The Potential Power of Suffering: Post-Traumatic Growth in Women Following Pregnancy Loss

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Glossary

List of Abbreviations

PTG: Post-Traumatic Growth

PTSD: Post-Traumatic Stress Disorder

NHS: National Health Service

AN: Anorexia Nervosa

CBT: Cognitive Behavioural Therapy

CBT-E: Enhanced Cognitive Behavioural Therapy

PTGI: Post-Traumatic Growth Inventory

ERRI: Event-Related Rumination Inventory

DDI: Distress Disclosure Index

CiOQ: Changes in Outlook Questionnaire

PBS: Perceived Benefit Scales

CBI: Core Beliefs Inventory

DPM: Disclosure Processes Model

TFA: Termination for Fetal Abnormality

SRQ: Social Reactions Questionnaire

EMDR: Eye Movement Desensitization and Reprocessing

PGS: Short Perinatal Grief Scale

PIS: Participant Information Sheet

BMI: Body Mass Index

BAME: Black Asian Minority Ethnic

FT: Forgiveness-Writing Therapy

EDE-Q: Eating Disorder Examination Questionnaire

DCoP: Division of Counselling Psychology

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I dedicate this project to him with all my heart.

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Declaration of Power

I, Irem Aksu, grant powers of discretion to the University Librarian to allow this Doctoral thesis to be copied in whole or in part without further reference to me. This permission covers only single copies made for study purposes, subject to normal conditions of acknowledgement.

Preface

This portfolio presents work from my counselling psychology doctorate journey, demonstrating the integration of research and therapeutic practice. It comprises three distinct yet interconnected parts, each representing a different aspect of my training. This portfolio begins with a doctoral research study investigating Post-Traumatic Growth (PTG), which describes the positive psychological changes that can arise after adversity (Tedeschi & Calhoun, 1996), focusing specifically on women who have experienced pregnancy loss. It is followed by a combined case study and process report in which CBT-E (Enhanced Cognitive Behavioural Therapy) was provided to a client seeking help for anorexia nervosa (AN) within the National Health Service (NHS). The portfolio concludes with a paper to be submitted to the British Journal of Guidance and Counselling, intending to publish the research findings. Through these pieces, I aim to demonstrate the ongoing theme of PTG in counselling psychology and how it links my academic research with my therapeutic practice.

The first part of the portfolio is my doctoral thesis (Part A). This section forms the foundation of this portfolio, as it presents my in-depth research on PTG in women following pregnancy loss, which is an emotionally painful and often isolating experience that can profoundly affect individuals' lives (Hughes & Riches, 2003). This thesis not only contributes to the academic understanding of PTG but also offers practical implications for counselling psychologists working with clients who have experienced pregnancy loss. It highlights the importance of creating spaces where clients feel safe to disclose their experiences, normalising rumination, and encouraging reflection, and self-disclosure which can facilitate a process of recovery that may lead to PTG (Ramos & Leal, 2013)

The second piece of my portfolio, the combined process report and case study (Part B), demonstrates the clinical side of my work. It includes an extended case study, which I hope will symbolise the scientist-practitioner paradigm and attempt to reduce the theory-practice gap through the integration of psychological theory within practice. The case was selected from my final year placement in an outpatient eating disorders service as a trainee counselling psychologist. It focuses on a client with AN, a condition that had dominated her life and self-evaluation. Her sense of worth was entirely tied to her weight and shape, and our therapeutic work, informed by CBT-E, centred on helping her build a life outside of anorexia. The concept of 'spreading our eggs into different baskets' became a guiding metaphor during therapy, emphasising the need to diversify the sources of meaning and self-evaluation in her life (Stott et al., 2010, p.88).

A particularly significant moment occurred when my client composed two letters addressed to her anorexia: one as a friend and one as an enemy. I anticipated that the letter to anorexia as an enemy would be longer and more impactful, but to my surprise, it was the letter to anorexia as a friend that stood out. In this letter, my client expressed gratitude for everything she had learned from her disorder, especially the realisation that she was stronger than she had ever believed. This moment resonated deeply with me as someone studying PTG because it highlighted the complexity of personal growth and how it can emerge following difficult life events.

This therapeutic moment reinforced the idea that psychological growth, resilience, and the ability to find strength following adversity are not always linear or straightforward processes. In my client's case, her journey with AN was fraught with challenges, but the process of acknowledging her inner strength was a critical part of her healing. While anorexia remained a difficult part of her life, her reflections during therapy demonstrated a kind of

psychological transformation that mirrors the concepts of PTG I was exploring in my research. Her recognition of strength amid struggle parallels what many individuals experience after traumatic life events, including those in my study who have experienced pregnancy loss.

The publishable paper (Part C) is the third piece of this portfolio and serves as a concise presentation of my doctoral research geared toward academic dissemination. It distils the key findings regarding the role of self-disclosure in fostering PTG after miscarriage and discusses the broader implications for counselling psychology practice. Initial investigations suggested that the British Journal of Guidance and Counselling might have been a good journal for the submission of the article. This decision was made on the basis of recent reviews published in the same journal; these attempted to shed light on positive psychology and its implications on clinical and counselling practice (i.e., Winter-Plumb et al., 2019).

These three sections are interconnected through the central theme of PTG in counselling psychology. This portfolio reflects my journey through both research and clinical practice, with a focus on PTG in the contexts of miscarriage and AN. The doctoral thesis provides a theoretical and empirical basis for understanding PTG, specifically in relation to miscarriage. The combined case study and process report demonstrate the practical application of these concepts, showing how clients can experience growth and resilience, even in the face of enduring psychological challenges. The publishable paper extends these ideas into the broader academic discussion, emphasising the implications of PTG for both research and clinical practice. My work in these areas has shaped my understanding of psychological growth and influenced my approach as a counselling psychologist, highlighting the complexity of the human experience, healing and PTG.

Although PTG remains a complex and sometimes debated concept, it offers valuable insight into how individuals can develop new strengths and perspectives after trauma (Zoellner & Maercker, 2006). The work presented here reinforces my belief in human resilience and transformation, even in the face of profound difficulties. As I progress in my career, I will continue to draw on the insights from this experience. I intend to work clinically within an NHS early intervention eating disorders service, in line with Counselling Psychology's ethos, which privileges respect for personal, lived experience over and above notions of diagnosis, measurement, and cure and values it as a profound tool for learning about and supporting one another (Bury & Strauss, 2006). I aim to foster resilience and healing in my clients while contributing to the ongoing discourse on PTG in counselling psychology.

It is hoped that these three pieces of work combined together will demonstrate my developing skills within the "scientific demand for rigorous empirical enquiry with a firm base grounded in the primacy of the psychotherapeutic relationship" (BPS, 2006). Ultimately, it is hoped that this portfolio will convey my passion for continuous learning, a commitment I plan to carry forward throughout my professional career.

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PART A: Doctoral Research Study

The Potential Power of Suffering: Post-Traumatic Growth in Women Following Pregnancy Loss

Supervised by Dr Seraphine Clarke

Abstract

Pregnancy loss remains a stigmatised experience, with many women encountering barriers to sharing their loss, which may impede positive psychological adjustment (Freedle & Oliviera, 2021). While distress disclosure has been shown to predict Post-Traumatic Growth (PTG), the mechanisms behind this relationship, particularly the roles of deliberate and intrusive rumination, are not fully understood (Alcarez-Calle & Chaves, 2023). This study aimed to examine the connections between self-disclosure, deliberate rumination, intrusive rumination, and PTG in women after pregnancy loss, explicitly investigating whether both types of rumination mediate the link between self-disclosure and PTG. A cross-sectional, online study was conducted with women who experienced single or multiple miscarriages at least 12 months ago. A total of 67 participants completed the Event-Related Rumination Inventory, Distress-Disclosure Index, and Post-Traumatic Growth Inventory. Data were analysed using hierarchical regression and mediation analyses. Hierarchical regression showed that self-disclosure and deliberate rumination positively predicted PTG, whereas intrusive rumination was not a significant predictor. Furthermore, the engagement in self-disclosure was linked to increased deliberate rumination and reduced intrusive rumination. Finally, the relation between self-disclosure and PTG was mediated by deliberate rumination but not by intrusive rumination. The findings suggest that disclosing emotional distress following pregnancy loss may lead to PTG through cognitive processing in which individuals articulate and elaborate on their thoughts and feelings. This study did not find evidence for the potential negative

impact of intrusive rumination as it did not predict PTG or mediate the relation between self-disclosure and PTG. This highlights the dynamic nature of cognitive processing following trauma and contributes to the literature by providing support for applying PTG theory to women who have experienced pregnancy loss.

Literature Review

Chapter Review

This chapter provides a comprehensive review of existing research on Post-Traumatic Growth (PTG) in women who have experienced pregnancy loss. It begins by introducing the concept of PTG and outlining Tedeschi and Calhoun's (1996) model. The chapter also examines how PTG is measured in research, addressing key debates and critiques surrounding the construct. Subsequently, it explores studies specifically focused on women who have undergone pregnancy loss, highlighting promising findings that support the application of PTG theory to this population. The review then identifies potential predictors of PTG, particularly rumination and self-disclosure, and discusses their influence on women's likelihood of experiencing PTG. The chapter concludes by emphasizing the need for further research to better understand how these factors, especially whether different forms of rumination, mediate the relationship between self-disclosure and PTG. Finally, the aims and hypotheses of the current study are presented, with the goal of informing policymakers and health professionals on how to support women after pregnancy loss, not only in their recovery but also in fostering PTG.

Search Protocol

This critical literature review is based on a comprehensive literature search on PTG in women who have experienced miscarriage. To collect the most relevant literature, four electronic databases, PsycInfo, PsycArticles, PubMed, and Embase, as well as additional resources such as Google Scholar, were searched until 2024. The search strategy employed a combination of search terms, including "post-traumatic growth," "miscarriage," and "pregnancy loss," in combination with "post-traumatic growth," and "posttraumatic growth."

Post-Traumatic Growth

The assumption that suffering can be transformative is not recent, with its origins traced back to the writings of ancient Greek philosophers (Tedeschi & Calhoun, 2004). Across various cultural traditions, the idea that adversity and trauma may foster positive change has endured for centuries (Joseph, 2011). For instance, the rebirth of the phoenix in Egyptian mythology reflects early recognition of the potential for growth through hardship (Henson, Truchot, & Canevello, 2021). This concept was further articulated by philosophers, notably Nietzsche (1888), who famously asserted, "What does not kill me makes me stronger." However, it is only in recent decades that the idea of growth through hardship has been systematically examined within the field of psychology (Calhoun et al., 2010). Tedeschi and Calhoun (1996) coined the term Post-Traumatic Growth (PTG) to describe the positive psychological change that may occur following a traumatic event. For this research, the terms 'trauma', 'traumatic event', and 'challenging life event' will be used interchangeably. The term 'growth' underscores that the person has developed beyond their previous level of adaptation, psychological functioning, or life awareness. It expresses that in people's lives, there is something positively new, which signifies a kind of additional benefit compared to their pre-crisis level (Zoellner & Maercker, 2006).

Fuelled by enthusiasm for the positive-psychology movement (Frazier et al., 2009), PTG has been investigated across different major life events such as cancer (Cordova et al., 2007), sexual assault (Grubaugh & Resick, 2007), natural disasters (Zhou et al., 2015) and miscarriage (Freedle & Kashubeck-West, 2020). It is estimated that between 30% and 70% of individuals who experience a traumatic event will go on to experience PTG (Joseph, 2011).

PTG theory conceptualises growth as a multifaceted construct that refers to a long-term, transformative change that individuals experience after a traumatic event in five domains: "greater appreciation of life and changed sense of priorities; warmer, more intimate relationships with others, a greater sense of personal strength, recognition of new possibilities or paths for one's life; and spiritual development" (Tedeshi & Calhoun, 2004, p.6). They also acknowledge that not everyone reports growth in each area or an equal amount in each area (Tedeschi & Riffle, 2016).

For example, when growth is reported in the relating to others domain, the individual often reports deeper and improved relationships with loved ones (Tedeschi & Moore, 2021). Growth in the personal strength domain may look like an increase in resilience and courage (Tedeschi & Calhoun, 2006). Someone who has experienced growth in the recognition of new possibilities domain may be seeing ways to accomplish new dreams after the trauma has disrupted their original path (Tedeschi & Moore, 2021). Growth in the appreciation of life domain may be reflected in an individual's re-evaluation of their priorities (Tedeschi & Calhoun, 2006) or an increase in mindfulness, which refers to the psychological process of bringing attention to present experiences in a purposeful and non-judgmental manner (Hanley et al., 2015). This practice allows individuals to develop a greater awareness of their thoughts, emotions, and environment, potentially leading to a deeper understanding and appreciation of life (Tedeschi & Calhoun, 1996). An individual may experience growth in the domain of spiritual or existential change because traumas often bring up existential questions, and spiritual or existential beliefs are changed as a result of suffering trauma (Tedeschi & Riffle, 2016). While these five domains may not represent every way a person may grow after experiencing trauma, they capture a significant range of common experiences (Calhoun et al., 2010). Organising PTG into five distinct domains allows researchers to more

effectively quantify the extent of growth an individual may have experienced following trauma (Tedeschi & Calhoun, 1996; Siebach et al., 2023).

