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Posttraumatic Growth Following Pregnancy Loss

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POSTTRAUMATIC GROWTH FOLLOWING PREGNANCY LOSS

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ABSTRACT

POSTTRAUMATIC GROWTH FOLLOWING PREGNANCY LOSS

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Posttraumatic growth (PTG) is positive psychological change that can result from the struggle with trauma or other highly stressful events (Calhoun & Tedeschi, 1999; Calhoun et al., 2010). The aim of this study was to capture the rich narratives of individuals who have experienced pregnancy loss and reported PTG. The narratives of ten participants were investigated to better understand what areas of posttraumatic growth they experienced following this often-devastating loss, as well as the processes that led to this growth. Participants of this study reported experiencing growth in the domains of (a) Relating to Others, (b) Personal Strength, (c) New Possibilities, (d) Appreciation of Life, (e) Spiritual Change, and (f) Altruistic Expansion. The findings of this study support the existing literature on posttraumatic growth, suggest future directions for research, offer recommendations for behavioral health and medical practitioners, and provide insight into the experience of growth following pregnancy loss. This study outlines strategies that may help facilitate this growth. It is my hope that this study will be a resource for those grieving the loss of a pregnancy, as well as a resource their friends, family, and professionals who wish to provide support through this process. This dissertation is available in open access at AURA (https://aura.antioch.edu) and OhioLINK ETD Center (https://etd.ohiolink.edu).

Keywords: grief, resilience, posttraumatic growth, pregnancy loss, miscarriage, stillbirth, qualitative, interpretative phenomenological analysis

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CHAPTER 1: LITERATURE REVIEW

Many people who have been through a traumatic event report suffering negative psychological and physiological effects following these experiences. However, research conducted over the last few decades has suggested that, in addition to negative effects, some individuals who have undergone a traumatic event may experience positive change as the result of their struggle. This is referred to as posttraumatic growth (Calhoun & Tedeschi, 1999; Calhoun et al., 2010). Trauma, with regard to posttraumatic growth, is interchangeable with the terms "crisis" and "highly stressful event." It is broadly defined to include difficult events or circumstances that challenge an individual's view of the world and their place in it (Tedeschi & Calhoun, 2004). In this literature review I will define trauma and discuss reactions to adversity, including grief and resilience. I will introduce the concept of posttraumatic growth, discuss the experience of pregnancy loss, and discuss pregnancy loss as it relates to posttraumatic growth. The purpose of this qualitative research study was to explore the occurrence of posttraumatic growth following pregnancy loss.

Trauma

A traumatic event, as defined by the Diagnostic and Statistical Manual of Mental Disorders [DSM-V-TR], occurs when an individual is exposed to death, the threat of death, serious injury, or violence (American Psychiatric Association [APA], 2022). This may include directly experiencing the event(s), witnessing the event(s), learning that it occurred to a close family member or friend, or repeated exposure to aversive details of the event(s) (APA, 2022). These events, whether physical or psychological, may threaten an individual's view of their world and may lead the individual to perceive their world as unsafe and unreliable. This can make it difficult to cope with challenges (Jaffe & Diamond, 2011). It is estimated that over 70%

of the population in developed countries will be exposed to at least one traumatic event at some point in their life (Benjet et al., 2016).

Reactions to Adversity

Grief

The United States Substance Abuse and Mental Health Services Administration (2017) described grief as a strong, sometimes overwhelming reaction to loss, disaster, or other traumatic events. "Grief is a normal response of sorrow, heartache, and confusion" (p. 1). There is no correct way to grieve, and grief can involve a wide range of experiences. Individuals may feel numb and unable to feel joy or sadness. They may also feel angry, socially withdraw, and have physical reactions such as shakiness, muscle weakness, nausea and loss of appetite, difficulty sleeping, nightmares, and difficulty breathing. Grief is not linear in its progression, and each person's experience of grief is impacted by the type of loss and their personal context. For most people, the intensity of grief will gradually lessen over time. Individuals with complicated or traumatic grief may take months or even years to experience this reduction of grief.

Resilience

While it is common to experience grief following loss, some individuals additionally may demonstrate resilience. *Resilience* is a complex term that is discussed in stress and trauma literature as either the outcome of stress and coping processes or as the "dynamic interactions between risk and protective factors" (Amir, 2014, p. 25). Resilience can be understood as recovery, resistance, or reconfiguration (Bonanno, 2004). The analogy of a tree being blown by the wind illustrates these forms of resilience. Recovery refers to an individual's ability to return to the same level of functioning after a stressor has passed (Bonanno, 2004). This is also known as a "normative adaptation pattern" (Bonanno, 2004, p. 25). Amir (2014) described recovery as a

tree that bends when blown by the wind in order to prevent breakage; when the wind passes, the tree returns to its upright stance. Resistance is a form of resilience where an individual maintains the same level of functioning before, during, and after a stressor has passed. The tree that demonstrates resistance does not falter in the wind. The final form of resilience–reconfiguration–occurs when an individual is able to adapt to stressors through changes to their thoughts, feelings, and behaviors. When the wind blows against this tree it changes shape to bear the force of the wind. When the wind ceases the tree does not resume its upright stance, but rather, keeps this reconfiguration to withstand future winds.

Posttraumatic Growth

In this section I will define posttraumatic growth and differentiate it from resilience. I will explain the history of this phenomenon, describe a tool that is used to measure it as a framework for understanding PTG, and define the domains of posttraumatic growth that are assessed with this tool.

Posttraumatic growth is positive psychological change that is experienced as the result of a struggle with a traumatic or highly stressful event (Calhoun & Tedeschi, 1999; Calhoun et al., 2010). Some survivors of trauma may demonstrate resilience while others may demonstrate posttraumatic growth (PTG). It is important to distinguish PTG from resilience. The reconfiguration form of resilience is similar to PTG because it reflects a transformation rather than a maintenance or return to the previous level of functioning (Amir, 2004). However, reconfiguration differs from PTG because in reconfiguration, the transformations made can have both positive and negative elements, whereas PTG refers exclusively to positive transformations (Amir, 2004). This focus on PTG is by no means intended to minimize the negative experiences

that result from trauma and loss. The experience of growth does not result in a corresponding reduction in grief (Calhoun et al., 2010).

Calhoun et al. (2010) summarized that the existing research provides inconsistent data on "the relationships between various measures of growth and general measures of psychological distress" (p. 127). This suggests that the "experience of growth is best viewed as statistically independent from the experience of posttraumatic losses" (Calhoun et al., 2010, p. 127). More recent data by Eisma et al. (2019) found that the likelihood of PTG occurring is dependent on the level of distress experienced in response to a traumatic event, though this is not a linear relationship. An individual who does not experience distress from the event will experience limited PTG; an individual who experiences a moderate level of distress will experience higher levels of PTG; when the individual is too overwhelmed and distressed from the event, it becomes harder for them to experience PTG. Therefore, the experience of PTG does not "consistently predict better or worse outcomes" (Eisma et al., 2019, p. 240).

The idea that trauma, or significant loss and suffering, may lead to positive transformations can be traced back to ancient literature and philosophy as well as some religions (Amir, 2014). For example, Buddhism is said to have originated from prince Siddhartha Guatama's mission to seek liberation for himself and others from suffering and the inevitability of mortality (Amir, 2014). In Christianity, Jesus is said to have suffered as the ultimate sacrifice so that the sins of others could be forgiven (Amir, 2014). In some sects of Islam, suffering is viewed "as a means for better preparing oneself for the journey heavenward" (Amir, 2014, p. 75). Experiences of grief and suffering are central topics that are addressed by many other religions. Themes of transformation that result from suffering are evident in both Greek tragedy and literature that date back for thousands of years (Amir, 2014).

In the 20th century, researchers began to examine this phenomenon in communities that were impacted by disaster (Lim, 2017). Rather than being consumed by chaos, they found that affected individuals tended to be cooperative and willing to offer "social (e.g., assurance, affection, and closeness), tangible (e.g., money and shelter), and informational (e.g., situational information and aid-related information) support to others in need" (Lim, 2017, p. 82). Those who lived in these communities reported feeling interpersonal connection, a sense of community, and increased trust toward others (Lim, 2017). These findings suggest that facing adversity may increase an individual's compassion toward others and their engagement in prosocial behavior. One contemporary measure of PTG, the Posttraumatic Growth Inventory, provides a framework from which we can conceptualize the types of positive effects that comprise the PTG construct.

Posttraumatic Growth Inventory. With overwhelming evidence to support the concept of growth following adversity, Tedeschi and Calhoun (1996) developed the Posttraumatic Growth Inventory (PTGI). The PTGI is a 21-item self-report measure that examines positive change in the five domains of Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation of Life (Tedeschi & Calhoun, 1996). The 21 items on this measure were developed by reviewing the literature on responses to highly stressful events and interviewing individuals who had experienced "spousal loss, physical disabilities, and other life crises" (Tedeschi & Calhoun, 2004, p. 5). These items were factor-analyzed to produce the five domains of PTG (Tedeschi & Calhoun, 2004).

