG they experienced. This last finding is contrary to previous research: Feder et al. (2008) observed that more severe stress was related with significantly higher posttraumatic growth. Research on cancer patients shows that perceived threat and impact of a stressor facilitates PTG (Stanton, Bower, & Low, 2006), so it is interesting that the current study's results do not show such results. Perhaps results are indicative of a curvilinear relationship between PPD and PTGI. More research is needed on this topic area.

**Purpose, Trauma, and PTG**

Together, the quantitative and qualitative findings in this study offer support for the role of purpose in posttraumatic growth, an understudied area. For example, in the current study, purpose in life was significantly associated with posttraumatic growth as well as a predominant qualitative theme that was cited as a way of getting through, healing, moving forward from, and growing from sexual assault. Research shows that those who experience greater purpose in life also experience PTG (Calhoun & Tedeschi, 2014). Calhoun and

Tedeschi (2006) posit that the more an individual engages in certain cognitive processing (such as attempting to construct a new assumptive world or finding the positive aspects of the experience) after the event, seeking to find meaning or sense out of the trauma, the more likely PTG will be experienced. Similarly, Feder et al. (2008) suggest that the same cognitive processes involved in facilitating PTG may also be used to construct one's purpose in life.

Looking at participants' qualitative responses about purpose in the context of the five factors of PTG as proposed by Taku et al. (2008; i.e., Relating to Others, New Possibilities, Personal Strength, Spiritual Change, Appreciation of Life), there is much overlap. In terms of Relating to Others, themes and sub-themes such as Relationships, Family, and Honoring Family arose. Participants wrote about drawing closer to and strengthening relationships with their family and friends. A predominant theme was an increase in compassion for others and a desire to serve others. Consistent with New Possibilities, themes such as Purpose Helped Me Take Action Outside Myself and Sexual Assault Increased My Purpose arose indicating that new paths for life had been established, they have new interests, and new opportunities have arisen that wouldn't have otherwise been available. In terms of Personal Strength, themes such as Purpose Helped Me Cope and Purpose Helped Me Grow arose and indicate participants felt stronger, more self-reliant, and better able to handle difficulties. In terms of Spiritual Change, the theme of Spirituality emerged. Some participants reported experiencing heightened spiritual beliefs or clearer understanding of spiritual matters. Last, consistent with Appreciation of Life, themes such as Improving Others' Lives and Self-Actualization arose. In these themes and in many others, participants spoke of experiencing a shift in priorities of what was important in life.

**Thematic Analysis results: purpose, trauma, and PTG.** Participants were asked what role purpose played in their lives post-sexual assault.

***Impacts of Sexual Assault (SA)***. In addition to writing about how their sense of purpose was impacted post-sexual assault, participants described how sexual assault impacted their life. Most of the effects mentioned were negative.

*Mental Health*. Many participants described experiencing various mental health symptoms and difficult emotions post-assault. The impact of sexual assault on survivors' mental health outcomes has been widely studied. Findings are consistent with research showing that various outcomes including post-traumatic stress disorder, depression, suicidality, and substance use are linked to sexual assault (Campbell, Dworkin, & Cabral, 2009). Additionally, Coker et al. (2002) highlight evidence that survivors of intimate partner violence have increased risk of current poor health, depressive symptoms, substance use, and developing a chronic disease, chronic mental illness, and an injury.

*Sense of Self*. Participants described a negative change in how they viewed and related to themselves, a loss of sense of self and a questioning of one's identity. Silvern and colleagues (1995) found that trauma exposure was related to low self-esteem. Self-blame is another widely studied concept following sexual assault and intimate partner violence. Janoff-Bulman (1979) theorizes two types of self-blame: characterological self-blame, finding fault with one's own character for the traumatic event, and behavioral self-blame, blaming the traumatic event on one's behavior or actions.

*Relational*. Participants described difficulty with intimacy and relating to others. Given that most sexual assaults occur from people that the survivor knows, it stands that these victims experienced a grave breach of trust from an existing relationship, and therefore

may experience more difficulty in trusting existing and new relationships (Balos & Fellows, 1990). Becker, Skinner, Abel, Axelrod, and Cichon (1984) also show that sexual assault can lead to difficulty in sexual relationships.