PTG is a complex and dynamic construct that arises from a development process (Hallam & Morris, 2014). According to the PTG model, when an event is traumatic enough to challenge assumptive world beliefs, the process of PTG can begin (Tedeschi & Calhoun, 2004). Research suggests that the distress from the disrupted core beliefs is correlated to PTG (Lindstrom et al., 2013). Therefore, the nature of the trauma is less important than the disruption it causes in the individual's core beliefs (Choi & In, 2019). Reconstructing the core beliefs that have been disrupted to accommodate the traumatic event is the process that leads to PTG (Calhoun & Tedeschi, 1996; Tedeschi & Moore, 2021). It is argued that such transformation does not result directly from the trauma itself, but rather from the process of coping with and coming to terms with emotional distress (Shakespeare-Finch et al., 2013).

Furthermore, given the complexity of trauma, distinguishing PTG from distress proves challenging (Canavarro et al., 2015). A plethora of evidence suggests that individuals who reported PTG also reported depression or distress related to the trauma they had experienced (Taku et al., 2008; Taku et al., 2021). Shen et al. (2021) argued that distress and growth can be understood within an integrative psychosocial framework, suggesting that PTG can coexist with distress. Moreover, they argued that PTG may buffer against the negative effects of psychological distress, indicating that growth and distress are not mutually exclusive but can be part of a complex, integrative process. Ramos and Leal (2013) agreed with this argument, suggesting that people can simultaneously experience feelings of transformation and growth while they also experience feelings of depression or distress related to the challenging event.

Calhoun and Tedeschi (2006) also noted that it is not guaranteed that PTG arises in all trauma situations as it does not occur in everyone who experiences stressful circumstances. Henson et al. (2021) agreed with this claim and highlighted that not everyone who faces traumatic life events will experience positive psychological changes, as both individual characteristics and contextual factors influence PTG. Some of these factors will be discussed later in this chapter.

Measurement of PTG

The measurement of PTG has been approached using various instruments. One such tool is the Changes in Outlook Questionnaire (CiOQ; Joseph, Williams, & Yule, 1993), which assesses both positive and negative changes in beliefs and attitudes following a traumatic event through 26 items. Another instrument, the Perceived Benefit Scales (PBS McMillen & Fisher, 1998), consists of 30 positive and eight negative change items, with the positive changes categorised into eight subscales. However, it is important to note that, despite their utility, these scales have notable limitations. They primarily measure general changes in outlook or perceived benefits rather than focusing on specific PTG dimensions such as increased personal strength, new possibilities, or spiritual growth.

The Post-Traumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996) has emerged as the most widely used and validated measure for assessing PTG, addressing these dimensions more comprehensively. It consists of 21 items prompting individuals to identify areas where they have experienced personal growth (Panchuk, 2023). Unlike some measures that encompass both positive and negative changes, the PTGI specifically focuses on positive changes, aligning closely with the theoretical framework of PTG. It is generally regarded as a reliable scale (Feder et al., 2008; Mystakidou et al., 2008; Tedeschi & Calhoun, 1996). For example, the PTGI showed excellent internal consistency in a sample of patients with lung

cancer (α = .96, Shen et al., 2015) and women who experienced pregnancy loss (α = .92, Krosch & Shakespeare-Finch, 2017).

While quantitative studies have consistently supported the validity of the PTGI (Splevins et al., 2010), some scholars have questioned its accuracy and reliability (e.g., Frazier et al., 2009; Hobfoll et al., 2007). Shakespeare and Finch (2013) conducted a qualitative study in response to ongoing debates regarding the validity of the PTGI. They identified some limitations; for example, some participants had experienced a negative change in some of the statements of PTGI and wanted to express this when rating the individual items. Nevertheless, they concluded that the PTGI remains a valid measure of PTG, consistent with a plethora of existing research. Consequently, the PTGI will be used in this research to facilitate comparisons and interpretations of findings, while remaining mindful of its limitations and implications.

Critiques of PTG

While PTG has garnered significant attention and support in the literature, some question whether individuals' reported growth represents actual positive change or if it is instead an "illusion" (Boals, 2023, p.6). To some extent, the debate has been based on methodological concerns (Frazier et al., 2009) and ways in which growth has been conceptualised and understood (Johnson & Boals, 2015; Maercker & Zoellner, 2004; Sumalla et al., 2009). For instance, it was argued that "self-perceived changes in personality are misperceptions" (Costa & McCrea, 1992, p. 65), implying that these subjective assessments cannot capture the "true" or objective essence of PTG (Zoellner & Maercker, 2006, p.638). In line with these critiques, some theorists explain PTG as a self-regulation mechanism tied to the innate biological tendency to protect oneself from the distress caused by adverse

conditions. When individuals perceive growth after coping with stress and trauma, they also see themselves as stronger individuals who have overcome difficulties and suffering (Ford et al., 2008). This could mean growth might be an additional aspect of the coping process that might occur successfully, with or without a perception of positive changes (Helgeson et al, 2006; Zoellner et al., 2008).

To explain this duality in PTG conceptualisation, Zoellner and Maercker (2006) proposed the "Janus-Face Model," which presents two ways of understanding PTG: the illusory and the constructive sides. According to the authors, the constructive component, in line with Tedeschi and Calhoun (2004), represents growth as a successful outcome of coping with adverse circumstances, leading to significant changes in personal cognitive schemas, positive adjustment to trauma, and identity change. In contrast, the illusory facet, proposed by Taylor et al. (2000), reflects distorted perceptions of growth that shield individuals from distress and the cognitive processing of their trauma. Thus, the illusory perception of growth helps maintain psychological equilibrium and avoid changing one's assumptive world (Affleck & Tennen, 1996). Furthermore, critics such as Nolen-Hoeksema and Davis (2004) argue that reliance on self-reported growth introduces biases and social desirability pressures, complicating the interpretation of perceived positive changes across individuals. Zoellner and Maercker (2006) also raised a point that merely recognising benefits from a traumatic experience does not necessarily translate into meaningful changes in daily life, while for others, it significantly impacts their daily experiences.

Despite these concerns, evidence suggests that people’s perception of growth following a traumatic event holds validity and offers substantial benefits (Shakespeare-Finch et al., 2013). For example, a meta-analysis by Helgeson et al. (2006) indicates that higher PTG scores correlate with enhanced well-being and improved physical health over time.

Similarly, longitudinal studies consistently link perceived growth to positive outcomes, including greater life satisfaction among cancer caregivers (Kim et al., 2007) and reduced depression in stroke survivors and caregivers of individuals with chronic illnesses (Gangstad et al., 2009; McCausland & Pakenham, 2003; Mock & Boener, 2010). Recent research by Boehm-Tabib and Gelkopf (2021) reinforces the notion that PTG reflects genuine growth rather than mere illusion. Their findings underscore PTG's transformative impact on individual functioning and worldview, suggesting that it should be recognised as a substantive process with tangible benefits for mental health and overall well-being.

Critics have also questioned the cultural validity of the PTG construct, arguing that it was established within a Western cultural framework (Splevins et al., 2010). According to McMillen (2004), factors such as people's fundamental assumptions, their ability to modify these assumptions post-trauma, and the type of social support they receive may be influenced by culture. He further argued that US culture encourages individuals to focus on the positives of their experiences more than other cultures, suggesting that the experience of growth among North Americans might not be transferable to non-US samples.

Kashyap and Hussain (2018) supported this claim, noting that most empirical studies of PTG have been conducted from a Western perspective. For instance, items measuring personal strength, such as those assessing changes in self-reliance, often assume the self is an independent and separate entity. Similarly, items in the relating-to-others subscale of PTG, such as ‘putting efforts into my relationships’, reflect an individualistic orientation, which may not align well with collectivist cultures where relationship-building is perceived as a natural process rather than a deliberate effort (Splevins et al., 2010). Additionally, items within the new-possibilities domain of PTG, such as ‘I am more likely to change things that

need changing' are grounded in Western notions of free will and agency (Pals & McAdams, 2004), which may be incongruent with cultural concepts like karma and destiny in other traditions. Kashyap and Hussain (2018) also highlighted that much of the literature on PTG comes from etic (outsider) studies, which are often based on the translation and reinterpretation of scales developed in Western cultures, such as the PTGI. This reliance on an etic perspective may limit the nuanced understanding of PTG in non-Western cultures. In line with this, Nisbett and Masuda (2013) pointed out fundamental cross-cultural differences in how people think about events. It was argued that Westerners tend to believe they can exercise more personal control over situations than Easterners, who believe that individuals should adjust to the situations they encounter (Morling et al., 2002; Morris & Peng, 1994; Nisbett & Masuda, 2013). Consequently, individuals from Western cultures are more likely to take personal responsibility for events and any positive changes following those events. In contrast, individuals from Eastern cultures are more likely to adjust to events, feel less personal responsibility, and make less effort to identify personal changes after the event (Shakespeare-Finch et al., 2013).

Another important cross-cultural difference in how people think about events was further highlighted by Cohen and Hoshino-Browne (2005), suggesting in collectivist cultures, people tend to consider how their actions affect others and themselves, viewing themselves from others' perspectives rather than their own. For example, Cheng, et al. (1993) found that Asian university students sought less help for personal and emotional problems than U.S. students because they felt the need to maintain their families' public dignity. In these cultures, people are discouraged from openly expressing negative emotions to maintain group harmony (Matsumoto et al., 1998).

Despite these criticisms, Splevins et al. (2010) noted that the psychological benefits following adverse events are not a new concept. Such ideas are incorporated into the world's major religions, including Christianity, Buddhism, Hinduism, Islam, and Judaism, and are rooted in the history of diverse cultures. Moreover, PTG has been evidenced in both individualist and collectivist societies (Lelorain et al., 2010; Schroevers & Teo, 2008). Research has found evidence of PTG in populations worldwide, including China (Ho, 2011), South Africa (Peltzer, 2000; Polantinsky & Esprey, 2000), Bosnia (Powell et al., 2003), the United Kingdom (Snape, 1997), Turkey (Kilic, 2010), and Korea (Ryu & Suh, 2022).

Another example is a study by Shakespeare-Finch and Copping (2006) aimed to understand cultural differences in PTG between US and Australian samples. Using a grounded theory methodology, they elucidated several dimensions of PTG in the Australian sample. The results supported Tedeschi and Calhoun's model of the PTG process and outcomes but also highlighted differences, such as a more expansive compassion dimension and the absence of a spirituality-religiosity dimension. These findings provide evidence for both the universality and cultural specificity of PTG. In conclusion, there is a robust body of evidence that supports the validity of PTG as a significant construct, as demonstrated through self-report, qualitative, and longitudinal studies (Henson et al., 2021). Moreover, evidence suggests that PTG can reflect universal experiences, and research has effectively captured this phenomenon across diverse cultures despite existing limitations (Tedeschi et al., 2018).

Miscarriage and PTG

Perinatal death is defined as the loss in pregnancy, including early miscarriage (i.e., during the first trimester of pregnancy up to 12 weeks), late miscarriage (i.e., during the second trimester at 13– 23 weeks), and stillbirth (i.e., defined as intrauterine death after 24

weeks gestation (Hughes and Riches, 2003). Perinatal loss, or pregnancy loss, is a common experience; recent statistics revealed that an estimated 1 in 8 pregnancies ended in pregnancy loss in the UK in 2020 (National Health Service [NHS], 2022). Despite being common, research indicates that many women experience these losses as profoundly traumatic events (Cacciatore, 2013; Rowlands & Lee, 2010). Some argue that losing a child is one of the most devastating things that a parent can experience in their lifetime (Doherty and Scannell-Desch, 2021). The intense psychological distress associated with such losses characterises the trauma experienced by these women (Schwerdtfeger & Shreffler, 2009).

The psychological aftermath of perinatal bereavement often includes shock, difficulty concentrating, and persistent, intrusive thoughts about the loss (Alvarez-Calle & Chaves, 2023). These symptoms are frequently accompanied by feelings of guilt, profound sadness, irritability, and avoidance behaviours, particularly in medical settings or situations involving pregnant women and children. Such losses can significantly impact a woman's identity as a mother (Boyd, 2019). Social and cultural factors further complicate this bereavement, as the loss may not be socially acknowledged, leaving parents to grieve in isolation and affecting their psychological adjustment (Markin & Zilcha-Mano, 2018). For instance, a recent study found that 50% of women felt at least partially responsible for the death of their baby, and only 33% reported receiving social support from their close environment, while 72.9% felt their grief was invisible to society (Cassidy et al., 2018). These findings suggest that most women experience feelings of guilt, sadness, and remorse following a miscarriage, exacerbated by a lack of external validation and support.