The PTGI is a well-researched instrument that has been used to explore PTG in a variety of populations. For example, recent studies have used the PTGI to explore PTG in victims of natural disaster (Han et al., 2019; Zhou et al., 2018), patients diagnosed with schizophrenia who were detained after committing an offense (Sylwia & Maryla, 2020), individuals diagnosed with

PTSD who participated in MDMA-assisted psychotherapy (Gorman et al., 2020), and women who have experienced pregnancy loss (Krosch & Shakespeare-Finch, 2017). I will now discuss the domains of PTG that are assessed by the PTGI, as much of the existing literature is centered on these concepts.

Relating to Others. Trauma and loss may cause negative shifts in relationships, but many individuals also report positive changes in relating to others. The domain of Relating to Others includes an increased sense of closeness with significant others as well as a greater sense of compassion toward others (Calhoun et al., 2010). To illustrate, one bereaved parent who was interviewed by Tedeschi and Calhoun (2004) stated, "When he died people just came out of the woodwork . . . I realize that relationships with people are really important now . . . and I cherish my husband a lot more" (p. 6). Another participant stated, "You find out who your real friends are in a situation like this" (p. 6).

New Possibilities. New Possibilities become available when the individual experiencing a stressor or loss takes on new roles and responsibilities (Calhoun et al., 2010). For example, one participant of Tedeschi and Calhoun's (2004) interviews reported that her grief led her to become an oncology nurse. In this role she was able to care for others going through similar experiences. This was a path she had never considered or pursued previously.

Personal Strength. Individuals may perceive themselves as more confident and demonstrating Personal Strength because they have been able to face adversity and survive such a difficult experience (Calhoun et al., 2010). A bereaved parent from Tedeschi and Calhoun's (2004) interviews stated, "I can handle things better. Things that used to be big deals aren't big deals to me anymore. Like big crisis problems, they will either work out or they won't. Whichever way it goes, you have to deal with it" (p. 6). The identification of personal strength

was found to often be correlated with an increased feeling of vulnerability (Tedeschi & Calhoun, 2004). When an individual experiences trauma, they have experienced a loss of control that shatters their assumptions about the world (Dekel et al., 2011). It has been speculated that the vulnerability caused by this loss of control leads to "intense cognitive processing in an attempt to understand what happened," which eventually turns into self-control and creates the opportunity for PTG (Dekel et al., 2011, p. 249).

Spiritual Change. PTG may be experienced as the result of existential questioning in general, but in the United States this growth tends to be centered on Spiritual Change or religious elements (Calhoun et al., 2010). One participant from Tedeschi and Calhoun's (2004) interviews stated the following:

> You think about getting through something like that and it's downright impossible to even conceive of how you ever could. But that's the beauty of the thing . . . it's gonna have to be said because I believe that God got me through it. Five or six years ago I didn't have these beliefs. And I don't know what I would do without Him now. (p. 6)

Appreciation of Life. The last domain of PTG, Appreciation of Life, often appears as individuals choose to live more deliberately in an effort to make the most out of the time they have (Calhoun et al., 2010). Individuals who experience growth in this area may identify with "being so lucky" and appreciating the "little things" (Tedeschi & Calhoun, 2004, p. 6). They may change their priorities as they recognize important things they once took for granted (Tedeschi & Calhoun, 2004). For example, a previously career-oriented parent may choose to take a step back at work in order to spend more time with their child.

Pregnancy Loss

This section will discuss pregnancy loss and the factors that might influence people's reactions to it. There are many factors that might be associated with different reactions to loss. Examples of these include type of loss, delivery process, other medical procedures needed

related to the loss, knowing or not knowing the results of testing, rituals and reminders of the baby, having or not having a living child at the time of the loss, age of parents, and recurrent loss. Some of these factors will be discussed in this section, but it is not possible to know all of the factors that will impact a family's experience of loss. I will then discuss common psychological consequences of pregnancy loss, including grief. I will follow this by reviewing existing literature that has explored the connection between pregnancy loss and PTG. Finally, I will discuss the meaning reconstruction model of bereavement, which is a theory about one process that has been found to be associated with PTG following pregnancy loss. Finally, I will discuss how this research relates to the present study.

Type of Loss

Miscarriage. The American Pregnancy Association (2021) is a national health organization in the United States that promotes reproductive and pregnancy wellness through education, support, advocacy, and community awareness. The association defines miscarriage as the spontaneous loss of pregnancy within the first 20 weeks of gestation. It is the most common type of pregnancy loss and occurs in as many as one in four pregnancies. About 80% of pregnancy loss occurs in the first trimester, which runs from conception through the end of week 12 (Dugas & Slane, 2022). The most frequent cause of miscarriage in the first trimester is a chromosomal abnormality, which cannot be prevented and is not caused by any environmental factor or choice that parents have the power to influence. Signs of miscarriage vary but may include bleeding, the passage of tissue, back pain, weight loss, and contractions (American Pregnancy Association, 2021).

Stillbirth. The loss of a fetus in the womb after 20 weeks gestation is referred to as stillbirth (Centers for Disease Control and Prevention [CDC], 2021). Stillbirth affects about 1 in

160 births in the United States, with the vast majority occurring before the onset of labor (CDC, 2021). March of Dimes (2020) is a nonprofit organization in the United States aimed at improving the health of mothers and babies. It was founded by President Franklin D. Roosevelt in 1938 and provides extensive information for pregnant people and healthcare providers about what to expect when experiencing a stillbirth. The most common symptom of stillbirth is feeling the baby stop moving and kicking. Other symptoms include cramps, pain, or vaginal bleeding. When pregnant women experience these symptoms, they are urged to call their healthcare provider or go to the emergency room to have an ultrasound, which will reveal if the baby's heart has stopped beating.

Factors that Might Impact Experience Reaction to Pregnancy Loss

Delivery. If a baby is stillborn, the approach for delivery will vary based on how far along the pregnancy is, any medical conditions that may be present, and what the patient believes is best for them and their family. While some pregnant people might need to give birth immediately out of medical necessity, it is often safe to wait until they go into labor naturally, which often occurs within two weeks after the baby dies in the womb. Healthcare providers might recommend dilation and evacuation, also known as D&E. D&E is a surgical procedure where the cervix is dilated to remove tissue from the lining of the uterus. If a pregnant person would like to deliver their baby right away, a healthcare provider might induce labor with medication or by manually breaking the amniotic sac. This approach would also be recommended to reduce the risk of blood clots if the pregnant person does not naturally go into labor within two weeks after their baby's death. The last option for delivery is a caesarean birth, or c-section, where the doctor cuts into the uterus to deliver the baby (March of Dimes, 2020).

Testing. March of Dimes (2020) explains that after a stillbirth, a healthcare provider might perform a variety of tests to attempt to determine the cause of death. Testing may include amniocentesis, autopsy, and a review of family history. However, despite these options for testing, it is common that healthcare providers are unable to determine the cause of the late miscarriage or stillbirth (March of Dimes, 2020), and not knowing the cause may be difficult for families.

Rituals and Reminders of Baby. March of Dimes (2020) explains that families are encouraged to do what feels best for them at birth. There are options available that can help families to grieve and remember their baby. Families may choose to spend time alone with their baby and family members. They can name their baby, hold their baby, and bathe and clothe their baby. Some families choose to take part in cultural or religious traditions, such as baptizing their baby. They can take photos, make footprints, save locks of hair, or keep mementos from the hospital such as their baby's blanket. Painful reminders of the loss that are likely to occur after leaving the hospital include hearing names they had in mind for their baby, seeing the nursery at home, having breast milk come in, and having to inform others of the loss. It is common for partners and families to have different ways of coping with grief. Hospitals might have loss and grief programs available or can connect families with grief counseling to help with this process.

Informing Children of Loss. Having a child at home can remind parents that they can have a successful pregnancy, but they can also be a painful reminder of how much they had wanted another child. After a miscarriage or stillbirth, families are faced with the challenge of explaining this in a developmentally appropriate way that children will understand (Johnstone, 2022). Families can choose to involve children in any rituals or ways that they plan to memorialize the pregnancy. Informing a living child of this loss and including them in this

process is another factor that might make this loss challenging. There appears to be limited research about whether the drive to keep things together for one's living child has an impact on grief reactions.

Involuntary Childlessness. Pregnancy loss during a first pregnancy often highlights the fear that one might never be able to have children. Couples who experience pregnancy loss are likely to grieve their dreams of parenthood (Tian & Solomon, 2020). Childless women who suffer a miscarriage tend to experience significantly higher levels of grief than women who already have children (Kersting & Wagner, 2012; Schwerdtfeger & Shreffler, 2009). While many of these couples may go on to give birth, approximately 5% of American couples will continue to be involuntarily childless (Kreyenfeld & Konietzka, 2017). This experience of involuntary childlessness has been associated with increased health complaints, greater anxiety and depression, complicated grief, and long-lasting impacts on women's relationships and intimacy throughout their lives. "The long-term psychological effects of stress related to reproductive problems are comparable to the psychological impact of a long-term disease" (Schwerdtfeger & Shreffler, 2009, p. 213).

Internalized social norms may also further inform women's experience of pregnancy loss (Whiteford & Gonzalez, 1995). Women are socialized to view their "self-worth, femininity, and reproductive success as interrelated, and not being able to have children may diminish their sense of value in society" (Freedle & Kashubeck-West, 2021, p. 158). Those that experience involuntary childlessness may experience their inability to have children as a central theme throughout their lives and have difficulty moving forward with other life transitions (Schwerdtfeger & Shreffler, 2009). Experiences of miscarriage or stillbirth may affect future

pregnancies as parents face the fear of another loss, prenatal depression, and prenatal attachment problems (Diamond & Diamond, 2017).