*Consequences.* Participants described consequences that took place as a result of their sexual assault (being entangled in legal battles with their perpetrator, struggling through the Title IX process, and working through the sexual assault in therapy). Campbell, Dworkin, and Cabral (2009) use Bronfenbrenner's ecological theory of human development to conceptualize the many different consequences survivors experience post-sexual assault - legal, medical, psychological, financial, judicial, career, relational, societal, etc. illustrating that this traumatic event has multiple levels of impact.

*Positive Effects*. Participants described some positive impacts of their sexual assault such as increased self-growth and self-care. Positive effects can coexist with negative effects, but may not imply a net-positive impact. As previously discussed, a large body of research exists evidencing that positive life changes can occur post-trauma (Calhoun & Tedeschi, 1998; Frazier, Conlon, & Glaser, 2001; Joseph & Butler, 2010; Joseph & Linley, 2008).

**Purpose Helps Me.** Participants described how sense of purpose helped them in various ways post-sexual assault. For these participants, purpose had a positive role in their life post-assault. Qualitative findings showed that for many participants, their trauma led them to hold fast to the things they most value in life, such as loving friends and family. In other words, the trauma crystalized what was already important. Therefore, already having things in one's life that provided a sense of purpose was helpful because it gave survivors an anchor to hold on to in the midst of rocky seas. Other survivors discussed how a sense of purpose stemmed from the trauma. For example, some described becoming more passionate

about helping others, fighting for other survivors and for sexual assault prevention, or growing into themselves. Janoff-Bulman notes that trauma prompts survivors to look for meaning and value in their life. This process can entail recognizing what meaning already exists or creating new meaning (1992). "Life has been stripped to its essentials," therefore prompting survivors to look at what is most important in life (Janoff-Bulman & Frantz, 1997, p.98). Perhaps for some survivors, the finality of life is more pronounced, evoking an urgency in finding value. Life is precious and must be approached with intentionality. Things that weren't previously taken for granted are now appreciated (Janoff-Bulman & Frantz, 1997).

*Purpose Helped Me Cope.* Participants described how their purpose aided them in their recovery of sexual assault and gave them strength to overcome challenges. For these participants, it seemed as though purpose was seen as a tool to focus their attention, rather than focus on their trauma. In this way, purpose may be viewed as a higher level motivating force that infuses coping and struggles to readapt and attain healthy mental health and relationships with meaning.

*Purpose Helped Me Grow*. Participants described how their purpose helped them grow as a person, give them direction, make them stronger, build a sense of self-worth and autonomy, strive for their goals, and persist in the face of obstacles. These participants appear to see purpose as something that helped them grow beyond baseline.

*Purpose Helped Me Take Action Outside Myself.* Many participants described how their purpose made them more passionate about making a positive contribution to the world and others. Several participants noted that their assault caused a change in their mindset that spurred them to take action to help others and become a proactive advocate for justice. For

these participants, it seems that focusing on issues larger than themselves helped to de-center their own pain and give life direction, focus, and purpose.

*Purpose Harms Me*. One participant formed a connection between their purpose to please others and their assault, internalizing self-blame for what happened. It could be that some participants, in trying to make sense of the trauma, placed blame on their purpose in failing to protect them from pain. Purpose can give life a sense of order and meaning. When that order is taken away, it could lead to resentment.

*Purpose Has No Impact*. Participants described how purpose did not play any role in their life post-assault. It could be that these participants did not have a sense of purpose, or that their purpose just did not play a role in their life post-assault.

*SA Increased My Purpose*. Participants described how the experience of sexual assault either helped them find or strengthen their sense of purpose. It could be that they had more need for purpose because purpose is important for overcoming trauma. Perhaps participants were inspired by the compassion that was shown to them in their healing process, which in turn strengthened their purpose. For some survivors with other-oriented purposes, the assault may have increased the visibility of others' pain, and this confrontation may emphasize the necessity for them to help others.

*SA Decreased My Purpose*. Participants described how they struggled to feel purpose post-assault, felt discouraged from achieving their life goals, and even feared their purpose and the barriers they would face. Perhaps these participants felt as though their worldview was shattered and could not be rebuilt - they gave up hope. Or perhaps focusing on surviving, coping with, and getting past their trauma took up too much of their internal resources and they did not have enough energy to dedicate to their sense of purpose at that time.

***SA Did Not Impact My Purpose***. Participants described how sexual assault did not change their sense of purpose in life. One factor that could influence this sort of response is that there are many degrees of sexual assault and of trauma, which means that participants could experience sexual assault in different ways; there is a gradient on which sexual assault affects their worldview. Other factors that could impact this response are that these participants have a flexible worldview, or a strong sense of purpose that could not be shaken.