However, the societal stigma surrounding miscarriage often leads mothers to keep their experiences private, limiting the social support they receive (Boyd, 2019). Bute et al. (2019)

highlighted that many women do not disclose their pregnancies before 12 weeks of gestation, the period when the risk of miscarriage is highest, forcing them to cope with their loss in silence. Lang et al. (2011) suggest that pregnancy loss is frequently perceived as less painful or significant than other forms of death, leading to diminished social recognition. This lack of societal acknowledgement, coupled with the absence of established mourning rituals for perinatal loss, can make it especially challenging for women to express their grief in socially and culturally meaningful ways (Tian & Solomon, 2020).

Although research on PTG in this population is in its infancy, existing evidence suggests that women report various positive changes following pregnancy loss (Krosch & Shakespeare-Finch, 2017). These changes include shifts in life priorities, strengthened marital bonds, enhanced appreciation for existing relationships, increased empathy and compassion for others, and the ability to identify new possibilities in life (Black & Wright, 2012; Thomadaki, 2017). For instance, PTG has been reported by parents following the death of their premature baby, with 78% of mothers and 44% of fathers noting significant positive changes (Buchi et al., 2007). Additionally, an ethnographic study by Black and Sandelowski (2010) found that parents expressed a newfound appreciation for life following a severe fetal anomaly diagnosis. Wright's (2010) grounded theory study involving 19 women who experienced pregnancy loss between 8 and 40 weeks gestation revealed that these women felt more loving, compassionate, and appreciative of their relationships. More recently, Krosch and Shakespeare-Finch (2017) reported moderate levels of PTG in women who had experienced miscarriage or stillbirth. These findings underscore the potential for personal growth and transformation even in the aftermath of profound loss as well as grief and distress. This highlights the importance of continued research in this area to better support women through such challenging experiences.

Factors associated with the PTG

Tedeschi and Calhoun (2004) propose a model for understanding PTG that highlights the importance of individual characteristics, including personality traits, distress disclosure, schema changes, and cognitive processing of traumatic events. It has been argued that these factors influence whether an individual experiences PTG and the degree to which this growth occurs (Horesh & Brown, 2020).

The PTG model is based on the idea that the possibility of growth is based on the extent to which a traumatic event challenges individuals' assumptive worlds, which sets the stage for re-examining core beliefs (Krosh & Shakespeare-Finch, 2017). A plethora of research has explored the relationship between the challenge to core beliefs and PTG, utilising the Core Beliefs Inventory (CBI) and the PTGI as assessment tools. Existing literature, including cross-sectional and longitudinal studies, has convincingly shown that CBI scores predict PTG, with greater disruption predicting greater growth. For example, research by Henson et al. (2021) found that it is not primarily the nature of the traumatic event that fosters PTG but rather the challenge or disruption to core beliefs that students must address in their healing process following trauma. A traumatic event's disruption to an individual's core beliefs and assumptions causes significant distress, which is likely to cause the person to engage in cognitive processing strategies such as rumination to reduce the distress they experience (Cann et al., 2010).

Deliberate and Intrusive Rumination in the Context of Posttraumatic Growth

Rumination, defined as repetitive and contemplative thought, plays a crucial role in the cognitive processing that occurs after a traumatic event disrupts core beliefs (Calhoun et al.,

2010; Dong et al., 2014; Tedeschi & Calhoun, 2004). Event-related rumination, more so than trait-related rumination, is closely linked to PTG, encompassing two distinct types: intrusive and deliberate (Cann et al., 2011; Taku et al., 2008). Intrusive rumination involves uncontrollable, often distressing thoughts, while deliberate rumination is intentional and reflective, aiding in the purposeful making of sense of traumatic events (Calhoun et al., 2010). Correlational analyses have indicated the relationship between intrusive rumination and deliberate rumination is relatively small, suggesting that it is useful and prudent to separately measure the two types of rumination (Taku et al., 2008). Research by Lafarge et al. (2020) and Freedle and Kashubeck-West (2021) support the idea that intrusive and deliberate rumination should be studied as two separate entities due to findings that suggest each of the two types of rumination contribute to PTG in a unique way.

The examination of rumination has gained significant attention in trauma and PTG research. Research consistently shows that intrusive rumination predicts increased worry, distress, Post-Traumatic Stress Disorder (PTSD), and grief (Allbaugh et al., 2016; Cann et al., 2010; Stockton et al., 2011). For instance, Ehring et al. (2008) found that intrusive rumination is linked to higher levels of depression and post-traumatic stress, suggesting that when people cannot control their ruminative thoughts, they struggle more to adjust to the trauma. Shigemoto (2022) further argued that PTG is not typically associated with intrusive rumination and may be negatively correlated. Conversely, deliberate rumination involves a more intentional and reflective process where individuals purposefully attempt to make sense of the traumatic event and its implications. Research has consistently shown that deliberate rumination is associated with greater positive change and PTG (Joseph, 2011). Unlike intrusive rumination, which is often involuntary and distressing, deliberate rumination allows individuals to process their experiences more constructively, leading to meaningful insights

and personal growth (Calhoun et al., 2010). Studies by Cann et al. (2011) have suggested that deliberate rumination helps individuals integrate the trauma into their existing belief systems, facilitating PTG by enabling them to find new meaning and purpose in life.

A recent study by Lafarge and colleagues (2020) examined the relationships between different types of rumination, grief, and PTG in women who had undergone termination for fetal abnormality (TFA), recruiting 161 participants from a support organisation. To investigate these relationships, participants completed the Short Perinatal Grief Scale (PGS), the Event-Related Rumination Inventory (ERRI), and the Posttraumatic Growth Inventory (PTGI). The results revealed that intrusive rumination positively predicted grief and negatively predicted PTG, whereas deliberate rumination positively predicted PTG. While both types of rumination were predictors of PTG, intrusive rumination served as a negative predictor of growth, indicating its role in perpetuating distress and hindering psychological progress. In contrast, deliberate rumination, characterised by reflective and meaning-oriented thinking, mediated the relationship between grief and PTG, underscoring its beneficial role in fostering psychological growth. These findings contribute to the limited literature on perinatal loss, suggesting that psychological growth can emerge as an outcome of such a loss. The study supports the perspective that engaging in deliberate rumination can aid women in their emotional recovery following TFA, while intrusive rumination may impede this process. The research aligns with broader studies indicating that deliberate rumination is a positive predictor of PTG, offering valuable insights for therapeutic approaches aimed at promoting psychological well-being in women who have experienced perinatal loss. It also highlights that intrusive rumination may hinder growth experiences by perpetuating distress and preventing the individual from moving forward (Lafarge et al., 2020).

However, the idea that all intrusive rumination is negative has been vigorously challenged in recent years by several researchers. Some scholars suggest that intrusive thoughts indicate how deeply the trauma has affected core beliefs. These thoughts may initiate the process of PTG by compelling individuals to focus their cognitive attention on the event and its implications (Calhoun et al., 2010; Tedeschi & Calhoun, 2004). Tedeschi et al. (2018) argued that both intrusive and deliberate rumination is needed to restore challenged beliefs and experience growth. In line with this, Freedle and Kashubeck-West (2021) suggested that not all intrusive rumination is detrimental and argued that intrusive rumination is a normal response following trauma and can be an indication that the traumatic event significantly impacted the individual. According to Taku et al. (2009), intrusive thoughts arise because the event has challenged existing world beliefs. These thoughts typically occur immediately after the trauma, unconsciously demanding attention and signalling to the individual the extent of the disruption experienced (Calhoun et al., 2010; Tedeschi & Calhoun, 2004). This initial disruption and the resulting intrusive thoughts can set the stage for PTG by initiating the cognitive process necessary for growth (Tedeschi & Moore, 2021).

Cann and colleagues (2011) further support this finding, arguing that intrusive ruminative thoughts can predict the levels of deliberate rumination. Their research indicates that intrusive thoughts can lead trauma survivors to engage in more constructive cognitive processes, making sense of stressful life events and facilitating PTG. Overall, it is important to note that there are contradictory findings related to the association between PTG and rumination, which highlights the dynamic nature of cognitive processing following trauma and underscores the importance of considering both types of rumination in PTG research.

Distress Disclosure in the Context of PTG

Distress disclosure, or self-disclosure, plays a pivotal role in the process of cognitive and emotional adaptation following trauma. The concept posits that articulating and discussing distressing events can aid in cognitive processing, allowing individuals to make sense of their experiences and elaborate on their thoughts and feelings (Burleson & Goldsmith, 1996). According to the PTG model, sharing the experience with others proposed to help build narratives about the event, offer new perspectives that can be integrated into the person's schema and help the individual recognise the value of existing interpersonal relationships, establish new relationships and facilitate social support (Pietruch & Jobson, 2011). Empirical evidence supports this claim, indicating that individuals who engage in self-disclosure following trauma often report higher levels of PTG (Dong et al., 2015).

For instance, research by Taku et al. (2009) among Japanese students and Cordova et al. (2001) with women who had experienced breast cancer both found that those who openly discussed their traumatic experiences tended to exhibit greater levels of PTG compared to those who did not. Similarly, recent findings by Achterbergh et al. (2020) suggested that individuals who refrained from disclosing their distress were more likely to experience symptoms of depression. These studies highlight the potential benefits of distress disclosure in fostering psychological resilience and growth. However, while the correlation between self-disclosure and PTG is evident in cross-sectional studies, establishing causality remains challenging due to the lack of longitudinal research examining the temporal relationship between these variables (Achterbergh et al., 2020). Moreover, the specific mechanisms through which self-disclosure contributes to PTG are not yet fully understood. It has been widely assumed in the literature that self-disclosure facilitates cognitive processing by enabling individuals to articulate and elaborate on their thoughts and feelings about traumatic experiences. This process is akin to deliberate rumination, which has been consistently the

greatest predictor of PTG. However, empirical exploration of whether self-disclosure specifically promotes deliberate rumination has been limited (Pietruch & Jobson, 2011).

Recent studies have begun to explore the relationship between self-disclosure and PTG in the context of miscarriage. Freedle and Oliveira (2021) investigated how the disclosure of miscarriage experiences influences PTG among affected women. In this study, 227 participants were recruited via social media. They completed an online survey that investigates their disclosure via The Distress Disclosure Index (DDI), rumination via ERRI and PTG via PTGI. They have found that the tendency to disclose personally distressing information was a statistically significant predictor of PTG following pregnancy loss, suggesting that disclosing one's trauma and distress may foster changes in cognitive processing. According to Markin and Zilcha-Mano (2018), this is because disclosing details of traumatic events creates a sense of intimacy with others and social support. However, it is also important to note that Freedle and Oliviera (2021) used DDI, which is a measure examining participants' tendency to disclose their experience of a traumatic event but not miscarriage exclusively. While the general tendency to disclose distress is beneficial, the specific content and context of disclosure, particularly in the case of miscarriage, may vary significantly. The impact of disclosing specific elements of the miscarriage remains unclear at present.

The societal stigma surrounding miscarriage often leads women to keep their experiences private, which can impact the type and amount of social support they receive (Andalibi, 2017). Boyd (2019) highlights that societal norms often dictate that women keep pregnancies private until after the first trimester despite the heightened risk of miscarriage during this period. This cultural silence can contribute to feelings of isolation and hinder opportunities for processing grief and achieving PTG (Boyd, 2019). Moreover, Bute et al.

(2019) argue that the unique aspects of miscarriage, such as its unpredictability and the lack of tangible remains, make it a particularly challenging event for women to disclose and discuss openly. Given the complexities surrounding miscarriage as a traumatic experience, there is a pressing need for research that explores the specific mechanisms through which self-disclosure fosters or inhibits PTG in this context (Tian & Solomon, 2020). While general theories of distress disclosure and PTG provide a framework, they may not fully capture the nuances and challenges faced by women coping with miscarriage.

The Interplay between Self-Disclosure, Rumination, and PTG

The PTG model proposed by Tedeschi and Calhoun (2004) highlights individual characteristics that significantly influence the trajectory and extent of growth or distress experienced after a traumatic event (Tedeschi & Calhoun, 2004; Horesh & Brown, 2020). Among these characteristics, intrusive rumination, deliberate rumination, and distress disclosure are particularly significant predictors of PTG (Ramos & Leal, 2013). These variables were chosen for the current study due to their substantial impact on the variance in PTG across different populations following a challenging life event (ie., Lindstrom et al., 2013; Wozniak et al., 2020), including miscarriage (Shakespeare-Finch et al., 2013). Existing literature suggests that the extent of intrusive rumination, deliberate rumination, and distress disclosure an individual engages in directly affects the amount of PTG they experience (Calhoun & Tedeschi, 2001; Lindstrom et al., 2013; Taku et al., 2009). Understanding how these variables influence the relationships between these variables and PTG is crucial. Additionally, these factors were selected for the current study as mental health professionals can tailor interventions to enhance or reduce intrusive rumination, deliberate rumination, and distress disclosure, thereby influencing the amount of PTG the client experiences (Calhoun & Tedeschi, 1999).