Reactions to Pregnancy Loss

Grief and Psychological Consequences of Pregnancy Loss

Since the 1980s, research has shown that pregnancy loss can result in psychological distress for those who were pregnant, as well as their partners. Prenatal loss has repeatedly been shown to be a traumatic event that can be "experienced by women just as significantly as the loss of a living child and family member" (Christiansen, 2017, p. 61). It may break an individual's trust in their body, health, "and the tacit belief that pregnancy would be a given" (Jaffe & Diamond, 2011, p. 54). These outcomes are often sustained, can result in extensive stress, and may produce marital conflict. Miscarriage is a unique form of loss, given that it is often a private experience that is not publicly mourned (Schwerdtfeger & Shreffler, 2009). Tian and Solomon (2020) describe pregnancy loss as a significant experience that can result in "acute and prolonged grief reactions" (p. 237). They summarize that parents may experience guilt, depression, feelings of failure, a sense of injustice, loss of control over their bodies, and social withdrawal. This loss may make parents question their ability to care for their child and may have a negative impact on their sense of identity and purpose.

Pregnancy loss at any gestational age is a painful emotional experience for families (Creamer et al., 2005). While grief is inherent in loss, the trauma of loss does intensify with later gestational age. This goes beyond the physical trauma of delivering a baby at a later gestational age. Later in pregnancy, individuals are more likely to have heard their baby's heartbeat, watched their baby grow on ultrasounds, experienced significant changes to their body, and shared their pregnancy with family, friends, and employers. They are more likely to have taken

several steps to change their life and home in preparation of bringing a new family member into their world.

Clinically Significant Symptoms. While bereavement is an expected response following pregnancy loss, some individuals may experience clinically significant levels of psychological distress that meet criteria for the diagnosis of a mental health disorder (Christiansen, 2017). Psychological distress resulting from exposure to a traumatic or stressful event may present as symptoms of anxiety, fear, anhedonia, dysphoria, externalizing anger and aggression, or dissociation (APA, 2022). Individuals who experience pregnancy loss may develop "anxiety disorders, obsessive-compulsive disorder, substance abuse, and acute and posttraumatic stress disorder (PTSD)" (Kunt Isguder et al., 2018, p. 100). To illustrate, a meta-analysis that examined rates of PTSD following pregnancy loss found that 7-28% of women met criteria for PTSD in the 3-12 months following their pregnancy loss. These results were present after controlling for pre-existing PTSD, depression, and exposure to interpersonal violence (Christiansen, 2017). The rate of PTSD in women who experience pregnancy loss is in the "moderate-to-severe range when compared to other female trauma populations" (Christiansen, 2017, p. 61). Symptoms may include feelings of fear, helplessness, and horror as well as reports of re-experiencing the trauma, avoidance, and arousal symptoms (Christiansen, 2017). The severity of grief reactions typically decreases within the first 12 months, and significantly after about two years, though it is not uncommon for these symptoms to last for many years (Krosch & Shakespeare-Finch, 2017). Each individual affected by pregnancy loss is likely to respond in a unique way.

Resilience and Posttraumatic Growth Following Pregnancy Loss

The existing literature on pregnancy loss does not discuss resilience with regard to recovery, resistance, and reconfiguration. In fact, there is very limited information describing

resilience following pregnancy loss. One of the few studies available explored resilience in physicians and midwives who work in low-resource areas with high perinatal death rates, but it did not explore the experience of patients (Petrites et al., 2016). The existing research that explores the experience of patients following pregnancy loss appears to focus more on grief reactions and posttraumatic growth than resilience.

Studies have suggested that PTG may result from bereavement; for example, parents who had lost a premature baby reported experiencing both grief and PTG in the years following their child's death (Büchi et al., 2007). The hypothesis that women may experience PTG following pregnancy loss has been further examined using the PTGI, the quantitative measure described previously. Krosch and Shakespeare-Finch (2017) reported moderate levels of PTG on the PTGI in a sample of 328 women who experienced miscarriage or stillbirth. The greatest PTG was reported in the domains of Appreciation of Life, Personal Strength, and Relating to Others. It is important to recognize that this sample was predominantly Caucasian, married or partnered, and had completed postsecondary education. It is possible that more diverse samples may have demonstrated PTG in more, fewer, or different domains. While this information confirms that women may experience PTG following pregnancy loss, it misses out on the rich information that can be produced from a qualitative exploration of the experience.

Meaning Reconstruction

Amir (2014) describes posttraumatic growth (PTG) as a form of meaning reconstruction following crisis and loss. Individuals have a tendency toward "storying" experience in an effort to seek and organize knowledge. According to narrative theory, "The most powerful therapeutic process I know is to contribute to rich story development" (White, 2004, as cited in Center for

Narrative Studies, 2022). This narrative formulation of experience "can be viewed as having three dimensions: personal, interpersonal, and broadly social or cultural" (Amir, 2014, p. 69).

On the personal level, Amir (2014) explains that our self-narrative is formulated by the stories we tell about ourselves, others tell about us, and "the stories we enact in their presence" (p. 70). When an individual goes through crisis or loss, their self-narrative is often affected, and as a result, the individual's assumptions and goals are revised, repaired, or replaced. On an interpersonal level, sharing traumatic life narratives is an interactional process that may result in the narrative being supported or contested by others, which in turn may facilitate or hinder PTG. On a social level, narrative processes provide a "context for posttraumatic stress or growth" (p. 71). For example, individuals can use some cultural stories as a resource to make meaning out of adversity whereas other narratives of cultural identity may contribute to oppression. The societal expectation to have children, or become a mother, is an example of a cultural narrative that may impact an individual who has experienced pregnancy loss. If a woman does not adhere to cultural practices, she might perceive her pregnancy loss to be a punishment, or something that she deserved. She may experience a great deal of shame and be blamed by family and community members. For example, in Nigerian society, pregnant women are encouraged to wear a safety pin on their garments or undergarments to protect their unborn child from evil spirits and ensure a safe delivery (Kola et al., 2017). Although not forbidden by Halakha or Jewish law, some Jewish customs prohibit baby showers because gifts for unborn children were once believed to draw the attention of dark spirits. Similar customs and fears prevent many Orthodox Jews from publicly sharing their son's name until the bris, or circumcision on the eighth day after birth, and their daughter's name until a baby naming ceremony (Katz-Stone, 2024). No pregnancy complications have been reported from these cultural practices, though they may result in psychological

damage when the pregnancy does not go as planned or when they have not been followed (Kola et al., 2017).

Gillies and Neimeyer's (2006) meaning reconstruction model of bereavement suggests that positive psychological change is likely to be experienced if individuals are able to find significance in their loss. This model proposes that meaning reconstruction occurs through sense-making, benefit finding, and identity change. Sense-making can be understood as attempts to understand the loss and why it occurred. Benefit-finding refers to resulting growth, valuing of life lessons, and changes to priorities. "Identity change occurs when profound loss challenges the coherence of bereaved individuals' self-narrative, thereby prompting them to relearn the self as they relearn the world" (p. 238). A study by Westrate and Glück (2017) explored the impact of exploratory and redemptive processing of difficult life experiences. Exploratory processing, which included meaning-making and personal growth, was positively associated with an increased sense of wisdom. Redemptive processing, which included positive emotional reframing and event resolution, was positively associated with increased adjustment. In a study of 221 individuals who self-identified as trauma survivors, Zeligman et al. (2019) also found significant, positive correlations between PTG and both meaning making and the search for meaning. Furthermore, they found significant, positive correlations between PTG and internal locus of control, suggesting that it "moderated the relationship between meaning presence and PTG" (Zeligman et al., 2019, p. 12). Zeligman's research proposes that internal locus of control might be another important element to consider in this process.

The meaning reconstruction model of bereavement suggests that individuals who experience pregnancy loss are more likely to experience PTG when they are able to reconstruct the meaning of their pregnancy loss (Tian & Solomon, 2020). Tian and Solomon (2020) explored

this relationship in a study of 298 women who had experienced miscarriage in the previous 12 months. The posttraumatic growth inventory (PTGI) was used to assess posttraumatic growth, and the meaning reconstruction of miscarriage was assessed using a short version of the Integration of Stressful Life Experiences scale. This version of the Integration of Stressful Life Experiences scale was a 6-item self-report measure that asked participants to respond to items on a 5-point Likert scale. Items from this measure asked about the extent to which participants were able to engage in meaning reconstruction, rather than specific factors that increased or hindered their ability to engage in meaning reconstruction. For example, participants rated the item "I have difficulty integrating the miscarriage into my understanding about the world" (Tian & Solomon, 2020, p. 240). The highest levels of PTG were reported by participants who had high levels of grief accompanied by either high levels of meaning reconstruction or high levels of partner supportive communication.

Purpose of Research

Quantitative research, such as the results presented in Tian and Solomon's (2020) study, provides evidence that demonstrates a relationship between PTG and meaning reconstruction in regard to pregnancy loss. However, using quantitative data alone restricts participants to only sharing experiences that align with items on the measures that researchers choose to use. These measures may not fully reflect participants' experiences because rating scales do not allow for participants to share examples or context. By providing participants with the opportunity to write about their experiences, we may gain further insight into the process of meaning reconstruction and how that may be related to PTG across domains.