**Limitations and Future Directions**

There are several limitations to this study. First, in terms of the quantitative results, the survey was self-report, and therefore, prone to human error and bias. Second, the THS asks participants to recall past events and how they felt about those events at that time and the duration of those feelings. There is considerable room for human error on this task. Third, not every participant indicated on the THS that they had experienced adult sexual assault, even if they had selected "yes" on the pre-eligibility question "Have you experienced sexual assault over the age of 18?" This further shows the irregularity in human reporting. Fourth, the author had several exchanges with the IRB committee such that there were multiple changes to the study in terms of pre-eligibility questions, recruitment emails, and participant rewards offered. Therefore, the study was not consistent from beginning to end and depending on when a participant took the survey, they could have encountered a slightly different study in these aspects (to be clear, the same survey questions were asked for all participants).

Last, the Trauma History Screen does not capture persisting posttraumatic distress (PDD) of non-violent sexual assault (i.e., not all survivors fear they will be killed or hurt during sexual assault, especially since the majority of sexual assault occurs between people

who already know each other as opposed to strangers). In order for sexual assault to be classified as PPD, the event had to involve actual or threatened death or injury. Many participants who endorsed sexual assault met all other criteria for PPD, except that one. Additionally, PPD criteria also did not capture very hurtful events such as someone's mom leaving them at age 11 to go live with her new husband and family. Both of these examples are interpersonal and the criteria for PPD does not capture the relational trauma that can occur.

There were also limitations in regards to the qualitative results. First, as the open-ended questions were asked via survey and not in person (and the survey results were anonymous), there was no opportunity to get feedback from or follow up with participants about their responses after researcher had collected and interpreted results. Second, as this sample was mostly comprised of people who identify as Caucasian – representing the dominant culture in society – the participants' responses are most likely skewed towards Western values. Therefore, it is important to consider that these results may not generalize to other cultures (see below for practice implications related to this point).

Future directions should examine these research questions with a more diverse sample. The qualitative results are not generalizable outside this sample, but instead are meant to explore, develop questions, collect details, and go in depth on certain stories. Therefore, future research could qualitatively explore purpose, trauma, and PTG cross-culturally. Future directions could also explore the direction of influence between PTG and purpose: whether PTG influences purpose or vice versa. Perhaps their relationship is bidirectional. Qualitative themes suggesting both directions arose. Future research could further explore these ideas. Researchers could also explore the five factors of PTGI and their

association to purpose in life, as some may have stronger associations than others and may suggest different ways of facilitating PTGI. It may also be interesting to explore purpose in life with different measures. Purpose and meaning are often conflated. It would be interesting to see how these constructs relate to each other and to PTGI.

**Practice Implications**

This study highlights the importance of mental health providers paying attention to matters of meaning and purpose in the healing process of survivors of sexual assault. A traumatic event such as sexual assault can shatter an individual's world view or core beliefs (Janoff-Bulman, 1992). PTG indicates a reconstruction of those core beliefs and worldview - how they see the world and themselves within that world - so that it is stronger than it was before (Tedeschi & Calhoun, 1995). Therefore, if a survivor's worldview grows to be different and stronger post-trauma, reasonably their purpose - an overarching higher order life goal or perspective - would also change or may even precede changes indicating posttraumatic growth.

Janoff-Bulman (1992) has theorized that survivors face two meaning related tasks after trauma: reducing anxiety and fear of a meaningless world, and increasing value in their life. Helping a survivor find or crystalize their life's purpose would fall into the category of creating meaning and value in one's life. Empowering a survivor to take action in their life, no matter how small, may help them to see that the world is not completely meaningless and that they have some agency (Herman, 1992). It is important to meet the survivors where they are. It may be important to first provide them with tools to cope with their anxiety and trauma symptoms in the beginning stages of treatment. The next stage of therapy can then move to

more insight-oriented therapy, shifting from questions about the meaninglessness of the world to the meaning and value of one's life (Janoff-Bulman & Frantz, 1997).