The assumption that self-disclosure predicts PTG is supported by Tedeschi and Calhoun's (2004) assertion that the psychological processing of crisis events involves emotional processing and is linked to perceived benefits. This hypothesis was recently tested in a study by Ryu and Suh (2022), which explored how self-disclosure leads to PTG in adults who have experienced traumatic events. They measured deliberate rumination, positive social responses, and the meaning of life as mediating variables. To this end, they used deliberate rumination items of ERRI, the self-disclosure Scale by Hahne et al. (2004), the Social Reactions Questionnaire (SRQ) that was developed by Ullman (2000), and PTGI. The study involved 318 male and female Korean adults and found that self-disclosure enhances PTG by increasing cognitive awareness through deliberate rumination. The results indicated positive correlations between the study variables and PTG, with self-disclosure positively correlated with deliberate rumination, positive social responses, and the meaning of life. In the multiple mediation model, deliberate rumination mediated the relationship between self-disclosure and PTG. Although Ryu and Suh's (2022) study examined Korean individuals who experienced diverse types of trauma, such as the death or betrayal of a loved one, accidents and injuries, and serious diseases, the role of intrusive rumination remains unclear, and these relationships have yet to be explored in the context of pregnancy loss.

The Impact of Contextual Factors on PTG

Existing literature on PTG following miscarriage has questioned how various contextual factors might influence the experience of PTG after perinatal loss (Boyd 2019; Freedle, 2020). In a recent systematic review, Alvarez-Calle and Chaves (2023) identified key loss-context factors that have been the focus of studies examining their significance in

explaining PTG. These factors include the number of previous losses, the time since the loss, gestational age, and having living children (Isguder et al., 2017; Krosch & Shakespeare-Finch, 2017; Lafarge et al., 2020). For instance, Waugh et al. (2018) found that previous miscarriages exacerbated the pain associated with the death. Conversely, Lafarge et al. (2017) found no association between previous losses and PTG.

Boyd (2019) extensively studied the possible confounding effects of such variables. Through multiple regression analyses, she identified pregnancy-related factors influencing PTG levels in both men and women following pregnancy loss. Interestingly, her analysis revealed that the number of previous losses predicted higher levels of growth. In another study, Krosch and Shakespeare-Finch (2017) analysed data from 374 women who experienced pregnancy loss. Using hierarchical regression to analyse variance among predictors, they discovered that factors such as the length of gestation and having children before the loss were weakly, but positively, associated with PTG, accounting for 6.5% of the variance in PTGI scores. The combined loss context factors accounted for a large proportion of variance in both negative outcomes but considerably less in PTG.

Furthermore, evidence exists that the time since the trauma was experienced had no correlation to the amount of PTG (Hallam & Morris, 2014). This was also seen in a study by Shakespeare-Finch et al. (2013), with the time since the trauma being unrelated to PTGI scores. The individuality of experience was also supported by the findings from their research, with some participants reporting growth occurring a few weeks after their traumatic experience while others experienced posttraumatic growth several years after their trauma. In conclusion, the impact of contextual factors on PTG following pregnancy loss remains inconclusive, highlighting the need for further research to understand these complex and varied influences.

The Potential Role of Therapy in Fostering PTG

Modern conceptualisations suggest that psychological trauma prompts a significant disengagement from previously held schemata, which refers to the cognitive frameworks that enable individuals to organise and interpret information about themselves, others, and their experiences (Janoff-Bulman, 1989). Following this process, individuals integrate trauma-related information into a newly constructed schematic framework, allowing for a revised understanding of their experiences and realities (Tedeschi et al., 2018). However, a notable gap exists in the literature regarding the potential role of therapy in PTG and the factors that impact PTG. Given the potential impact of therapy on factors such as rumination, self-disclosure, and the management of acute stress, it is surprising that most studies on PTG have not included therapy attendance as part of demographic data collection.

Recent studies have begun to explore the impact of therapy on PTG. For instance, Loewenthal (2022) investigated whether positive religious/spiritual change, a component of PTG, is facilitated by Eye Movement Desensitization Reprocessing (EMDR). Their findings indicate that EMDR can indeed foster positive religious/spiritual change. However, they could not determine if this change is part of general PTG or how different PTG features might influence each other, such as whether improvements in emotional bonds could enhance religious/spiritual feelings and vice versa. Similarly, Ha et al., (2017) examined the effects of forgiveness writing therapy on PTG among sexual abuse victims, focusing on shame and depressive symptoms. Participants were randomly assigned to a Forgiveness-writing Therapy (FT) group or a control group. The FT group participated in 30-minute writing sessions about self-forgiveness and situational forgiveness, while the control group received no treatment. The FT group exhibited a significant increase in PTG compared to the control group, but the study had notable limitations. It remains unclear if the effects were due to forgiveness therapy

or the writing process, and the study lacked a comparative group due to recruitment challenges and ethical concerns. An objective analysis of participants' writings could have provided deeper insights into the psychological changes involved.

Gleeson et al. (2023) also explored the relationship between PTSD and PTG, identifying predictors such as the number of therapy sessions, self-blame, anger, and shame. Their hierarchical multiple regression analysis revealed that the number of therapy sessions was the most significant predictor of PTG, supporting Tedeschi and Calhoun's (2004) assertion that deliberate sense-making, often facilitated by therapy, can promote PTG (Schubert et al., 2016). Despite these valuable insights, research on therapy's impact on PTG, particularly concerning miscarriage, remains limited. Thus, the current study will investigate this factor in an exploratory capacity by collecting data on participants' therapy attendance history to identify any potential confounding effects and will control for therapy if necessary.

Relevance to Counselling Psychology

Traditional approaches in psychiatry and clinical psychology have traditionally concentrated on the detrimental effects of trauma and the pathologisation of suffering (Roepke, 2015). As mentioned earlier, despite the limited research on whether and how therapy can facilitate PTG, studies on this topic offer a new perspective. This perspective aligns more closely with counselling psychology's emphasis on constructive and healthy functioning rather than psychopathology (Murphy, 2015). PTG is highly relevant to counselling psychology because it emphasises the potential for positive change following trauma, aligning with the field's focus on nurturing strengths and talents for a fully functioning life (Rogers, 1951).

It is argued that concentrating solely on symptom reduction potentially neglects clients' broader experiences of suffering and their capacity for growth. This symptom-focused approach can miss opportunities to support clients in exploring positive changes that may result from coping with trauma. Counselling psychology, however, is well-positioned to fill this gap by fostering an environment where clients can find personal meaning in their experiences tailored to their individual needs. Unlike well-meaning advice from friends to "concentrate on the positive" (Zoellner & Maercker, 2006, p.629), a counselling psychologist can guide clients through a deeper, more personalised exploration of growth. Raising clinicians' awareness of PTG is crucial, allowing them to recognise and support emerging growth aspects during therapy. By understanding how working through trauma can lead to a revision of trauma-affected schemas, therapists can help clients achieve a heightened appreciation for life and other dimensions of PTG. By investigating these dynamics, psychotherapy can better understand and facilitate the processes that lead to positive psychological growth following trauma. Emotional self-disclosure is highly relevant to the field of counselling psychology, particularly in relation to this study's focus on understanding how self-disclosure may support clients following pregnancy loss (Khan et al., 2012). It was argued that expressing emotions through verbal or nonverbal modalities can alleviate distress, enhance insight, and positively influence interpersonal relationships (Kennedy-Moore & Watson, 2001). Client self-disclosure is "at the heart of psychotherapy" (Khan et al., 2012, p.134) and is a fundamental process within therapy, promoting well-being and facilitating therapeutic progress (Farber, 2006). These perspectives align with this study's research question, which seeks to explore the mechanisms by which self-disclosure contributes to post-traumatic growth. This approach enhances counselling psychology's emphasis on promoting holistic and constructive functioning that includes both distress and PTG.

Summary and Problem Statement

The stigma associated with pregnancy loss may be a factor impacting individuals' ability to engage in self-disclosure and experience positive adjustment following loss. Several studies have supported the link between self-disclosure and PTG; participants who talked about their trauma with others had higher self-reported PTG than those who did not (Taku et al., 2009). Self-disclosure may help individuals find meaning in the events through cognitive processing and emotional expression (Tedeschi & Calhoun, 2004). The therapeutic effect of self-disclosure for patients with PTSD is well-documented (Yeterian et al., 2017; Ko et al., 2018). However, little is known regarding the factors and mechanisms through which self-disclosure affects PTG, particularly the roles of deliberate and intrusive rumination, which require further investigation. To date, there is no known study that has explored the relationship between self-disclosure and PTG through different types of rumination in women who have experienced pregnancy loss.

Moreover, the potential impact of undergoing therapy on self-disclosure, rumination, and PTG remains largely unexplored in the literature. It has been suggested that therapy can facilitate these processes, leading to more positive adjustment (Lepore, 2001). This study aims to address these gaps by examining these relationships in women who have experienced miscarriage. Although a few studies have investigated the effects of therapy with a focus on various outcomes, including PTG, they have not specifically addressed the context of pregnancy loss. This is particularly important because the stigmatised nature of miscarriage may make individuals more inclined to discuss their experiences with a therapist (Nakano et al., 2013).

Significance of the Study

There is a growing recognition that focusing solely on the negative impact of adverse events does not provide a complete clinical picture of an individual's responses to trauma (Krosch & Shakespeare-Finch, 2017). This study aims to explore the factors and mechanisms through which self-disclosure facilitates positive psychological change in women who have experienced pregnancy loss. By examining these relationships, we can expand our understanding of the applicability of the PTG model to stigmatised bereavement and traumatic events. Investigating how positive psychological change occurs in these women can enhance clinicians' ability to support adaptive functioning after such a loss. Furthermore, this dissertation will broaden our understanding of the potential impact of therapy on different types of rumination, self-disclosure, and PTG following pregnancy loss. It will also explore whether therapy influences the relationship between self-disclosure and PTG, strengthening the current knowledge of this process.

On a broader advocacy level, this research may contribute to ongoing efforts to break the stigma associated with pregnancy loss. It aims to increase the understanding of researchers, clinicians, and the general public about the positive impact of providing women with opportunities to disclose their feelings and engage in supportive communities on their psychological well-being.

Research Question, Aims and Hypotheses

Based on the theoretical and empirical literature reviewed previously, this research seeks to answer the following question: “Do deliberate rumination and intrusive rumination

mediate the relationship between self-disclosure and PTG in women following miscarriage?" To answer this question, the following hypotheses are proposed.

This study aims to understand the relationships between intrusive rumination, deliberate rumination, self-disclosure and PTG. It also aims to investigate whether engaging in deliberate rumination and intrusive rumination can mediate the relationship between self-disclosure and PTG.

Aim 1: To examine the influence of self-disclosure, deliberate rumination, and intrusive rumination on PTG.

It was hypothesised that the more people engage in self-disclosure and deliberate rumination, the higher their PTG and the more people engage in intrusive rumination, the lower their PTG.

H1: There will be a positive relationship between self-disclosure and PTG, deliberate rumination and PTG, and there will be a negative relationship between intrusive rumination and PTG.

Aim 2: To examine the influence of self-disclosure on deliberate rumination and intrusive rumination.

It was hypothesised that the more people engage in self-disclosure, the more likely they are to engage in deliberate rumination and the less likely they are to have intrusive rumination.

H2: There will be a positive relationship between self-disclosure and deliberate rumination, and there will be a negative relationship between self-disclosure and intrusive rumination.

Aim 3: To examine whether deliberate rumination and intrusive rumination mediate the relation between self-disclosure and PTG.

It was hypothesised that deliberate rumination and intrusive rumination would at least partially explain the relationship between self-disclosure and PTG.

H3: Deliberate rumination and intrusive rumination will mediate the relation between self-disclosure and PTG.

Table 1

Summary of research aims, objectives, and hypotheses.

Study Aims	Hypotheses	Key Supporting Literature
Aim 1: To examine the influence of self-disclosure, deliberate rumination, and intrusive rumination on PTG.	***H1:*** The more people engage in self-disclosure and deliberate rumination, the higher their PTG and the more people engage in intrusive rumination, the lower their PTG.	Freedle and Oliveira (2021) Lafarge et al., (2020) Zou et al., (2021) Platte et al., (2022) Lindstrom et al., (2013) Freedle and Kashubeck-West (2021) Wilson et al., (2014) Isguner et al., (2018) Taku et al., (2009)

Aim 2: To examine the influence of self-disclosure on deliberate rumination and intrusive rumination.	***H2:*** The more people engage in self-disclosure, the more likely they are to engage in deliberate rumination and the less likely they are to have intrusive rumination.	Ryu and Su (2022) Ramos et al., (2017) Roepke (2015) Neimeyer et al., (2010) Cann et al., (2011)
Aim 3: To examine whether deliberate rumination and intrusive rumination mediate the relationship between self-disclosure and PTG.	***H3:*** Deliberate rumination and intrusive rumination would at least partially explain the relationship between self-disclosure and PTG.	Ryu and Su (2022) Ramos et al., (2017) Jeon et al., (2015) Roepke (2015)

Summary

This dissertation aims to address the current gap in the literature regarding women's experiences of positive psychological changes following pregnancy loss. Specifically, there is a paucity of research investigating the mechanisms through which self-disclosure leads to PTG in the aftermath of this highly stigmatised event. This section has outlined the problem and its significance, the theoretical approach to be utilised, and the available literature on pregnancy loss and PTG. The following section will discuss the research design, including participants, measures, procedures, data analysis, ethical considerations, and the researcher's reflexivity.