The purpose of this study was to use a qualitative approach to capture the rich narratives of individuals who have experienced pregnancy loss and report PTG. With these narratives, I

hoped to better understand how individuals engaged in the meaning reconstruction that led to PTG. Furthermore, I hoped to examine the relationship between meaning reconstruction and the various domains of PTG. This information may be helpful in supporting families who are navigating similar losses.

CHAPTER II: METHOD

Research Questions

1. What changes related to posttraumatic growth do individuals experience following pregnancy loss?
2. What factors do they believe helped them achieve these positive outcomes?

Methodology: Interpretative Phenomenological Analysis

Interpretative Phenomenological Analysis (IPA) is a qualitative methodology that seeks to understand how individuals make sense of their experiences (Creswell & Poth, 2018). IPA was developed in 1996 by psychologist Jonathan Smith (Noon, 2018). It draws on phenomenology, hermeneutics, and idiographic theories to explore personal experience with a commitment to "giving voice and making sense" (Noon, 2018, p. 75). Phenomenological research views participants as the experts of their own experiences and focuses on the thoughts, feelings, and memories that they share (Noon, 2018). Hermeneutics refers to interpretation, which is impacted by the participant's ability to share their experiences as well as the researcher's ability to analyze these experiences (Noon, 2018). This dual process is referred to as a double hermeneutic (Noon, 2018), where both the participant and the researcher engage in interpretation. The idiographic emphasis of IPA involves in-depth analysis of phenomena and how individuals make meaning of their experiences based on their own unique contexts (Noon, 2018). The theoretical underpinnings of IPA make it a suitable approach to understanding posttraumatic growth in women who have experienced pregnancy loss, through exploring the meaning they make of their loss.

Participants and Sampling

Purposive Convenience Sampling. IPA focuses on purposeful, homogenous samples (Noon, 2018; Peat et al., 2019). Participants must have experienced the phenomenon being studied to ensure that the research question is meaningful and relevant (Peat et al., 2018). Initial recruitment for this study took place through referral. I contacted medical providers and mental health clinicians within New England to advertise the study and recruit participants. Providers I contacted were my own professional contacts. Through snowball sampling I was introduced to additional professional contacts by my existing professional contacts. I attempted to advertise my study in online support groups by reaching out to program administrators, but was unsuccessful with this approach due to strict group policies restricting research efforts. To gather more participants, I expanded my recruitment to include social media sampling. The study was shared on Facebook, Instagram, and LinkedIn.

Potential participants all viewed the same flyer advertising the study, whether viewing this online or in person (see Appendix B). This flyer defined posttraumatic growth, described the purpose of the study, the method to be used, and criteria for participation. The flyer included both a link to the online questionnaire and a generated quick response (QR) code. Those viewing the flyer online were able to click the link or copy and paste it into their web browser. Those viewing the flyer in-person were able to scan the QR code using a mobile device to access the survey. This link and QR code brought interested participants to a brief eligibility questionnaire. Participants were informed of their eligibility by being allowed to continue moving through the survey. The next page was the informed consent form. Participants had the choice to continue on to the demographic form or to exit without consequence. Following completion of the demographic form, participants were able to move on to the writing prompt. All prompts and

forms were accessed through the initial survey link or QR code. Participation was complete once the participant submitted their final answers to the writing prompt.

Inclusion and Sample Size. Participation was completely voluntary, and no incentive was offered to participants for being a part of the study. Inclusion criteria were: (a) must have been over the age of 18, (b) must have been pregnant and experienced pregnancy loss after 12 weeks gestation, and (c) this loss must have been experienced within the last five years. Participants were chosen without regard to ethnicity or socioeconomic status.

In IPA, sample sizes are typically kept to ten or fewer participants to allow for thoughtful and detailed analysis of participants' rich accounts of their experiences (Peat et al., 2018). I recruited ten participants to ensure I had sufficient data to form meaningful comparisons and contrasts within and between cases. By having participants provide a written narrative, I did not need to transcribe a verbal interview. For this reason, having a sample size of ten participants allowed me to align with IPA's idiographic commitment to in-depth analysis of each account.

Ethical Considerations and Informed Consent

The potential for minimal psychological harm existed in this study because participants were asked to reflect on and write about their experiences following pregnancy loss. Participants were not required to divulge details of their miscarriage or stillbirth. The informed consent document (see Appendix D) provided participants with information about the purpose of the research, length of time involved in participation, limits of confidentiality, and the right to terminate participation at any time without consequence. Participants were encouraged to seek professional mental health support if they experienced distress about this sensitive topic and had difficulty managing their distress on their own. The informed consent document included contact

information for The National Suicide Prevention Lifeline and the Psychology Today therapist referral website.

Researcher Biases and Assumptions

The double-hermeneutic process that occurs in IPA requires the researcher to play an integral role in interpreting the experiences of participants. For this reason, it is important that I disclosed my personal biases, assumptions, and beliefs that may interfere with data analysis. In this section I have disclosed my inspiration for this study as well as personal and academic experiences that may influence how I perceive the data.

My inspiration for this dissertation topic stemmed from many conversations with my partner about difficult life experiences that he believes led him to grow and change his life for the better. We often discussed the stark contrast of his life trajectory in comparison to others who had been through similar experiences. My academic exposure to this topic at the time was limited to resiliency, but I did not feel that this fully captured his experience. In a related conversation with a faculty member, I was introduced to the topic of posttraumatic growth.

I appreciated the strength-based lens that lends itself to posttraumatic growth and wondered about its implications with different populations. I have always had an interest in women's health and considered choosing to focus on a variety of health conditions before settling on pregnancy loss. Over the last few years, I have noticed this topic become more prominent in my life. Part of this may be due to my age, as some of my peers have begun to start families of their own, but I have also noticed an increased presence of the topic on social media, as more and more people have taken the vulnerable step of sharing their stories online. I plan to have children of my own one day and am fearful that I could become one of the one in four women who experience pregnancy loss. This fear drives my hope that this experience could lead

to something more meaningful than loss alone. This hope might impact my understanding of the data; for example, I might interpret a participant's responses in a positive light that is not reflective of their experience. Various steps, such as peer review, were taken to limit the impact of my biases. I immersed myself in the existing literature on posttraumatic growth following pregnancy loss and found it to be limited. It seemed that the complexity of this experience was not reflected in the existing quantitative data. My hope for this research was to gain a better understanding of the complex experience of pregnancy loss and to identify the factors that impact the ways in which posttraumatic growth takes form.

Data Collection Methods and Procedures

Data were gathered through the online survey tool Google Forms. The first page of the survey included required questions about eligibility (see Appendix C). Participants were required to provide a "yes" or "no" answer to the following questions: (a) I am at least 18 years of age (b) I have been pregnant and experienced a miscarriage or stillbirth after 12 weeks gestation and (c) I have experienced a miscarriage or stillbirth within the last 5 years. If the participant answered yes to all three questions they were considered eligible to participate and able to proceed to the informed consent document (see Appendix D). The participants acknowledged the informed consent document and proceeded by clicking "Next." The participant then had access to a brief Demographics Survey (see Appendix E). Participants answered an open-ended prompt that allowed for in-depth exploration of each participant's experience (see Appendix F). Participants were recommended to spend up to 30 minutes reflecting on and answering the prompt. Participation was complete after this step. Responses were exported from Google Forms in the form of text documents.

Data Analysis Processes and Procedures

Overview. Interpretative Phenomenological Analysis (IPA) was used to analyze the data gathered through the participant writing prompt. I examined how each participant made sense of their experience of posttraumatic growth in the aftermath of pregnancy loss. When analyzing and interpreting the data, I first attended to the idiographic nature of each individual's narrative. I then explored the presence of patterns, common themes, and discrepancies among participants. The end result was a detailed narrative that provided insight into this experience as a whole.

Interpretative Phenomenological Analysis. IPA is described as an iterative and inductive process that follows common processes and principles (Smith et al., 2009). Smith et al. (2009) explained that researchers have room for flexibility and innovation in their analysis, though many utilize a well-defined process with distinct steps. These steps include (a) reading and rereading, (b) initial noting, (c) developing emergent themes, (d) searching for connections across emergent themes, (e) moving to the next case, and (f) looking for patterns across cases. Steps 1–4 are repeated for each case before progressing to the next stages. Finally, data are organized into a master list of superordinate and emergent themes.

Step 1: Reading and rereading. The first step of this process began with the examination of the first participant's responses. It requires that researchers slow down and ensure the participant is the focus of analysis (Smith et al., 2009). I immersed myself in the data by reading and rereading the participant's responses without attempting to summarize or simplify the data in any way.

Step 2: Initial noting. The second step of analysis is the most time-consuming and involves examining the semantic content and language on an exploratory level (Smith et al., 2009). In line with IPA's phenomenological focus, the goal of this step is to produce a detailed

set of notes that reflect the participant's explicit meaning (Smith et al., 2009). I made three types of comments while I read through the participant's responses: (a) descriptive comments that describe the content of what the participant shared, (b) linguistic comments that focus on the specific use of language, and (c) conceptual comments that use an interrogative and interpretative approach.