This study shows that purpose is significantly positively associated with PTG, indicating implications for practice. Mental health providers can work with survivors to hold fast to the values that mean most to them, or to explore and find new values. Interventions could help survivors clarify or hold fast to their existing sense of purpose as they navigate the complexities of healing, use their sense of purpose to help them reconstruct their assumptive worldview, or uncover a new sense of purpose, and work with them on how to live out their purpose. Therapists can also work with survivors to help them explore their purpose as it relates to various aspects of PTG, such as relating to others, new possibilities, personal strength, spiritual change, appreciation of life (i.e. domains of the Posttraumatic Growth Inventory). Perhaps exploring each of these areas would make the task of finding one's purpose more meaningful and less daunting, as time can be spent exploring each domain as it pertains to the survivor's life.

**Dominant culture considerations.** It is important to consider implications for practice with people from other backgrounds and cultures. People who identify with cultures other than the dominant ones in society may perceive purpose in life differently. Some cultures may place more emphasis on family, community, religion/spirituality, or some other emphases not mentioned in this study. Different cultures may conceptualize purpose and the path to purpose differently altogether, or may have subtly different nuances to the concept of purpose. For example, *ikigai* (Japanese concept) and *plan de vida* (Costa Rican concept) are similar to the concept of purpose, but have slightly different meanings. *Ikigai* is doing what you are good at and what you love doing; *plan de vida* is having a reason to live, which

encourages people to have a positive outlook on life in order to stay active (Blue Zone, 2018; Martinko, 2017). Both of these differ from Ryff's definition of purpose. It is also possible that some cultures may have different perspectives on and beliefs about the importance of purpose in life or the role of purpose in healing from sexual assault. Given all of the possible differences that can arise when thinking about purpose in life, it is important to take a multicultural approach (as is important when working with all clients) when working with survivors of sexual assault to foster purpose in their healing and growth processes.

**Expert companionship**. Joseph and Linley (2006) suggest a non-directive relationship based therapeutic approach to working with survivors in therapy, as directive approaches may stifle client growth (Joseph & Linley, 2008). In other words, this means going at the survivor's pace and not rushing or forcing the process of healing and growth. Tedeschi and Calhoun (2006) offer "expert companionship" as a way of facilitating PTG. An expert companion is someone who is willing to entertain posttraumatic growth as a possibility after trauma. They must approach survivors with compassion and good clinical practice, understand the impacts of trauma and be able to explain them to survivors, help survivors manage their emotions, and help survivors reconstruct their narratives (Tedeschi, Shakespeare-Finch, Taku, & Calhoun, 2018).

Expert companions can "highlight[] how aspects of post-trauma experiences reported indicate developing areas of PTG; fashion[] a narrative together with the trauma survivor that respects the horror of trauma while at the same time opening areas of change and development; and encourage[] an appreciation for the paradoxical in the trauma experience, so that vulnerability can be strength, and loss is a change that can also be positive." (Tedeschi, 2011, p. 139). An expert companion is able to balance being patient and going at

the client's pace, with not being afraid to see the possibility of growth, to see that a client is more than their pain (Tedeschi, Shakespeare-Finch, Taku, & Calhoun, 2018). "Because PTG involves rebuilding of a worldview that was challenged by trauma, reconstruction of narrative is an important component, and the co-authoring of the narrative is central to the process" (Tedeschi, Shakespeare-Finch, Taku, & Calhoun, 2018, p. 143) Therefore, if a survivor is to rebuild their worldview, they also must rebuild their view of themselves in the world, their relation to the worldview, or their sense of purpose.

The keen observer notices that expert companions engage in very nuanced interventions: listening for strengths and growth, knowing when the client is ready to take a step towards change, walking with them and gently and appropriately encouraging them along in their journey instead of leading them to change prematurely (Tedeschi, Shakespeare-Finch, Taku, & Calhoun, 2018). Practitioners can engage in mirroring client strengths that the survivor has used and gained in their healing process, highlighting the progress the survivor has made in the midst of trauma, listening for important values the survivor seems most attuned to, and reflecting the values that the survivor has lived out or has indicated are most important to them. The goal of these practices is to facilitate survivors' realization of a higher order purpose in life - and possibly - posttraumatic growth.

Contrary to what many might believe, people do not have to achieve PTG through therapeutic intervention – it can be achieved through other relationships (Tedeschi & Moore, 2016b). This opens the door for others, not just mental health practitioners, to be potential "companions."

The data gathered from the present study will be shared with the university center that supports and advocates for survivors of sexual assault as a tool to help counselors, advocates,

and other "companions" deepen their understanding of the sexual violence healing process and to aid in the advocacy process.