Methods

The previous chapter provided the foundation for this research by emphasising the importance of investigating this topic, offering a critical review of existing studies, and justifying the need for the current research. Building on that, this chapter outlines the methodology, including the rationale for selecting a quantitative approach and the researcher's epistemological stance. It details the study's design, data collection methods, recruitment strategy, inclusion criteria, and participant characteristics. Additionally, the materials used, and the analytic strategy employed are discussed. Ethical considerations are then addressed, followed by a comprehensive reflexivity section, where the researcher reflects on their role in the study. This chapter serves as a detailed account of the research methods employed, ensuring transparency and rigour in the research process.

Rationale for a Quantitative Approach and Theoretical and Epistemological Framework

The ontological framework of this research is informed by objectivism, which asserts the existence of an objective reality that can be investigated (Willig, 2019). This study examines participants' PTG using the validated PTGI, a widely employed measure in the literature (Alvarez-Calle & Chaves, 2023; Krosch & Shakespeare-Finch, 2017; Shakespeare-Finch & Barrington, 2012). Additionally, it quantitatively measures predictors and mediators such as deliberate rumination, intrusive rumination, and self-disclosure to understand the mechanisms through which they operate. This ontological stance aligns with a positivist epistemology adopted by the researcher. Positivism in psychological research argues that reality can be understood through deductive reasoning and exists independently of social constructs. It emphasises discovering knowledge through objective examination and minimising the influence of the researcher's subjective biases on findings (Snape, 1997). Consequently, this study employed a quantitative research design to reduce researcher-

participant interaction and potential bias. Using questionnaires, the study aimed to identify trends in naturally occurring variables. This approach favours the generation of objective and replicable knowledge over qualitative methods.

While qualitative research methods are well-suited for studying hidden populations due to their exploratory nature (Ellard-Gray et al., 2015; Rich & Ginsburg, 1999; Smith, 2008), they often require face-to-face interactions, which can limit anonymity and confidentiality, especially in snowball sampling, where participants are referred by others (Sutherland & Fantasia, 2012). Additionally, qualitative methods pose challenges related to participant resource constraints, such as childcare, work obligations, and daily life stresses, which may lead to attrition and absenteeism (Angucia, et al., 2010; Bonevski et al., 2014).

Furthermore, it is important to note that the need for more theory-driven research in counselling psychology is well documented (Aiken & West, 2020). Gore-Felton (2005) supports the necessity of theory-driven research, while Karr and Larson (2005) argue that an imbalance exists in the type of scientific inquiry reported in journals traditionally publishing empirical research in counselling psychology. They found that most of the research cited from three journals was not based on theory. It is problematic for counselling psychologists seeking to intervene in behaviours to promote health and well-being. Without empirically based studies pertinent to the field, counselling psychologists are limited in their ability to use effective methods to improve human functioning among diverse populations across the developmental lifespan (Barkham & Mellor-Clark, 2003).

Given these considerations, a quantitative approach was deemed more suitable for this study. The researcher believes that a clearer understanding of the predictors of PTG can significantly benefit counselling psychology by fostering the development of innovative interventions aimed at promoting PTG (Roepke, 2015). Furthermore, quantitative research

aligns with counselling psychology's commitment to the scientist-practitioner framework, which integrates scientific knowledge with clinical applicability to provide effective care for clients (Blair, 2010). By employing a quantitative research design, this study can produce statistically significant data that helps to identify and measure the specific factors influencing PTG. With sufficient statistical power, the insights gained from this study can be generalised to the wider population of women who have experienced miscarriage (Banwell et al., 2023). Furthermore, the study's focus on deliberate and intrusive rumination as mediators between self-disclosure and PTG can stimulate further research within counselling and psychotherapy. These findings can also have broader implications for mental health and psychology by highlighting effective strategies for promoting PTG and addressing the negative impacts of intrusive rumination.

Design

This quantitative study, conducted online, employed a cross-sectional, correlational design to explore the relationship between intrusive rumination, deliberate rumination, self-disclosure, and PTG. Quantitative analysis was chosen in line with my positivist epistemological position.

Participants and Recruitment

Power calculations

A priori power analysis was conducted using G*Power version 3.1.9.7 (Faul et al., 2007) to determine the minimum sample size required to test the study's hypotheses. The analysis indicated that 77 participants are required in order to obtain .80 power and to detect an effect of .15 p =.05. In line with this, Kline (2016) also suggests that using structural equation modelling techniques requires a sample size of 20 participants per variable.

Accordingly, given that the present study included three predictors (self-disclosure, deliberate rumination, and intrusive rumination), a minimum of 60 participants was needed. Therefore, the researcher aimed to oversample and recruit 85 participants to account for the potential to control therapy attendance in the analysis.

Sampling considerations

Participants were recruited using snowball and opportunity sampling. In line with the Code of Human Research Ethics (BPS, 2014), inclusion and exclusion criteria were developed to protect the well-being of potential participants. The inclusion criteria were women over 18 years old who experienced single or multiple miscarriages at least 12 months ago and who passed the screening question, which was "Are you finding it extremely hard to cope with the challenges you are facing on a day-to-day basis due to miscarriage?". While working with a vulnerable population, research suggests using a screening question or pre-screening survey to determine eligibility (Ellard-Gray et al., 2015). This screening question was used to protect the vulnerable participants by signposting them to miscarriage charities and their GPs, reminding them to focus on themselves. Participants who answered 'yes' did not meet the criteria and could not join the study. No incentives were given to participate.

To ensure participants had sufficient time to transition from the state of amplified emotional distress and disruptive cognitive processing typical in the immediate aftermath of a traumatic event like miscarriage, only women who experienced miscarriages at least 12 months ago were included. While there is no consensus on the time required for PTG to emerge, Buchi et al. (2015) previously adopted the same time point. They determined that this interval provided adequate time for PTG to develop in their research on women who experienced the loss of a premature baby. Similarly, Alvarez-Calle & Chavez (2023) and Hall

(2014) agree that grief intensity typically peaks six months post-loss and gradually declines over the following months, stabilising around 12 months. Therefore, the 12-month period is considered sufficient for participants to process the event and for PTG to potentially emerge.

Participants

A total of 98 women participated in this study. Nine participants failed the well-being screening question; hence, they could not continue with the study. Twenty-two participants did not complete the survey until the end, so they were excluded before running the analysis, leaving a sample of 67 participants. The demographic details of the participants are shown in Table 2. Table 3 presents pregnancy loss-related information.

Table 2.

Demographic information

Demographics	**Proportions**
Age	37.3% were between 35 and 44 years old (*n* = 25), 31.3% of participants aged 25 to 34 (*n* = 21). 28.4% of the sample aged 45 to 54 (*n* = 19). 3% of the participants were women aged 55 to 64 (*n* = 2).
Ethnic group	61.2% of the participants identified as "White" (*n* = 41). 13.4% (*n* = 9) identified as "Black British". 13.4% (*n* = 9) identified as "Asian/ Asian British". 10.4% of the participants (*n* = 7) identified "mixed". 1.5% of the

Demographics	Proportions
	participants. (*n* = 1), identified as “other” and specified “Ashkenazi Jewish”.
Religious background	
	34.3% of the participants were Christian (*n* = 27). 19.4% (*n* = 13) of the participants were Muslim. 7.5% of the participants (*n* = 5) were Jewish. 9% identified as Hindu (*n* = 6). 13.4% of the participants (*n* = 9) identified themselves as atheists, 6% of the participants (*n* = 4) identified as ‘other’, and 10.4% (*n* = 7) selected prefer not to say.
Education level	
	37.3% of the participants (*n* = 25) had a master’s degree. 29.9% (*n* = 20) had a Bachelor’s degree. 17.9% (*n* = 12) had a doctoral degree, and 14.9% (*n* = 10) had A-levels.
Employment status	
	37.3% of the participants (*n* = 25) were full time employed. 22.4% were part time employed (*n* = 15). 14.9% were self-employed (*n* = 10). 13.4% (*n* = 9); were unemployed (not looking for work). 9% (*n* = 6) were students. 1.5% (*n* = 1) were unemployed and looking for a job.

Demographics	Proportions
Marital status	68.7% were married or in a domestic relationship (*n* = 46). 13.4% (*n* = 9) were never married. 1.9% of the participants were divorced (*n* = 8), 4.5% (*n* = 3) were separated, and 1.5% (*n* = 1) were widowed

Table 3.

Loss-related information

Loss- related Variables	Proportions
Time since loss	43.3% (n=29) 1-3 years, 28.4% (n=19) 4-6 years, 17.9% (n=12) 7-10 years, 10.4% (n=7) more than 10 years
Number of miscarriages	49.3% (*n* = 33) had 1 miscarriage, 26.9% (*n* = 18) had 2 miscarriages, 14.9% (*n* = 10) had 3 miscarriages, 1.5%

Loss- related Variables	Proportions
	(*n* = 1) had 4 miscarriages, and 7.5% (*n* = 5) had more than 5 miscarriages
How many weeks were you pregnant at the time of the loss?	61.2% (n=41) were pregnant for 7-13 weeks. 19.4% (n = 13) were pregnant for 0-6 weeks. 19.4% (n = 13) were pregnant for 14-20 weeks.
Did you have other children at the time of the loss?	67.2% (n = 45) did not have other children while 32.8% (n = 22) had other children at the time of the loss.
Have you had therapy after miscarriage?	38.8% (n = 26) have had therapy, and 61.2% (n = 41) have not had therapy after miscarriage.

Recruitment

After gaining ethical approval from the City St Georges, University of London (Ethics code: ETH2223-2197) (Appendix 1) in June 2023, the researcher started the recruitment process. Recruitment took place online through different platforms. Women who self-identified with the eligibility criteria were offered to join the study via online flyers on social media. The flyer included a brief description of the study and a URL for the website at which all study questionnaires could be completed (Appendix 2). Potential participants were not

approached individually to ensure that the initiative for participating in the project resided with individual members and that people did not feel pressurised to participate.

The researcher posted this online recruitment flyer (Appendix 2) on Facebook research groups and Twitter, and a professional profile was created for this project to do that. The word “miscarriage” was entered into the Facebook search function to identify miscarriage Facebook groups where the call for participants could be posted. Requests to join the first 20 groups returned by the search were then sent. Fifteen requests were granted, and the call for participants was posted on these Facebook pages. The recruitment flyer on Twitter used hashtags, including #miscarriage, #posttraumaticgrowth, and #psychologyresearch, to reach a targeted audience on this platform. Secondly, the call for participants was posted on City St Georges, University of London’s SONA system, which recruits participants from students and staff.

Once the potential participants clicked the link, they received the Participant Information Sheet (PIS) (Appendix 3) and a consent form (Appendix 4). Only participants who gave consent could participate in the study. They were informed they could withdraw from the study until they submitted their responses. Before they began the survey, they were presented with the screening question. Only those individuals who clicked the “No” button were given access to the study. Those who responded ‘Yes’ were presented with a signposting page.

Materials

Demographic and Loss-related information

A range of demographic and loss-related information was collected (Appendix 5). Regarding demographic information, participants were asked to provide their gender, age, ethnicity, religion, educational level, marital status, and employment status. The loss-related information sought included the number of miscarriages, the time since the loss, the gestational age of the baby at the time of loss, and whether participants had living children.

Post-Traumatic Growth Inventory (PTGI)

PTG was measured by the Post-Traumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996) (Appendix 6). It is a 21-item questionnaire that measures perceived positive changes that may be experienced following traumatic experiences. Participants rated the occurrence of personal changes they experienced following their miscarriage from 1 (I did not experience this change as a result of my crisis)) to 6 (I experienced this change to a very great degree as a result of my crisis) (e.g., "I have a greater sense of closeness with others" and "I know better than I can handle difficulties"). Individual item responses were summed to achieve the total scale score, with higher total scores indicative of a greater degree of perceived PTG. The PTGI showed excellent internal consistency in a sample of women who experienced pregnancy loss with a Cronbach's *a* of .92 (Krosch & Shakespeare-Finch, 2017). The PTGI demonstrated excellent internal reliability in this current study, with a Cronbach's *a* of .99.

In addition to the total scale score, five subscale scores were generated: Relating to Others (e.g., "I have a greater sense of closeness with others"), New Possibilities (e.g., "I established a new path for my life"), Personal Strength (e.g., "I've discovered that I'm stronger than I thought I was"), Spiritual Change (e.g., "I have a better understanding of spiritual matters"), and Appreciation of Life (e.g., "I can better appreciate each day"). Although the subscales have been verified via confirmatory factor analyses (Taku et al.,

2008; Tedeschi & Calhoun, 1996), several researchers have recently demonstrated that a factor structure consisting of a single higher-order factor fits the instrument equally as well as does the five-factor structure (Lee et al., 2010; Palmer et al., 2012). As such, in the context of the current study, PTG was assessed as a unitary construct, meaning that the total scale score only was used.