Step 3: Developing emergent themes. An increased volume of detail resulted from the combination of the participant's responses and my initial noting (Smith et al., 2009). I reviewed my notes from the individual participant and began to identify emergent themes. During this step, I began to group information in an effort to reduce the volume of data, while maintaining complexity that captured the mapping of interrelationships, connections, and patterns between notes (Smith et al., 2009).

Step 4: Searching for connections across emergent themes. This step of IPA involves mapping out the emergent themes found in Step 3, beginning by typing all of the emergent themes in chronological order (Smith et al., 2009). These themes were clustered into superordinate, or higher level, themes (Smith et al., 2009). This process involved abstraction (i.e., clustering similar emergent themes to form a superordinate theme), subsumption (i.e., creating a superordinate theme from a single emergent theme), polarization (i.e., examining oppositional relationships between emergent themes), contextualization (i.e., attending to temporal, cultural, and narrative themes), numeration (i.e., examining the frequency in which an emergent theme appears within a participant's responses), and function (i.e., focusing on the function that emergent themes served in a participant's responses; Smith et al., 2009). The concluding emergent and superordinate themes were then organized into a table to provide a visual representation of the structure of emergent themes (Smith et al., 2009).

Step 5: Moving to the next case. The superordinate and emergent themes identified in the first participant's responses were bracketed for later use. Steps 1 through 4 were repeated for each subsequent participant's responses. Before I moved on to the next step, I utilized peer debriefing to establish inter-rater reliability. This peer reviewed the responses to the writing prompts and made note of emergent themes that they observed in the data prior to meeting with me to compare the findings.

Step 6: Looking for patterns across cases. I laid out the table from each participant's responses to examine them for patterns across cases. I reconfigured and relabel themes as needed throughout this process in an effort to best represent unique idiosyncratic instances, while also demonstrating how these themes share higher order qualities (Smith et al., 2009). This process allowed me to create a master list of superordinate and emergent themes (see Table 2). This process continued throughout the process of writing the findings (Jeong & Othman, 2016). Smith et al. (2009) explained, "[There] is not a clear-cut distinction between analysis and writing up. As one begins to write, some themes loom large, others fade, and so this changes the report" (p. 110). As a result, themes that are only relevant to single cases remained recorded under the individual participant's superordinate and emergent themes but were discarded from the master list.

Research Trustworthiness

While we can assess the quality of quantitative research using measures of reliability and validity, qualitative research requires different methods of establishing trustworthiness (Lincoln & Guba, 1985). Trustworthiness refers to "the degree of confidence in data, interpretation, and methods used to ensure the quality of a study" (Connelly, 2016, p. 435). There are debates in the literature regarding what methods produce trustworthiness, but criteria outlined by Lincoln and

Guba (1985) have been widely accepted (Connelly, 2016). These four concepts of trustworthiness are credibility, dependability, transferability, and confirmability (Lincoln & Guba, 1985). The following outlines efforts made toward trustworthiness in this study.

Credibility

Credibility refers to the confidence in the truth of the findings (Lincoln & Guba, 1985). This concept parallels internal validity in quantitative research and is often regarded as the most important criterion in establishing trustworthiness (Connelly, 2016; Lincoln & Guba, 1995). Credibility was maintained through the use of peer review. "A peer reviewer provides support, plays devil's advocate, challenges the researchers' assumptions, pushes the researchers to the next step methodologically, and asks hard questions about methods and interpretations" (Creswell & Miller, 2000, p. 129). I utilized peer review by having a peer who is familiar with the topic review the responses to the writing prompts. They served as an independent rater by making note of emergent themes that they observed in the data. We then met to discuss the emergent themes and findings. This process of comparing findings established interrater reliability. There were no significant disagreements in the emergent themes identified by myself and my independent rater. When variations in wording could have impacted the meaning of an emergent theme, we discussed the differences and came to a joint decision about what would most accurately highlight the voices of participants.

Dependability

Dependability refers to the consistency of research findings (Lincoln & Guba, 1985). This concept parallels reliability in quantitative research (Lincoln & Guba, 1985). To demonstrate dependability, this research must be able to be repeated. Dependability was established by providing detailed methodological steps and procedures. Any changes to this

process were reviewed with my dissertation chair and described in detail so that an audit can be performed, if needed. The process of peer review also contributed to the dependability of this study by creating an opportunity to highlight and address any methodological issues (Lincoln & Guba, 1995).

Transferability

The concept of transferability parallels external validity in quantitative research (Lincoln & Guba, 1985). It is the responsibility of the researcher to provide enough detail so that the reader can come to their own conclusion about whether the findings can be generalized to other settings or contexts (Creswell & Miller, 2000; Lincoln & Guba, 1985). These detailed accounts that provide context to the reader are referred to as a "thick" description (Creswell & Miller, 2000). To establish transferability, I provided thick descriptions in my identification of emergent themes.

Confirmability

The concept of confirmability parallels objectivity in quantitative research (Lincoln & Guba, 1985). Confirmability refers to neutrality; it focuses on the extent to which the findings are shaped by the participants without distortion due to researcher bias or motivation (Lincoln & Guba, 1985). To establish confirmability, I demonstrated reflexivity. A researcher demonstrates reflexivity by providing a statement of positionality that shares their biases and beliefs with the reader (Lincoln & Guba, 1985). To further provide evidence that the findings were shaped by the participants, I provided examples of original text from the writing responses that led to specific themes and interpretations.

Summary

Pregnancy loss, both through miscarriage and stillbirth, is a common experience. It can impact individuals regardless of their age, gender, sexual orientation, race, ethnicity, nationality, and socioeconomic status. While this experience may be highly stressful or traumatic, it may also lead to positive changes. This study focused on individuals who have experienced pregnancy loss within the last five years. It explored changes related to posttraumatic growth and the factors that helped these individuals achieve these positive outcomes.

CHAPTER III: RESULTS

Summary and Description of Participants

There were a total of 21 potential participants that responded to the study's recruitment invitations. Some participants were recruited through a psychiatric nurse practitioner who previously provided care in an obstetrics and gynecology office and was working in private practice at the time of this study. Other participants were recruited through social media sampling (e.g., through Facebook and LinkedIn). Participants were not asked to disclose how they were recruited for the study so it is unclear how many participants came from each of these sources. Attempts to recruit from other medical offices or online support groups were unsuccessful due to restrictions these organizations and groups had about disseminating research. Of the 21 participants, 10 met the inclusionary criteria of (a) being 18 years of age or older, (b) having been pregnant and experienced a pregnancy loss after 12 weeks gestation, and c) experienced this loss within the last five years. These 10 participants participated to completion. The following paragraph provides demographic information.

All participants ranged from 26 to 33 years of age, with a median of 29 years of age. With regard to race and ethnicity, 9 participants identified as White or Caucasian and 1 participant identified as Asian. 6 of the 10 participants reported that they had difficulty getting pregnant and 4 of the 10 participants had gone through fertility treatment. All participants had experienced multiple pregnancies. Of the participants who had never had a live birth, two reported being pregnant twice, while another reported three pregnancies. Of the participants with one live birth, two reported two pregnancies, two reported three pregnancies, and one reported five pregnancies. One participant had two live births and reported three pregnancies. These results indicate that 7 of the 10 participants experienced recurrent loss and 3 of those 7

participants had never had a live birth. 2 of the 10 participants who had successful past pregnancies were currently pregnant at the time of their participation. The amount of time that had passed since the participants' most recent pregnancy loss ranged from 7 months to 3 years and 5 months. For a detailed description of each participant please see Table 1.

Table 3.1

Participant Demographics

Participant	Age	Difficulty Getting Pregnant	Had Fertility Treatment	Currently Pregnant	# of Pregnancies	# of Live Births	Years Since Most Recent Loss
1	26	✓	✓		2	0	3.41
2	28		✓		2	0	1.00
3	31	✓			3	0	3.41
4	33				3	1	1.50
5	32	✓	✓		2	1	3.00
6	26	✓	✓		5	1	1.50
7	29	✓			2	1	3.58
8	27			✓	3	1	0.58
9	29				3	2	1.92
10	32	✓		✓	7	2	2.50

Themes from Qualitative Analyses

The following findings detail the superordinate and emergent themes that surfaced during the qualitative analyses. As emergent themes were grouped together it became clear that the superordinate themes were consistent with the five domains of posttraumatic growth that have been discussed in the existing literature and were labeled as such, with the addition of one additional superordinate theme. The superordinate themes include (a) Relating to Others, (b) Personal Strength, (c) New Possibilities, (d) Appreciation of Life, (e) Spiritual Change, and (f) Altruistic Expansion.

The themes are presented in order of their consistency and depth across responses, with the most salient listed first in descending order. That is, the superordinate theme with the highest

frequency of emergent themes and associated writing excerpts is presented first, followed by the superordinate theme with the second highest number, and so forth. In some cases, a theme surfaced an equal number of times across participants. When this occurred, the superordinate theme in which participants elaborated the most upon in their responses was listed first. It is important to note that themes were developed based on their recurrence in participant responses across multiple cases. See Table 2 for a list of themes that emerged from the data.