**Conclusion**

It is important to have an integrative conceptualization of reactions to trauma so as to further theoretical development, empirical research, and therapeutic intervention. Understanding how PTG operates can ultimately help mental health practitioners implement practices, therapies, and techniques that facilitate posttraumatic growth. Research on PTG can inform therapeutic interventions that can help survivors who may not otherwise experience growth from their trauma. This research can also serve to encourage mental health professionals to take a strengths-based perspective in therapeutic work in order to promote growth-oriented outcomes and hope that trauma can be overcome. Healing from trauma is a process influenced by many factors and that looks differently for all survivors. As researchers, we should strive to find pathways and tools that empower survivors to realize strength within themselves so that they can lead a life that is meaningful and purposeful to them.

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Table 1

*Summary of Research Questions, Hypotheses, Variables, and Analysis Methods*

| Research Questions | Hypotheses | DVs | IVs | Analytic Method |
|---|---|---|---|---|
| Q1a: What is the spread of the distribution of the Purpose in Life subscale with this sample? | The data will be normally distributed. | | **Purpose in Life Sub-Scale:** *(E.g., Some people wander aimlessly through life, but I am not one of them.)* | Descriptive statistics |
| Q1b: What does "purpose in life" mean to survivors of sexual assault? | | | **Open-ended question:** *Given the following definition of purpose in life, tell me about purpose in your life.* *Purpose in life is defined as: having goals in life and a sense of directedness; feeling there is meaning to present and past life; holding beliefs that give life purpose; having aims and objectives for living (Ryff, 1989)"* | Thematic Analysis (TA) |
| Q2: Is Ryff's Purpose in Life Sub-Scale reliable for this population? | Yes, Cronbach's alpha will be .80 or higher, indicating good internal consistency. | | **Purpose in Life Sub-Scale** | Cronbach's Alpha |
| Q3: Are sense of purpose and trauma history (HMS, TS, and PPD) related to posttraumatic growth (controlling for age and education)? | Controlling for age and education, sense of purpose and trauma history (HMS, TS, and PPD), will be related to posttraumatic growth, with purpose being the most significantly related. | Posttraumatic Growth Inventory (E.g., *Since the trauma, I have a greater feeling of self-reliance*.) | **Purpose in Life Sub-Scale** **Trauma History Screen:** (HMS: *Have you had forced sexual contact as an adult?* TS: *When this happened did you feel really bothered emotionally?* PPD: *When this happened, did you feel very afraid, helpless, or horrified?*) **Covariates**: Age Education | Hierarchical Multiple Regression |

Q4: What role does purpose in life play in the experiences of survivors of sexual assault?

**Open-ended question:**
*What role has purpose in life played in your life post-sexual assault?*

TA

Appendix B

Demographic Questions

1. Please indicate your age (in years):

2. Please indicate your gender identity:

Man
Woman
Transgender man
Transgender woman
Gender Non-Conforming / Non-binary / Genderqueer
Other, please specify _____

3. Please indicate your ethnic/racial identity:

Asian / Pacific Islander
African American
Black
Caucasian / White
Chicana/o/x
Hispanic
Latina/o/x
Native American or American Indian
Multiracial (please specify)_____
Other, (please specify)_____

4. Please indicate your sexual orientation:
Asexual
Bisexual
Gay
Heterosexual
Lesbian
Queer
Other, (please specify)_____

5. What year of school are you in?

1st year undergraduate
2nd year undergraduate
3rd year undergraduate
4th year undergraduate
5th year undergraduate
1st year graduate
2nd year graduate

3rd year graduate
4th year graduate
5th year graduate
6th year graduate
7th year graduate
Other (*please specify*):

6. Have you been in therapy specifically to process sexual assault? If so, for how long?
If yes:
   ____ months   _____ years

7. What was the first language you learned to speak? _____

8. What was the second language you learned to speak (if any)? _____

9. How long have you lived in the United States (in years)? _____

10. Please indicate your generational status:

First generation (Born outside the US.)
Second generation (Born in US, and at least one parent born outside the US.)
Third generation (Born in US, both parents born in US, and at least one grandparent born outside the US.)
Fourth generation or more (Born in US, parents born in US, grandparents born in US, and at least one great-grandparent born outside the US.)