Event-Related Rumination Inventory (ERRI)

The ERRI is a 20-item self-report measure of the cognitive processing that occurs in the aftermath of a traumatic event (Appendix 7). It assesses deliberate and intrusive rumination (ERRI; Cann et al., 2011). The ERRI comprises two 10-item subscales: the Intrusive Rumination and Deliberate Rumination subscales. Of the twenty items, ten items assess intrusive rumination (e.g., "I thought about the event when I don't mean to"), and ten items assess deliberate rumination (e.g., "I force myself to deal with my feelings about the event"). Items are rated on a 4-point Likert scale (1 = *not at all* to 4 = *often*), and responses to individual subscale items are summed to create two subscale scores ranging from 0 to 30. Higher scores on the subscales reflect greater reported deliberate and intrusive rumination. The scale has shown excellent internal consistency (intrusive rumination *a* = .94; deliberate rumination a = .88; Cann et al., 2011) in a sample of undergraduate students who experienced a highly stressful event. For the current study, Cronbach's *a* reliability coefficient for the subscales were .97 (Intrusive Rumination), .96 (Deliberate Rumination) and .75 for the total.

The Distress-Disclosure Index

The Distress Disclosure Index (Appendix 8) assessed individuals' tendency to disclose personally distressing information (DDI; Kahn & Hessling, 2001). It is a 12-item

measure, with responses on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) (e.g., “I prefer not to talk about my problems” and “When something unpleasant happens to me, I often look for someone to talk to”). Confirmatory factor analysis of the DDI suggested a single construct, with self-disclosure on one end and self-concealment on the other (Kahn & Hessling, 2001). Higher scores indicate a higher tendency to disclose distress, while lower scores indicate greater concealment of distress. Items 2, 4, 5, 8, 9, and 10 were reverse-scored. The scale has shown excellent internal consistency (a = .92; Levi-Belz, 2016) in a sample of bereaved individuals. In the current study, the DDI scale showed excellent internal reliability with a Cronbach's *a* .97.

Procedure

After clicking the link to join the study, participants were first presented with the PIS. This document provided detailed information about the study's purpose, procedures, potential risks, and benefits. Participants were required to give informed consent to participate in the study by clicking "I agree." Following consent, participants were presented with a screening question designed to ensure they met the study's inclusion criteria. Only those who answered "no" to this screening question were allowed to proceed with the study.

Once participants entered the study, they were introduced to a series of multiple-choice questions. Participants were allowed to progress through the questionnaires at their own pace, providing a comfortable environment and ensuring they could take the necessary time to provide thoughtful responses. The survey responses were collected using Qualtrics, a robust online survey software tool known for its user-friendly interface and secure data management.

The online survey was structured into four distinct parts, each targeting different aspects of the study. The first part focused on demographic and loss-related variables.

Participants were presented with 13 multiple-choice questions designed to gather information about their demographic background and experiences with miscarriage. These questions covered various aspects such as age, gender, education level, and specific details about their miscarriage experience. In the second part of the survey, participants completed the PTGI (Tedeschi & Calhoun, 1996). This validated instrument was employed to measure the extent of PTG that participants may have experienced following their miscarriage. The PTGI consists of several items that assess positive psychological changes that can occur as a result of struggling with highly challenging life circumstances.

The third part of the survey utilised the ERRI (Cann et al., 2011). This inventory measures two types of rumination: deliberate and intrusive. Deliberate rumination refers to purposeful and reflective thinking about the event, while intrusive rumination involves unwanted and recurrent thoughts about the event. The ERRI provided insight into how participants processed their experiences related to the miscarriage. The final part of the survey included the DDI (Kahn & Hessling, 2001). This index was used to assess the participants' tendency to disclose personally distressing information to others. Understanding this tendency was important as it could influence how participants dealt with their miscarriage experience and their overall psychological well-being.

Participants had the flexibility to exit the survey at any point and return later to complete their responses. This feature was particularly useful for ensuring that participants could take breaks as needed and manage their participation according to their own schedules. Upon completion of the questionnaires, an automatic debriefing form appeared on the screen (Appendix 9). This form provided participants with information about the study's purpose, what to do if they had any concerns, and contact information for the researchers should they

have any questions or need further support. The entire process, from start to finish, took approximately 35 to 40 minutes, depending on the individual participant's pace.

Data Analysis

Descriptive statistics were calculated to investigate the rates of deliberate rumination, intrusive rumination, self-disclosure, and PTG and to explore the sample's demographics and loss-context characteristics. Prior to conducting further analysis, an independent samples t-test was conducted to compare the mean scores of the dependent variables for all hypotheses, PTG, intrusive rumination, and deliberate rumination between participants who had received therapy and those who had not to assess whether having undergone therapy could confound the results. T-test results showed significant differences between participants who had and had not received therapy. Due to these significant differences, therapy was controlled for in all subsequent analyses.

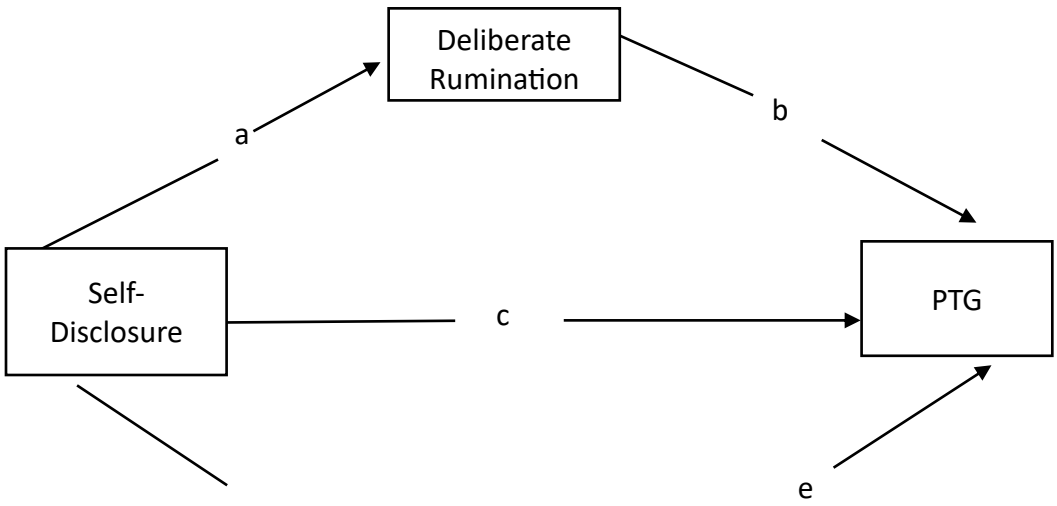
Data analysis was conducted using SPSS software (IBM Corp, 2021). Before conducting regression and mediation analyses, the data were assessed for assumptions of linearity, homoscedasticity, independence of residuals, normality, and multicollinearity. All assumptions were satisfied in the current sample for all hypotheses. For Hypothesis 1, hierarchical multiple regression analyses were performed to examine the extent to which one's self-disclosure, intrusive rumination, and deliberate rumination predicted PTG. Therapy attendance was entered first. Then, the predictor variables, self-disclosure, deliberate rumination, and intrusive rumination, were entered at the same time. PTG was the outcome variable in this hierarchical multiple regression.

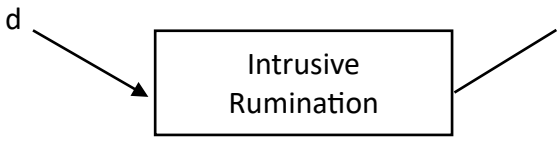
Two hierarchical regressions were carried out for Hypothesis 2. To test the first part of hypothesis 2, the first regression examined the extent to which self-disclosure predicted deliberate rumination while controlling for therapy attendance. Therapy attendance was entered first. Then, the predictor variable, self-disclosure, was entered. The outcome variable was deliberate rumination. To test the second part of hypothesis 2, another hierarchical regression examined the extent to which self-disclosure predicted intrusive rumination while controlling for therapy attendance. Therapy attendance was entered first. Then, the predictor variable, self-disclosure, was entered. The outcome variable was intrusive rumination.

For Hypothesis 3, a parallel mediation regression analysis was conducted using PROCESS (version 4.1; Hayes, 2022), with self-disclosure as the predictor, PTG as the outcome, and deliberate and intrusive rumination as mediating variables (Figure 1). Therapy attendance was entered as a covariate.

Figure 1

Multiple Mediation Models for the Relation between Self-Disclosure and PTG





Ethical Considerations

Miscarriage was chosen as the context for this project precisely because, despite being common, it can be highly stressful and emotionally difficult for mothers while not receiving social recognition of their loss, leading to 'invisible grief' (Markin & Zilcha-Mano, 2018, p.369). However, the sensitivity of this also raises important ethical questions. The well-being of potential participants has taken priority over all other considerations. The principles of the Code of Human Research Ethics (BPS, 2014) were adhered to and applied throughout all stages of the research.

Ethical Approval

Prior to the commencement of the research, ethical approval was obtained from the Psychology Ethics Committee (Ethics code: ETH2223-2197) in June 2023, in accordance with City St Georges, University of London's *Policy and Code of Practice for the Conduct of Research with Human Participants*. The initial application for ethical approval was submitted in November 2022. The panel requested amendments to the flyer, PIS, and debrief sheet, specifically requesting the use of the latest template with updated contact details. Ethical approval was granted in February 2023 following these revisions. Subsequently, the researcher decided to make additional changes to the flyer to facilitate participant recruitment and submitted further amendments for review in May 2023. These amendments were approved by the panel in June 2023.

Ethical issues

There were some ethical issues which needed specific consideration in view of the sensitive nature of the research (Mallon & Elliott, 2022). These included informed consent, support of the participants, and confidentiality and anonymity. Informed consent was secured in written form from all participants. The true nature of the project was clearly explained to participants via a written information sheet provided before they completed the questionnaires. Participants were informed of their right to withdraw their data from the project anytime. Furthermore, they were thoroughly debriefed following the survey. They were provided with information on how to contact the research team if they had any concerns about the project and were given details on how to self-refer to relevant support services if needed. In accordance with confidentiality requirements and data protection legislation, all participant data were anonymised. Only non-identifiable data was transferred to the encrypted folder and stored electronically on a secure City St Georges, University of London's OneDrive. Data will be kept for ten years before it is destroyed, in line with the Sponsor's (City St Georges, University of London) guidelines.

Despite participation being voluntary and the provision of an information sheet at the beginning of the online survey, the nature of the study, which is addressing participants' experiences of loss, could potentially cause unease or distress. To manage this, a screening question was used at the beginning of the survey to exclude individuals already experiencing acute psychological distress. Participants who did not pass the screening question were advised to focus on self-care rather than participate in the research project. They were provided with signposting to appropriate support services, including local miscarriage support services such as Teddy's Wish, The Miscarriage Association, Saying Goodbye, and Cradle Charity. Participants were informed that the results of each questionnaire did not serve

as clinical diagnoses. They were advised to consult with their therapist, GP, or another mental health professional if they had concerns about their own or someone else's well-being.

Reflexivity

Reflexivity is the process of engaging in self-reflection to acknowledge and understand how one's own beliefs, biases, and subjectivities influence the research process and are shaped by it (Jamieson et al., 2022). It is particularly useful for psychologists who deal with sensitive or complex issues (Wilkinson, 1988). Although reflexivity has traditionally been associated with qualitative research (Lazard & McAvoy, 2020), it is equally crucial in quantitative research to enhance the objectivity and validity of the study (Ryan & Golden, 2006). By actively reflecting on their own beliefs and judgments, researchers can ensure that the research process and outcomes are not unduly influenced by personal perspectives, which is especially important in sensitive, political, or complex areas of psychology (Jamieson et al., 2022).

I am a 27-year-old White Caucasian woman conducting this research during the second and third years of my Doctoral training in Counselling Psychology. I have no children and no personal experience of miscarriage. However, I have worked therapeutically with women who sought support for grief, anxiety, and depression following a miscarriage. My professional background as a therapist has ingrained in me the belief that talking and reflecting are important and helpful. Through my work, I observed that miscarriage involves a unique type of grief, characterised by the loss of the possibility of someone never met and, for some, a loss of identity as a mother (Engel, 2020). Miscarriage is a fragile bereavement, often lacking a recognisable body or concrete object to bury, no past to mourn, no rituals, and

ongoing debates about whether bereavement is even possible before 16 weeks when attachment has traditionally been thought to occur (Gerber, 2017).

While working with women who experienced miscarriage, I have noticed a lack of social support around miscarriage. For instance, the NHS does not offer specific psychological miscarriage support, and individuals are asked to contact relevant charities. While bereavement counselling is available, the waiting list is very long. The isolating nature of this experience is compounded by the fact that people often do not share their pregnancy in the first trimester, where miscarriage rates are highest, leading to a sense of isolation and shame as if one's body is flawed. From a feminist perspective, there is an argument that one must hide their true feelings, as speaking out could invite criticism and mockery as a 'hysterical woman' (Gerber, 2017, p. 137). Through my research, I aim to normalise the experience of miscarriage by highlighting that it is both common and uniquely painful.