Table 3.2

Data Organized by Superordinate Themes and Emergent Themes

Superordinate Themes	Emergent Themes
Relating to Others	Strengthening of Existing Relationships Seeking Community
New Possibilities	Career Change Sense of Purpose
Personal Strength	Sense of Self Skills
Appreciation of Life	Appreciation of Life
Spiritual Change	Strengthened Spirituality
Altruistic Expansion	Sharing Experience to Help Others Offering Support

Relating to Others

In nine of the ten cases, participants described experiences that highlighted how their relationships with others changed and grew through their experience of pregnancy loss. The emergent themes were (a) Strengthening of Existing Relationships and (b) Seeking Community.

Strengthening of Existing Relationships. Many participants reported an increased sense of closeness to their friends, family, and partners. One participant shared:

> When I had my miscarriage, it really brought my husband and I closer together. It's unfortunate, because we mourned together, but in a way it brought us closer together. We shared this grief and instead of letting it divide us we decided to work harder together to support each other.

Some relationships were altered in a way that strengthened them, while other participants developed a newfound appreciation for existing relationships and support systems. One participant shared:

> I would still be crumpled up in a ball if I didn't have the support system I did. After wanting to give up many times, dealing with setback after setback, they were the ones that picked me up, wiped my tears and pushed me forward. They are the reason I get to hold my baby girl in my arms today.

Seeking Community. Participants of this study shared that they sought community to strengthen their own support system as well as be that support to others. One participant wrote, "Being in such a dark and isolated state has made me realize how important it is to create community by speaking openly about the experience. I heal out loud because I suffered in silence, like so many do." Another participant wrote:

> After my second miscarriage, I was very depressed for a bit as that was a late miscarriage. I didn't want to just keep dwelling on that. I looked for support groups, looked for churches, and reached out to other women with similar difficulties. I found that I had been putting those support systems on hold, only to really need them when I went through my miscarriages.

Personal Strength

In eight of the ten cases, participants described a greater sense of personal strength. They described having a stronger sense of self, as well as having developed new skills and having grown existing skills.

Sense of Self. Many participants reported increased acceptance for themselves and their bodies. One participant wrote, "It has encouraged me to treat myself more kindly," while another shared, "For a long time I was angry with my body, but through my miscarriage, I was able to

learn to love my body. To learn my own love language with myself. I've been able to grow physically and mentally." Other participants perceived themselves as better equipped to handle adversity. A participant wrote, "I never knew I would be able to endure such difficulties. Although I had lost myself here and there. I persevered and never gave up hope." Another participant shared, "It made me realize I was resilient and can go through a loss and a surgery and still make it out ok."

Skills. Other participants shared skills they developed through this process. For example, one participant wrote:

> I have also learned from the experience to be more assertive for myself and my family when it comes to things we need done or are concerned about. Losing our son made me realize that us as parents are all they have. If we don't stick up for them, then who will?"

Another participant shared that their pregnancy loss inspired them creatively and allowed them to use their artwork as a means of healing.

New Possibilities

Five of the ten participants endorsed a combination of changes including developing new interests, starting a new path for their life, and feeling a greater sense of purpose.

Career Change. Participants reported experiencing motivation to change their careers in order to pursue their dreams, take on roles caring for others, and access better medical benefits. One participant wrote:

> Motivation increased to pursue my career at new heights. More than one life dream. Being a mom is definitely, and was always, top of my list, but a huge part of myself also belongs to my career dreams. Time before kids was the best time to lay that foundation of success for myself.

Another participant shared how her tragic loss pushed her to put in her notice at work and pursue a career as a labor and delivery nurse. She wrote:

> I knew nothing about OB and was honest in my interview, but open with my story. I worked as an MA for 9 years and now I am in school completing my BSN following my dreams . . . [I take] pride in holding my standards high to be the best nurse I can be to my patients.

Another participant wrote that they initially switched to a different field that offered better pay while they were pregnant, and then again switched careers to access medical coverage for in vitro fertilization (IVF).

Sense of Purpose. Several participants expressed having a greater sense of purpose following their loss. For some, their experience of pregnancy loss reinforced and emphasized their desire to be a parent. For others, their newfound sense of purpose informed their career changes. One participant shared that her experience of pregnancy loss shifted her values, which increased her passion for building community and being involved in pro-life organizations.

Appreciation of Life

Four of the ten participants reported having a greater appreciation for life following their pregnancy loss.

Appreciation of Life. Emergent themes could not be differentiated beyond appreciation of life due to brevity of responses. One participant wrote, “A tragic loss and subsequent losses after this one has taught me to appreciate life in a way I never imagined.” Participants shared gratitude for the extra time they had with their living children, appreciation for successful pregnancies, and a desire to be more present with their families.

Spiritual Change

Four of the ten participants endorsed a strengthened sense of spirituality.

Strengthened Spiritually. Some participants shared that they started going to church more after their loss, while others were able to use prayer to maintain a positive mindset and develop their relationship with God. One participant wrote:

> I've always been spiritual, but my experience has caused a roller coaster relationship with God. I've been angry and screaming at him wondering why He would put me through so much pain, but would then understand what He was trying to teach me.

Altruistic Expansion

The final theme that emerged was altruistic expansion. Altruistic expansion can be understood as the desire or motivation to promote the welfare of others **(**Canevello et al., 2022). Many individuals who experience posttraumatic growth develop a greater sense of compassion toward others (Calhoun et al., 2010). This superordinate theme is in addition to the five domains on the PTGI.

Sharing Experience to Help Others. Participants expressed a desire to share their experience with others in hopes of offering support to people who are going through similar losses. They hoped that their stories would help others to navigate the process and reduce shame. One participant stated, "this topic of loss can be very taboo for people, but I find strength in being open and letting others know that they are not alone. That in itself has brought positive changes to my life."

Offering Support. Other participants chose to offer comfort and support to others "to pay it forward." On participant explained, "You truly never know what someone is going through, and that perspective is something I lacked before my losses." They extended this support to individuals grieving similar losses, friends going through difficult times, and through careers where they had caretaking roles.

Grief Responses

Although this study emphasized growth, it is important to recognize that this is a much more complex process. PTG did not result without significant struggle, difficulty, and grief. Participants of this study described being angry with their bodies, feeling depressed, and being in

"a dark and isolated state" following their losses. One participant shared that "my experience has caused a roller coaster relationship with God." Another participant shared, "After tragically losing my first baby at 7 months gestation, my life was turned upside down. [I was] at my lowest point in my life, questioning my faith and wondering how I could go on." This experience of growth did not occur in lieu of these challenges, but rather was another facet of these participants' experiences.

CHAPTER IV: DISCUSSION

The participants of this study reported experiencing PTG in domains that are consistent with the existing literature. Participants of this study reported experiencing growth in the domains of (a) Relating to Others, (b) Personal Strength, (c) New Possibilities, (d) Appreciation of Life, (e) Spiritual Change, and (f) Altruistic Expansion. These narratives support the existing literature that suggests that at least some women experience PTG following pregnancy loss. The following sections will discuss relevant findings in the domains of Relating to Others, Personal Strength, and New Possibilities. I will then discuss clinical implications of the results, limitations, and implications for future research.

Relating to Others

It is unsurprising that almost every participant endorsed areas of growth consistent with the Posttraumatic Growth Inventory (PTGI) domain of Relating to Others. Cohen and Willis's (1985) main-effect theory states that social support has a positive impact on mental health, regardless of the level of stress an individual is experiencing. Social support alleviates distress and promotes adjustment by providing individuals with frequent positive experiences, a sense of predictability and stability, and socially rewarding roles in their communities (Cohen & Wills, 1985). The positive correlation between social support and posttraumatic growth has repeatedly been demonstrated in the existing literature (Benetato, 2011; Han et al., 2019, Lai et al., 2018). Perceived social support following the experience of stillbirth has been associated with posttraumatic growth (Cacciatore et al., 2009). More specifically, it has been suggested that partner support has a moderating effect on grief and posttraumatic growth in women who have experienced pregnancy loss (Yoon et al., 2023).

Feeney and Collins (2015) developed a model of thriving through relationships that suggested that receiving quality social support improves views of the self and leads to PTG. In this model, social support not only serves as a buffer to the negative impact of stress or trauma, but also helps the individual to grow (Feeney & Collins, 2015). This social support (a) creates an environment of safety and comfort where individuals can express vulnerability and experience acceptance; (b) assists in developing and recognizing strengths and skills; (c) assists in the reconstruction process to increase motivation, utilize strengths, problem-solve, and cope with adversity; and (d) "assists in reframing/redefining adversity as a mechanism for positive change" (Feeney & Collins, 2015, p. 118). Zhou et al. (2018) studied PTG in adolescents following a natural disaster. Results were consistent with the main-effect hypothesis of social support and integrated this model of thriving through relationships (Zhou et al., 2018). This research further emphasizes the importance of fostering social support when individuals are going through or have recently experienced traumatic events.

These results suggest that interventions should be aimed at helping individuals to identify their social supports and find community. By helping individuals to share openly about their pregnancy loss, they are likely to learn that they do not have to go through grief alone. Engaging partners, family, or close friends in behavioral health treatment, community programs, and support groups might increase their understanding of the individual's mental health following pregnancy loss and result in relational changes that promote PTG.

Personal Strength

Within the superordinate theme of Personal Strength participants endorsed having a stronger sense of self, as well as developing and building upon existing skills. A person's sense of self answers the question of, "Who am I?" and is closely tied to self-esteem. Self-esteem

refers to “the degree in which persons accept and value themselves (Zhou et al., 2018, p. 33). This research suggests that helping these individuals to build self-esteem may also contribute to PTG.