Appendix C

Open Ended Response Questions

1. Given the following definition of purpose in life, tell me about purpose in your life.

**Having purpose in life is defined as:** *having goals in life and a sense of directedness; feeling there is meaning to present and past life; holding beliefs that give life purpose; having aims and objectives for living* **(Ryff, 1989)"**

2. What role has purpose in life played in your life post-sexual assault?

Appendix D

Purpose in Life subscale (Ryff & Keyes, 1995)

The following set of questions deals with how you feel about yourself and your life.  Please remember that there are no right or wrong answers.

*1 = Strongly Disagree, 2 = Moderately Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Moderately Agree, 6 = Strongly Agree*

1. I feel good when I think of what I've done in the past and what I hope to do in the future.
2. I live life one day at a time and don't really think about the future.
3. I tend to focus on the present, because the future nearly always brings me problems.
4. I have a sense of direction and purpose in life.
5. My daily activities often seem trivial and unimportant to me.
6. I don't have a good sense of what it is I'm trying to accomplish in life.
7. I used to set goals for myself, but that now seems like a waste of time.
8. I enjoy making plans for the future and working to make them a reality.
9. I am an active person in carrying out the plans I set for myself.
10. Some people wander aimlessly through life, but I am not one of them.
11. I sometimes feel as if I've done all there is to do in life.
12.  My aims in life have been more a source of satisfaction than frustration to me.
13.  I find it satisfying to think about what I have accomplished in life.
14.  In the final analysis, I'm not so sure that my life adds up to much.

Appendix E

Trauma History Screen (Carlson et al., 2011)

The events below may or may not have happened to you. Circle "YES" if that kind of thing has happened to you or circle "NO" if that kind of thing has not happened to you. If you circle "YES" for any events: put a number in the blank next to it to show how many times something like that happened.

Number of times something
like this happened

| | | | | |
|---|---|---|---|---|
| A. | A really bad car, boat, train, or airplane accident | NO | YES | _____ |
| B. | A really bad accident at work or home | NO | YES | _____ |
| C. | A hurricane, flood, earthquake, tornado, or fire | NO | YES | _____ |
| D. | Hit or kicked hard enough to injure - as a child | NO | YES | _____ |
| E. | Hit or kicked hard enough to injure - as an adult | NO | YES | _____ |
| F. | Forced or made to have sexual contact - as a child | NO | YES | _____ |
| G. | Forced or made to have sexual contact - as an adult | NO | YES | _____ |
| H. | Attack with a gun, knife, or weapon | NO | YES | _____ |
| I. | During military service - seeing something horrible or being badly scared | NO | YES | _____ |
| J. | Sudden death of close family or friend | NO | YES | _____ |
| K. | Seeing someone die suddenly or get badly hurt or killed | NO | YES | _____ |
| L. | Some other sudden event that made you feel very scared, helpless, or horrified | NO | YES | _____ |
| M. | Sudden move or loss of home and possessions | NO | YES | _____ |
| N. | Suddenly abandoned by spouse, partner, parent, or family | NO | YES | _____ |

**Did any of these things really bother you emotionally? NO YES**

**If you answered "YES", fill out a box to tell about EVERY event that really bothered you.**

Letter from above for the type of event: _____ Your age when this happened: _____

Describe what happened:

When this happened, did anyone get hurt or killed? NO YES

When this happened, were you afraid that you or someone else might get hurt or killed? NO YES

When this happened, did you feel very afraid, helpless, or horrified? NO YES

After this happened, how long were you bothered by it? not at all/1 week/2–3 weeks/a month or more

How much did it bother you emotionally? not at all/a little/somewhat/much/very much

**IF THERE WERE MORE EVENTS THAT REALLY BOTHERED YOU, GO TO OTHER SIDE**

Appendix F

Post Traumatic Growth Inventory (Tedeschi & Calhoun, 1996)

**Directions**: Indicate for each of the statements below the degree to which this change occurred in your life as a result of the crisis/disaster, using the following scale.

0 = I did not experience this change as a result of my crisis.
1 = I experienced this change to a very small degree as a result of my crisis.
2 = I experienced this change to a small degree as a result of my crisis.
3 = I experienced this change to a moderate degree as a result of my crisis.
4 = I experienced this change to a great degree as a result of my crisis.
5 = I experienced this change to a very great degree as a result of my crisis.

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

Note: Scale is scored by adding all responses. Factors are scored by adding responses to items on each factor. Items to which factors belong are not listed on form administered to participants.