My interest in PTG stems from my observations and reflections on how different cultures and religions throughout history have embraced the idea that enduring difficult times can lead to greater resilience and compassion. For example, in Buddhism, suffering is viewed as a pathway to enlightenment, with overcoming adversity leading to wisdom and compassion (Ortega-Williams et al., 2021). The Japanese art of Kintsugi, which involves repairing broken pottery with gold, embodies the idea that healing after damage can result in something even more beautiful. This practice illustrates how adversity can lead to growth and transformation (Fujimura, 2021). Such traditions underscore that the process of growing through suffering is a universal human experience, transcending various cultural and religious belief systems (Shakespeare-Finch et al., 2013).

From a personal perspective, reflecting on the loss of my stepdad, the sudden and unexpected nature of his passing has made the experience incredibly difficult. Even after 14

months, the pain and grief remain, and the depth of the hurt hasn't diminished. Yet, through this enduring sadness, I can clearly see how I have changed. I've become more connected to my family, appreciating those relationships more deeply. I also find myself living more in the present, no longer getting entangled in the anxieties about daily tasks that once consumed me. This personal journey highlights how complex it is for us as humans to navigate pain and sadness, but also how transformation and growth can emerge from such profound loss. It's a testament to the resilience and adaptability that often arise from hardship.

This concept has long intrigued me, as I have seen how people who undergo significant adversity often emerge stronger and more empathetic. When I first encountered the term PTG, I was surprised to learn that this phenomenon has been the subject of extensive research. This discovery resonated with my experiences and observations, reinforcing my belief in the potential for positive outcomes following difficult life events. My exploration of PTG is driven by a desire to understand and document how individuals can transform pain into personal growth and how this growth can be facilitated and supported through therapeutic practices. This focus on PTG aligns with my broader aim to provide hope and validation to those who have experienced miscarriage, emphasising that their journey, while painful, can also be a path to resilience and deeper compassion.

As I conduct this research, I am acutely aware that my personal and professional perspectives may influence various aspects of the study, from formulating research questions to interpreting data. The study is grounded in the belief that individuals can experience PTG, and that this growth can be measured. My belief in the potential for positive outcomes following trauma may have shaped my expectations and interpretations, potentially introducing bias. Furthermore, it is essential to reflect on why, out of all possible gaps in the literature and all the possible research questions I could have asked, I decided to focus on

understanding through which mechanisms self-disclosure can lead to PTG. This question itself holds the belief that self-disclosure, which is one of the primary mechanisms of therapy, is helpful. I also propose that this relationship can be understood through deliberate and meaningful reflections. As a trainee counselling psychologist, I might be biased towards the positive impact of reflecting and sharing, both with therapists and others. Throughout the process of writing this dissertation, I realised that I have a strong belief that therapy is helpful for everyone; I might be looking for more evidence to test and find these results.

Consequently, I have decided to check whether therapy influences variables such as self-disclosure and rumination. However, it is important to note, that this focus on therapy as a potential confounding variable was not part of my initial hypotheses or data collection. This consideration arises from my personal interest and background in counselling psychology. It emerged as I delved deeper into the project and reflected on the reasons behind my choice of hypotheses. If I could start this research all over again, I would have collected more data regarding my participants' therapy journey, such as the number of sessions they attended, the type of therapy they received, and whether they found it helpful. This additional information would have provided deeper insights into the role of therapy in PTG. Initially, I considered not exploring the impact of therapy, as it was not a part of the original study. However, I realised that examining therapy could be valuable not only for this research but also for sparking further discussion and opening doors for future studies. Moreover, I would have included therapy attendance in the initial hypotheses to examine its potential moderating or mediating effects more directly. This expanded dataset could have helped clarify the impact of therapeutic interventions on self-disclosure and other key factors related to PTG.

To mitigate any further potential bias, I employed rigorous methodological strategies, including validated instruments and statistical analyses, to ensure the reliability and validity

of the findings. Additionally, I remained committed to maintaining objectivity throughout the research process. By reflecting on my own perspectives and implementing these measures, I aimed to minimise the impact of personal biases and ensure the integrity of the study. While quantitative research typically strives for objectivity through standardised methods and statistical analysis, as a counselling psychologist in training, I aim to critically evaluate my interpretations and consider alternative explanations for the findings.

Throughout the research process, my engagement with the study's design prompted a pragmatic shift, particularly during the recruitment phase. Initially, I titled the study "Post-Traumatic Growth Following Miscarriage" due to my familiarity with the research topic. However, a colleague who had experienced a miscarriage pointed out that the title might be perceived as insensitive. Despite her conceptual interest in the study, she admitted that she would hesitate to participate initially. This incident made me feel like the ‘outsider’ of the participants group that I am researching and highlighted the dual role I needed to balance as both a counselling psychologist in training and a researcher (Jamieson et al., 2020, p.3).

Recognising the importance of sensitivity in language, I revised the study's title to "Women's Experiences Following Miscarriage". I crafted a more compassionate introduction: "Miscarriage can be one of life's most challenging and isolating experiences. Therefore, I am conducting a study focusing on the experiences of women who have undergone miscarriage, exploring their resilience and growth following such a difficult event. My aim is to understand how we can support women in finding strength and healing after miscarriage." This adjustment aimed to convey empathy and inclusivity from the outset, ensuring potential participants felt understood and welcomed.

This experience aligns with the findings of Grov et al. (2009), who encountered similar challenges in recruiting vulnerable populations. Their qualitative evaluation

highlighted the impact of recruitment language on participant engagement, noting that terms such as "survivor" could inadvertently exclude individuals who did not identify with that label. In response, they modified their approach to attract a broader range of participants, emphasising the need for sensitivity and inclusivity in research communication. By incorporating these insights, I aimed to create a research environment that respects and values participants' diverse experiences. This reflexivity emphasised the importance of continually reassessing and refining my role as a researcher to ensure ethical and respectful engagement throughout the study process.

Furthermore, I adopted a reflective approach to data collection to minimise the risk of biased sampling. Recognising that individuals who have received therapy are more likely to self-disclose and that literature supports therapy's potential to facilitate PTG, I decided not to recruit participants through miscarriage counselling charities or miscarriage-specific private psychological services. To make the research accessible, I used online platforms and encouraged participants to invite their friends to join the study. While the online nature of the study has limitations regarding who can see and complete the research, it generally reaches a larger population (Wu, et al., 2022). Additionally, the literature review highlighted existing racial inequalities in miscarriage research, with women from Black Asian Minority Ethnic (BAME) backgrounds underrepresented despite higher miscarriage rates (McCloskey, 2022). I aimed to avoid perpetuating these inequalities to align with counselling psychology’s commitment to diversity, inclusivity, and multiculturalism. Therefore, I posted my study on specific social media forums dedicated to people from BAME backgrounds as well as on general forums and groups.

One of the primary challenges I encountered during recruitment was reaching a sufficient number of participants, which limited my ability to control for potentially

confounding variables. With only 67 participants, the statistical power of the study was constrained, reducing the feasibility of exploring multiple variables that might have influenced the results. If I were to conduct this study again, I would allocate a longer recruitment period to increase the sample size and allow for greater control over additional factors. However, I recognise that in real-world research, it is rarely possible to control for all variables, and attempting to do so may overlook the value of the findings within the natural complexity of human experiences. Despite the limitations, my study contributes meaningfully to the existing literature by testing the applicability of PTG theory in the context of pregnancy loss and by sparking new discussions, such as the potential role of therapy in facilitating the mechanisms that foster PTG. This exploration highlights the significance of my research in expanding understanding and shaping future inquiries in the field.

As a counselling psychologist conducting this research, I often encountered a dilemma. Counselling psychology underscores that reality is socially constructed, emphasising how social contexts and interactions influence individuals' perceptions and experiences (Milton, 2010). In my clinical practice, I adhere to a social constructivist epistemology, which suggests that individuals can have multiple identities or 'selves' that emerge in various social contexts (Willig, 2019, p. 23). This perspective guides me in understanding clients' subjective experiences and the influence of their social environments on their mental health.

However, my background in quantitative research instils in me a sense of confidence in adopting a positivist approach to my research. Quantitative methods allow me to systematically study the relationships and interactions between variables, aiming for objective understanding and measurable outcomes. This approach provides a structured framework to analyse data and draw conclusions based on statistical evidence. Balancing

these two perspectives, social constructivism in practice and positivism in research, requires careful consideration to integrate both approaches effectively and ethically in my work as a counselling psychologist and researcher.

Summary

This chapter has detailed the selected study design and methodology used in this study. It outlined the rationale for using quantitative design and described the recruitment, data collection and analytic strategy. Given the sensitive nature of this research area and the potential vulnerability of the study population, attention has also been given to the ethical considerations of this study. The chapter ended with the researcher's reflections on how her subjective experiences as a researcher have shaped the development and analysis of the research. The next chapter will present the results of the study.

Results

This section presents the findings of the study, beginning with a detailed overview of the descriptive statistics to provide a foundational understanding of the data. Following this, the results of the assumption tests for the hypotheses will be discussed to ensure the validity of the subsequent analyses. The section will then explore the potential confounding impact of therapy on the outcomes. The findings from hierarchical regression analyses and mediation tests will be presented.

Preliminary Analysis

Before the main analysis, a preliminary data analysis was conducted to investigate whether the assumption of parametric tests had been violated. Four scale scores were

computed: self-disclosure, deliberate rumination, intrusive rumination, and PTG. All variables demonstrated strong internal consistency, with Cronbach's alpha values exceeding the recommended threshold of .70 (Cronbach, 1953). Specifically, the DDI had a Cronbach's alpha of .97, the ERRI Deliberate Rumination subscale had an alpha of .96, the ERRI Intrusive Rumination subscale had an alpha of .97, and the PTGI demonstrated particularly high reliability with an alpha of .99.

The inspection of the shape of the variables revealed that they fell within the acceptable boundaries for skewness (between -2 and +2) and kurtosis (between -7 and +7), as suggested by Bryne (2010) and Hair et al. (2010). Additionally, z-scores were computed to identify outliers, revealing that none of the variables had extreme values beyond the threshold of ±3.29 (Tabachnick & Fidell, 2013).

A Kolmogorov-Smirnov test was also performed and however it showed evidence of non-normality in the variables self-disclosure D (67) = 0.17, $p < .001$; deliberate rumination D (67) = 0.16, $p < .001$; intrusive rumination D (67) = 0.15, $p < .001$; and PTG D (67) = 0.21, $p < .001$. While the K-S test is useful in detecting deviations from normality, it is known to be highly sensitive to extreme values and may not accurately reflect the overall data pattern. Specifically, it has been suggested that the K-S test has low statistical power in certain cases and should not be the sole criterion for assessing normality (Ghasemi & Zahediasl, 2012). Given these limitations and considering the skewness values, which were within an acceptable range (between -2 and +2), it was determined that the data sufficiently approximated a normal distribution (Bryne, 2010). As a result, a parametric test was deemed appropriate for further analysis. Descriptive statistics for these variables are provided in Table 4.

Table 4

Descriptive Statistics

Variables (Total Scores)	Number of Participants	Mean (SD)	Min-Max	Skewness	Kurtosis	*a*
Self-Disclosure	67	41.36 (14.29)	12-60	-0.45	-1.30	.97
Deliberate Rumination	67	27 (9.43)	10-40	-0.24	-1.47	.96
Intrusive Rumination	67	48.90 (18.60)	20-80	0.12	-1.52	.97
PTG	67	74.43 (35.09)	21-121	0.01	-1.74	.99

The assumptions for multiple regression were thoroughly assessed for both Hypothesis 1 and Hypothesis 2. For Hypothesis 1, visual inspection of the scatterplot of standardised residuals against standardised predicted values revealed no clear outliers or a clear pattern, confirming that the assumption of homoscedasticity was met (Appendix 10). Additionally, the visual inspection of the histogram of residuals suggested that the assumption of normality was also met, with no multivariate outliers detected (Appendix 11). Furthermore, the Durbin-Watson statistic indicated that the independence of residuals was maintained, as the value was 1.12, falling within the acceptable range of 1 to 3. The maximum Cook's distance was 0.19, below the recommended threshold of 1, indicating that no influential cases were detected. Multicollinearity was evaluated using Tolerance and VIF values. The VIF values ranged from 1.44 (therapy attendance) to 2.82 (self-disclosure), with intrusive rumination at 1.84 and deliberate rumination at 2.13. All VIF values were below the recommended threshold of 5, indicating no multicollinearity issues. Similarly, Tolerance values ranged from 0.36 (self-disclosure) to 0.69 (therapy attendance), with intrusive

rumination at 0.54 and deliberate rumination at 0.47. Since all Tolerance values exceeded the minimum threshold of 0.2, there were no concerns about multicollinearity. Thus, all regression assumptions for Hypothesis 1 were met.