New Possibilities

Within the superordinate theme of New Possibilities many participants of this study reported going through career changes. There appears to be limited research about career-related reactions to trauma. One way of measuring these reactions is using the concept of career adaptability, which refers to an individual’s resources for coping with developmental work tasks, transitions, and traumas (Savickas & Porfeli, 2012). Savickas and Porfeli (2012) outlined four elements of career adaptability: concern, control, curiosity, and confidence. “Concern about the future helps individuals look ahead and prepare for what might come next. Control enables individuals to become responsible for shaping themselves and their environments to meet what comes next by using self-discipline, effort, and persistence” (p. 663). Curiosity refers to an individual’s resources to explore career options, while confidence refers to their ability to overcome barriers in this pursuit (Savickas & Porfeli, 2012). In a study of college students who identified as trauma survivors, Prescod and Zeligman (2018) found that PTG served as a buffer to trauma symptoms and led to increased career adaptability.

It is possible that results of this study reflect how pregnancy loss can be associated with a values reflection process that may influence an individual to re-evaluate career choice. Individuals who have experienced pregnancy loss might find that exploring their values and needs modifies their prior beliefs about what their careers should and can look like. The role of values reflection was not explored in the current research, though future research might consider exploring this relationship. Additionally, it is important to note that individuals who participated

in this study were at an age where it is common to re-evaluate and alter one's career path. It is possible that same-age peers might have reported similar career outcomes independent of PTG.

Participants of this study described volunteering their time through community organizations, which was captured by the emergent theme of Sense of Purpose. These results further support recent literature that has highlighted the connection between volunteer work and PTG in this population. In a study of prosocial behavior following pregnancy loss, Freedle and Oliveira (2023) found that women who experienced pregnancy loss and chose to volunteer their time either in-person (e.g., helping with fundraising events) or online (e.g., providing supportive or informative comments and posts) reported experiencing moderate levels of PTG. Of note, those that volunteered in-person experienced higher levels of PTG. These findings are consistent with the existing literature on PTG. Volunteer work might help individuals to process their loss, strengthen their sense of control, and find meaning in their loss. Involvement in these organizations is also likely to result in an increased sense of social support.

Clinical Implications

Participants of this study grew in their relationships by leaning on loved ones for support, being open about their experiences, and seeking community through support groups, churches, and other organizations. Participants who endorsed experiencing altruistic expansion expressed a desire to pay it forward by volunteering their time, sharing their experience in hopes of helping individuals grieving similar losses, supporting friends through difficult times, and taking on caretaking roles in their careers. The following recommendations are made based on information gathered from this study and prior research. Interventions aimed at fostering social support can be done by engaging partners, family, or close friends in behavioral health treatment, community programs, and support groups. We both must help individuals to connect with their community,

as well as teach community members how to provide a safe environment for those experiencing loss. Supporting individuals can learn to recognize strengths and skills, assist in the reconstruction process, and assist in reframing adversity (Feeney & Collins, 2015). Participants of this study described a stronger sense of self and development of skills, such as assertiveness and creativity, as contributing to their greater sense of personal strength. While receiving support from others might increase self-esteem, individuals who have experienced pregnancy loss might also benefit from additional strategies aimed at building self-esteem and skill development (e.g., assertiveness training).

Participants of this study reported experiencing new possibilities through career change and a newfound sense of purpose. Results of this study and the existing literature suggest that values reflection is likely a beneficial area of focus in behavioral health services. Participants of this study experienced a greater appreciation of life following their loss, though they did not elaborate on what factors facilitated their experience of PTG in this domain. Existing research suggests that helping these individuals to find meaning in their loss, challenge core beliefs, develop adaptive coping strategies, and keep bonds with their deceased infant are likely to facilitate PTG (Alvarez-Calle & Chaves, 2023). With regard to spiritual change, participants of this study shared that connecting with their church communities and prayer was helpful in growing their relationship with God and feeling supported.

Given that such a large portion of the population is impacted by pregnancy loss, it seems that more could be offered to expectant parents. In the United States, our healthcare system often behaves in reaction to events rather than in a preventative manner. By offering preparatory guidance to individuals who are expecting or planning to grow their families we can provide both the individuals who will carry the child and their support systems with valuable strategies.

These strategies can promote PTG in the event of a loss and general growth in the event of a healthy pregnancy without complications.

Limitations and Research Implications

Barriers to Elaboration

This study is not without limitations. In order to maintain anonymity, participants were not asked to provide their name or contact information. This prevented follow-up to clarify the meaning of responses or to request participants to elaborate on their responses. The writing prompt was structured in two questions with broad prompts in an effort to allow participants to voice what felt most important to them to share. This resulted in some brief responses. For example, multiple participants stated that they experienced spiritual growth and greater appreciation of life, but did not elaborate on what they meant by this.

Influence of Writing Prompt on Responses

Participants of this study were asked to participate if they self-identified as having experienced PTG following pregnancy loss. Before completing the two writing prompts, participants read a description of PTG that provided examples that were consistent with the domains outlined in the PTGI (see Appendix F). It is possible that this description influenced the responses of participants by priming them to share responses that aligned with the existing literature. Participants might have described their experience in a different way if they had not read this description.

Selection Bias

Participants of this study were provided with an explanation of PTG on the recruitment flyer and welcomed to participate if they resonated with this experience of growth after their loss. Those that chose to participate were individuals who felt ready and able to share their

experience. It cannot be assumed that PTG is a universal experience following pregnancy loss so these results cannot be generalized to every person that experiences pregnancy loss. Participants were recruited via a psychiatric nurse practitioner and social media sampling. Since I did not ask participants to disclose which recruitment source they came from, it is unclear how many participants came from each source. This means I do not have information about what level of professional mental health support participants had prior to or during the time of their participation.

Diversity

This sample was lacking heterogeneity with regard to race and ethnicity. The sample was composed predominantly of white women (90%) with one Asian participant. Miscarriage and stillbirth affect individuals regardless of their age, gender, sexual orientation, race, ethnicity, nationality, or socioeconomic status, but it would be remiss to ignore the impact of racial disparities in maternal and infant health when considering these results (Hill et al., 2022). The U.S. Maternal Vulnerability Index (US MVI) is an index of relative vulnerability across the following 6 domains: reproductive healthcare, physical health, mental health and substance abuse, general healthcare, socioeconomic determinants and physical environment (Valerio et al., 2023). Black women are twice as likely to experience a miscarriage during gestational weeks 10-20 when compared to white women (Mukherjee et al., 2013). Additionally, Valerio et al. (2023) found that Black women in the U.S. are 2-3 times more likely than white women to experience both maternal mortality and severe maternal morbidities. These disparities persist after adjusting for maternal vulnerability, which suggests that additional factors such as racism play a role in these outcomes. It is possible that the domains of posttraumatic growth identified in this study are not generalizable across varied racial, ethnic, or socioeconomic populations

because of the stark health disparities that are likely to impact an individual's experience of maternal healthcare and pregnancy loss. Future studies should aim to explore posttraumatic growth with diverse racial, ethnic, and socioeconomic populations.

Premorbid Tendencies Toward Prosocial Behavior

Results indicated that some individuals who experienced PTG following pregnancy loss found meaning in their involvement in volunteer organizations. It is unclear whether these individuals had a premorbid tendency to engage in these prosocial behaviors or if this desire to volunteer was a direct result of their pregnancy loss. Longitudinal research would help to determine if premorbid tendencies toward prosocial behavior facilitate PTG or if PTG is what makes these individuals more likely to engage in this prosocial behavior. It is possible that individuals without these premorbid tendencies would feel dissatisfied, misunderstood, or even dismissed if pushed to engage in these activities. A longitudinal study would be helpful in gathering more information and guiding recommendations. This could involve a trained researcher in psychology connecting with individuals at their obstetrician appointment that immediately follows, or occurs during, the experience of a pregnancy loss. Those that consent to participate in the study could be given a questionnaire that assesses factors such as current engagement in prosocial behaviors. For example, The Prosociality Scale is a 16-item scale that was developed for late adolescents and adults to assess the tendency of individuals to act in favor of others (Bernadette et al., 2021). These researchers could follow up with participants 6 months later to readminister The Prosociality Scale and administer the PTGI. This would provide information about an individual's premorbid prosocial behavior, changes to prosocial behavior following an experience of pregnancy loss, and to what extent, if any, these individuals experience PTG. While prosocial behavior is broadly defined and can be accessed in a variety of

ways, in-person access to volunteer organizations that are centered around pregnancy loss are limited in some geographic regions. Additional research focused on further exploring the relationship between engagement in online communities and PTG could be beneficial in guiding recommendations for this population.

Other Research Considerations

For the purpose of this study, pregnancy loss was used as an all-encompassing term that referred to both miscarriage and stillbirth. In an effort to reduce error variance and maintain a homogenous sample, participants of this study were limited to individuals who experienced pregnancy loss after the first trimester. Due to the small sample size used in this study, I was unable to explore differences in the way PTG was experienced by individuals who experienced pregnancy loss at earlier versus later gestational ages. Future research might benefit from categorizing participants based on gestational age at the time of the loss. This study did not gather information about the order of participant's pregnancy losses and reported live births. This limited my ability to draw conclusions about whether having a child prior to loss impacted a participants experience of PTG and vice versa. Future research might also consider exploring the impact of recurrent pregnancy loss and time elapsed since the loss on PTG. Additionally, it is possible that the definition and examples of PTG provided prior to completing the writing prompts might have influenced participant's responses. Future research might ask about positive growth experiences without providing these descriptors or examples to reduce priming effects.

This study supported the growing body of research on posttraumatic growth following pregnancy loss. The following suggestions can be used to guide future research: (a) exploring posttraumatic growth with diverse racial, ethnic, and socioeconomic populations, (b) exploring the impact of other factors on PTG including gestational age at the time of the loss, time elapsed

since the loss, recurrent pregnancy loss, and presence of living children, (c) longitudinal studies to explore causal relationships between prosocial behavior and PTG (d) exploring the benefit of engagement in online communities, and (d) impacts of preparatory guidance on PTG.

CHAPTER V: CONCLUSION

The purpose of this study was to capture the rich narratives of individuals who have experienced pregnancy loss. These narratives were explored to better understand what areas of posttraumatic growth have been experienced following this often-devastating loss, as well as the processes that led to this growth. As Haidt (2006) wrote:

> Trauma often shatters belief systems and robs people of their sense of meaning. In so doing, it forces people to put the pieces back together . . . rebuilding beautifully those parts of their lives and life stories that they could never have torn down voluntarily." (p. 145)

The findings of this study support the existing literature on posttraumatic growth, suggest future directions for research, offer recommendations for behavioral health and medical practitioners, and provide insight into the experience of growth following pregnancy loss. Participants of this study reported experiencing growth in the domains of (a) Relating to Others, (b) Personal Strength, (c) New Possibilities, (d) Appreciation of Life, (e) Spiritual Change, and (f) Altruistic Expansion. This study outlines strategies for facilitating this growth. It is my hope that this study will be a resource for those grieving the loss of a pregnancy, as well as a resource their friends, family, and professionals who wish to provide support through this process.

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APPENDIX A: REQUEST TO DISTRIBUTE RECRUITMENT FLYERS TO SUPPORT GROUPS

I am a doctoral student in clinical psychology at Antioch University New England. I am conducting research for my dissertation that explores women's experiences of "posttraumatic growth" after pregnancy loss. While pregnancy loss is usually a devastating experience, some women report additional positive changes or experiences such as

- Strengthening of close relationships or development of new relationships
- Greater awareness and utilization of personal strengths
- The identification of new possibilities or a purpose in life
- Greater appreciation of life
- Spiritual development
- Other positive psychological change

I would like to learn more about this through my dissertation, as it may be useful in helping other women who go through pregnancy loss. Would it be possible for you to share my recruitment flyer with members of your Pregnancy and Infant Loss Support Group?

I have attached the flyer here for your review. Please let me know if you have any questions or concerns. You can reach me at xxx.

Your support is greatly appreciated,

Megan Pinette

APPENDIX B: SAMPLE RECRUITMENT FLYER

VOLUNTEERS NEEDED FOR RESEARCH STUDY

Experience of Posttraumatic Growth Following Pregnancy Loss

I am a doctoral student in clinical psychology at Antioch University New England. I am researching the experience of posttraumatic growth after pregnancy loss. Posttraumatic growth is positive change that is experienced as the result of the struggle with a highly stressful or traumatic event. Pregnancy loss is a common experience with an often-devastating impact. While grief is a normal and expected response, some people might also experience growth. After your pregnancy loss, you might have noticed any of the following changes:

- Strengthening of close relationships or development of new relationships
- Greater awareness and use of personal strengths
- Finding new possibilities for yourself or a new purpose in life
- Greater appreciation of life
- Spiritual development or awareness
- Other positive changes

If you feel you have experienced growth from navigating this difficult experience, please consider participating in this study. I am looking for participants to write about their experiences through an online questionnaire. You may take as much or as little time as you need to reflect and write about your experience.

Participation Requirements:

- Must be 18 years or older
- Must have been pregnant and experienced a miscarriage or stillbirth after 12 weeks gestation (after the first trimester)
- This loss must have occurred within the last five years

To sign the consent form and participate in the study,
please click on this link (https://forms.gle/612hGBkRmoGojLyh7)
or scan the QR Code.

Questions? Please reach out by email (xxx)

Thank you!

APPENDIX C: CONFIRMATION OF ELIGIBILITY

1. I am at least 18 years old
   - Yes / No

2. I have been pregnant and experienced a miscarriage or stillbirth after 12 weeks gestation
   - Yes / No

3. I have experienced a miscarriage or stillbirth within the last 5 years
   - Yes / No

APPENDIX D: CONSENT TO PARTICIPATE IN RESEARCH

1. I volunteer to participate in a research project by Megan Pinette, M.S., supervised by Kathi Borden, PhD, from Antioch University New England. I understand that the project will explore my experience of posttraumatic growth following my pregnancy loss. I understand that I will be one of about 10 people in this study.

2. I am freely participating in this study. I will not be paid and I can stop at any time before submitting my responses. There is no consequence to discontinuing my participation.

3. I will participate by writing answers to prompts provided by the researcher. The amount of time this takes will depend on how much I choose to write. I may take as much or as little time as I need to reflect and write about my experience.

4. I will be asked to reflect on and share my experiences of pregnancy loss. While writing about this process might be therapeutic, this information is sensitive and might be hard to think and write about. If I feel uncomfortable at any time, I can stop. If I feel that I cannot deal with my distress on my own, I can reach out to a mental health professional or health services agency. I can also call The National Suicide Prevention Lifeline by dialing 988 anytime to receive 24/7, free and confidential support, or I can go to the Psychology Today website (https://www.psychologytoday.com/us) to help me find a therapist in my area.

5. I understand that my participation will be anonymous and all information will be stored securely. No information that can identify me will appear in the final report.

6. I understand that this research has been approved by the Institutional Review Board at Antioch University New England. If I have questions about my rights as a research participant I can reach out to Dr. Kevin Lyness, chair of the Antioch University New England Institutional Review Board, at xxxxx@xxxxxx.xxx or Dr. Shawn Fitzgerald, Antioch University New England provost and campus CEO, at xxxxx@xxxxxx.xxx. If I have any other questions, I can contact Megan Pinette at xxxxx@xxxxxx.xxx.

7. Please feel free to save or print out a copy of this page for your records.

By clicking “Next” I am consenting to participate in this study.

APPENDIX E: DEMOGRAPHICS SURVEY

1. Age
- _____

2. Race / Ethnicity
- _____

3. Have you had difficulty getting pregnant?
- Yes / No

4. Have you had fertility treatment?
- Yes / No

5. Are you currently pregnant?
- Yes / No

6. How many times have you been pregnant?
- _____

7. How many children do you have, if any?
- _____

8. Time since most recent pregnancy loss
- _____ Years _____ Months

APPENDIX F: WRITING PROMPT

Posttraumatic growth is positive change that is experienced as the result of the struggle with a highly stressful or traumatic event. Pregnancy loss is a common experience often with a devastating impact. While grief is a normal and expected response, individuals might also experience growth in the wake of this loss. In addition to the difficult feelings you experienced with your loss, you may have noticed any of the following changes:

- Strengthening of close relationships or development of new relationships
- Greater awareness and use of personal strengths
- Finding new possibilities for yourself or a new purpose in life
- Greater appreciation of life
- Spiritual development or awareness
- Other positive changes

Please briefly describe any of the above changes, or any other areas of positive change, that you experienced following your pregnancy loss. You may comment on anything else that feels relevant and important to your experience.

What do you believe led to, or supported, your ability to experience these positive changes?

APPENDIX G: DEVELOPMENT OF EMERGENT THEMES—EXAMPLES

Excerpts	Exploratory Comments	Emergent Themes
It has encouraged me to treat myself more kindly.	Self-compassion	Sense of Self
I never knew I would be able to endure such difficulties. Although I had lost myself here and there. I persevered and never gave up hope.	Ability to persevere and maintain hope	Sense of Self
For a long time I was angry with my body, but through my miscarriage, I was able to learn to love my body. To learn my own love language with myself. I've been able to grow physically and mentally.	Self-love	Sense of Self
It made me realize I was resilient and can go through a loss and a surgery and still make it out ok.	Resilience	Sense of Self
Motivation increased to . . . pursue my career at new heights. More than one life dream. Being a mom is definitely and was always top of my list but a huge part of myself also belongs to my career dreams and time before kids was the best time to lay that foundation of success for myself.	Making space for other priorities / career ambitions	Career change
I was a medical assistant at the time and aspiring to be a radiology technologist; which I thought that was it for me. However, after tragically losing my first baby at 7 months gestation, my life was turned upside down. Fast forward through being at my lowest point in my life, questioning my faith and wondering how I could go on, I returned to work. Only to put in my 2 week notice, I was now	Change in career aspirations and motivation to perform well	Career change

pursuing my career to be a labor and delivery nurse. I knew nothing about OB and was honest in my interview, but open with my story. I worked as an MA for 9 years and now I am in school completing my BSN following my dreams . . . [I take] pride in holding my standards high in being the best nurse I can be to my patients.		
Finding new possibilities for myself in terms of career. I switched to a different field that offered better pay during the times that I was pregnant. My second miscarriage pushed us to look for careers with IVF options as well.	Changes in career to increase access to care and fertility options	Career change