The same rigorous checks were performed for Hypothesis 2, which involves two different outcomes and corresponding hierarchical regression analyses. Visual inspection of the scatterplots for both outcomes showed no clear outliers or a pattern, confirming homoscedasticity (Appendix 12 and Appendix 13). The histograms for both regression models indicated that the residuals were normally distributed, with no multivariate outliers identified (Appendix 14 and Appendix 15). The Durbin-Watson statistic for deliberate rumination as the outcome was 1.85, and the Durbin-Watson value for intrusive rumination the outcome was 2.13; both models remained within the acceptable range. The maximum Cook's distance was 0.16 for deliberate rumination as the outcome and 0.14 for intrusive rumination, indicating no influential cases. Multicollinearity was evaluated using Tolerance and VIF values for two hierarchical regressions. The VIF values were 1 for therapy attendance and 1.35 for self-disclosure, both below the threshold of 5. Tolerance values were 1 for therapy attendance and 0.74 for self-disclosure, exceeding the minimum threshold of 0.2. Thus, Tolerance and VIF values confirmed the absence of multicollinearity. For Hypothesis 2, all assumptions were satisfactorily met in the current sample for both regressions.

To assess whether having undergone therapy could confound the results, an independent samples t-test was conducted to compare the mean scores of the dependent variables for all hypotheses, PTG, intrusive rumination, and deliberate rumination between participants who had received therapy and those who had not.

Results indicated significant differences between participants who had undergone therapy and those who had not across all measured variables. Specifically, participants who received therapy scored higher in PTG ($M = 4.48$, $SD = 1.52$) compared to those who did not receive therapy ($M = 3.00$, $SD = 1.56$), $t\ (65) = 3.81$, $p < .001$. Similarly, deliberate rumination was significantly higher among therapy participants ($M = 3.31$, $SD = 0.69$) compared to non-therapy participants ($M = 2.34$, $SD = 0.91$), $t\ (65) = 4.63$, $p < .001$. Conversely, intrusive rumination was lower in those who had undergone therapy ($M = 2.08$, $SD = 0.76$) than in those who had not ($M = 2.63$, $SD = 0.98$). Due to these significant differences, therapy was controlled for in all subsequent analyses.

Correlations

Table 5 presents the correlation analysis between self-disclosure, intrusive rumination, deliberate rumination, and PTG. The correlation analysis revealed several significant relationships. Self-disclosure was positively correlated with both deliberate rumination ($r = .709$, $p < .001$) and PTG ($r = .745$, $p < .001$), but negatively correlated with intrusive rumination ($r = -.669$, $p < .001$). Intrusive rumination was negatively correlated with both deliberate rumination ($r = -.543$, $p < .001$) and PTG ($r = -.619$, $p < .001$). Deliberate rumination showed a strong positive correlation with PTG ($r = .884$, $p < .001$). The correlation analysis shows that self-disclosure is positively linked to both deliberate rumination and PTG, suggesting that greater self-disclosure is associated with more intentional reflection and higher PTG. However, self-disclosure is negatively correlated with intrusive rumination, indicating that as self-disclosure increases, intrusive thoughts decrease. Intrusive rumination itself is negatively correlated with both deliberate rumination and PTG, implying that individuals who engage in more intrusive rumination tend to experience less deliberate rumination and lower PTG. Lastly, deliberate rumination has a strong positive

relationship with PTG, suggesting that more deliberate rumination is strongly associated with higher levels of PTG after pregnancy loss.

Table 5

Bivariate Correlation between Self-disclosure, Intrusive Rumination, Deliberate Rumination, and PTG

	1	2	3	4
1. Self-disclosure	-			
2. Intrusive Rumination	-.660**	-		
3. Deliberate Rumination	.704**	-.543**	-	
4. PTG	.745**	-.619**	.884**	-

Note: PTG = Post-traumatic Growth, ** p < .001

Multiple Regression Analyses

Self-disclosure, Intrusive Rumination, and Deliberate Rumination Predicting PTG

Hypothesis 1. Engagement in self-disclosure and deliberate rumination would significantly increase PTG, and engagement in intrusive rumination would significantly reduce PTG when controlling for therapy attendance.

Hierarchical Regression Analysis was conducted to test the first hypothesis. PTG was used as the outcome variable. A two-stepped approach was employed. Whether participants had undergone therapy or not following pregnancy loss was entered in the first step. After step one, the results showed that whether participants had undergone therapy or not explained 16.8% (R^2 = .168) of the variance in the PTG. The overall model was significant, $F(1, 65) = 13.13$, $p < .001$. The first step of the regression analysis showed that having undergone

therapy was a significant predictor of PTG (b = -1.40, t = -3.62, SE = 0.39, β = -.410, p < .001).

The predictors, intrusive rumination, deliberate rumination, and self-disclosure, were entered as simultaneous predictors in the second step (see Table 6). The model was significant, F (4, 62) = 70.22, p < .001, and the amount of variance explained in PTG by the independent variables increased to 81.9%. This was a significant addition ΔF (3,62) = 74.42, p < .001. The variable of whether participants had therapy following pregnancy loss did not show significance in model 2 (b = 0.23, t = 1.05, SE = 0.22, β = .068, p = .296). In line with hypothesis 1, deliberate rumination was the strongest positive predictor in the model (b = 1.27, t = 9.10, SE = 0.14, β = .718, p < .001), suggesting that individuals who engage more in deliberate rumination experience higher levels of PTG.

Self-disclosure was also a significant positive predictor (b = 0.27, t = 2.11, SE = 0.13, β = .191, p = .039), indicating that greater self-disclosure is associated with increased PTG. However, higher intrusive rumination did not significantly predict PTG (b = -0.22, t = -1.63, SE = 0.13, β = -.119, p = .109), suggesting that higher levels of intrusive rumination do not necessarily lead to higher PTG. Therefore, hypothesis 1 is partially supported: while deliberate rumination and self-disclosure positively influence PTG, intrusive rumination does not significantly affect PTG. The SPSS output for Hypothesis 1 can be found in Appendix 16.

Table 6

Hierarchical Regression Analysis for Hypothesis 1

		Unstandardized coefficients		*Standardized coefficients*					
Step	*Predictor*	*b*	*SE*	*β*	*p*	R^2	R^2 change	*F*	*p*

1	Therapy	-1.40	0.39	-.410	< .001	.16.8		13.13	.001
2	SD	0.27	0.13	.191	.039	.81.9	65.1	70.22	< .001
	DR	1.27	0.14	.718	<.001				
	IR	-0.22	0.13	-.119	.109				

Self-disclosure Predicting Deliberate Rumination and Intrusive Rumination

Hypothesis 2. Engagement in self-disclosure would increase deliberate rumination and reduce intrusive rumination whilst controlling for therapy attendance.

Hierarchical regression was conducted to test the second hypothesis. As there are two different outcome variables in this hypothesis, it was tested by using two separate hierarchal regressions. A two-stepped approach was employed for both regressions.

In the first hierarchal regression, deliberate rumination was used as the outcome variable. Whether participants had received therapy or not, which was correlated with deliberate rumination, was entered in the first step. The results showed that whether participants had therapy or not following pregnancy loss explained 23.9% (R^2 = .239) of the variance in deliberate rumination. The overall model was significant, F (1, 65) = 20.41, p < .001. The regression analysis in model 1 showed that those who had therapy differed in deliberate rumination from those who did not have therapy (b = -0.94, t = -4.52, SE = 0.21, p < .001, β = -.489).

Self-disclosure, which was the predictor, was entered in the second step. The model was significant, F (2, 64) = 34.62, p < .001, and the amount of variance explained in deliberate rumination by the model increased to 52.%. This change in variance was significant ΔF (1,64) = 37.42, p <.001. The variable of whether participants had therapy did

not show significance in model 2 *(b* = - 0.34, *t* = -1.77, *SE* = 0.19, *p* = .082, *β* = -.177). In line with hypothesis 2, self-disclosure was a positive significant predictor controlling for therapy (*b* = 0.49, *t* = 6.12, *SE* = 0.80, *p* = .000, *β* = .615. Greater self-disclosure was thus associated with greater deliberate rumination.

Another hierarchal regression was conducted to test hypothesis 2 with the other outcome, intrusive rumination. Whether participants had therapy or not, correlated with intrusive rumination, was entered in the first step. The results showed that whether participants had therapy or not, explained 6.6.% (R^2 = .066) of the variance in intrusive rumination. The overall model was significant, *F* (1, 65) = 4.57, *p* = .036. The regression analysis showed that those who had therapy differed in intrusive rumination from those who did not have therapy (*b* = 0.48, *t* = 2.14, *SE*= 0.23 *p* = .036, *β* = .256).

The predictor, self-disclosure, was entered in the second step. The model was significant, *F* (2, 64) = 34.62, *p* < .001 and the amount of variance explained in intrusive rumination by the model increased to 44.3%. This change in variance was significant ∆*F* (1,64) = 43.4, *p* <.001. The variable of whether participants had therapy did not show significance in model 2 (*b* = -0.2, *t* = -0.97, *SE* = 0.20, *p* = .337, *β* = -.105). Self-disclosure was a significant negative predictor of intrusive rumination controlling for therapy (*b* = -0.56, *t* = -6.59, *SE* = 0.08, *p* = .000, *β* = -.713); greater self-disclosure was associated with lower intrusive rumination. Therefore, the results support hypothesis 2. Engagement in self-disclosure would increase deliberate rumination and reduce intrusive rumination whilst controlling for therapy. The SPSS outputs for Hypothesis 2 can be found in Appendix 17.

Table 7

First Hierarchical Regression Analysis for Hypothesis 2 with Deliberate Rumination as outcome

		Unstandardized coefficients		*Standardized coefficients*					
Step	*Predictor*	*b*	*SE*	*β*	*p*	R^2	R^2 change	*F*	*p*
1	Therapy	-0.94	0.21	-.489	< .001	.23.9		20.41	<.001
2	Therapy	-0.34	0.19	-.18	.082	52	28.1	34.62	<.001
	Self-Disclosure	0.49	0.80	.615	.000				

Table 8

Second Hierarchical Regression Analysis for Hypothesis 2 with Intrusive Rumination as outcome

		Unstandardized coefficients		*Standardized coefficients*					
Step	*Predictor*	*b*	*SE*	*β*	*p*	R^2	R^2 change	*F*	*p*
1	Therapy	0.48	0.23	.256	.036	6.6		4.57	.036
2	Therapy	-0.2	.20	-.105	.377	44.3	37.8	25.48	<.001
	Self-Disclosure	-0.56	0.08	-.713	.000	.72.1			

Mediation Analysis

Deliberate Rumination and Intrusive Rumination as Mediators

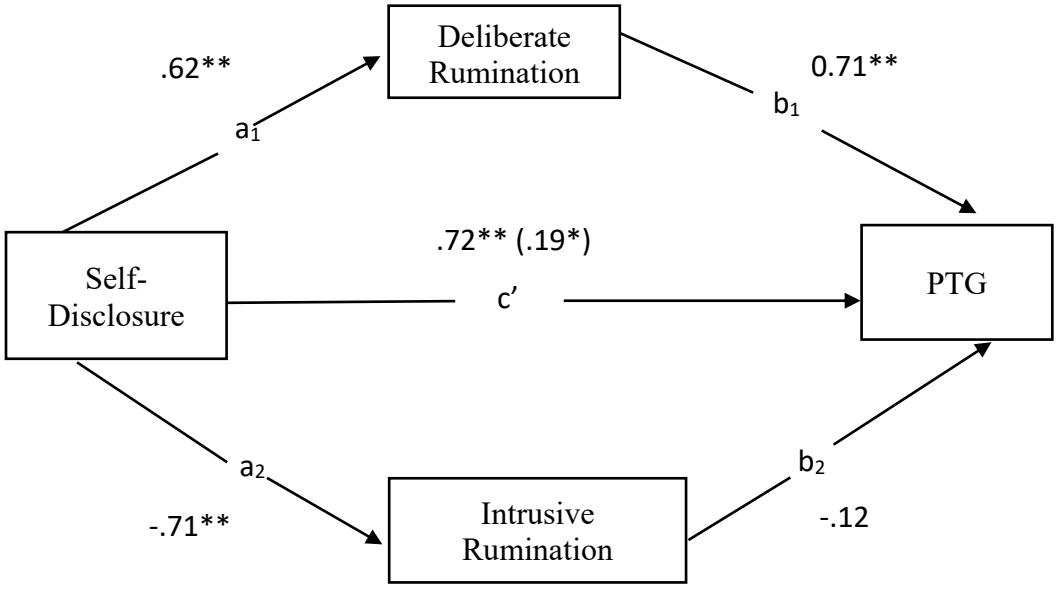
Hypothesis 3. Deliberate rumination and intrusive rumination would mediate the relation between self-disclosure and PTG while controlling for therapy attendance.

To test the third hypothesis, a parallel mediation regression analysis was conducted using PROCESS (version 4.1; Hayes, 2022), Model 4, with 5000 bootstrap samples for the bootstrap confidence intervals. The Hayes PROCESS macro offers significant advantages for mediation analysis by automating complex calculations, such as bootstrapping for indirect effects and conditional effects. This automation not only reduces the likelihood of errors but also streamlines the process, saving time and effort compared to manual computations. Additionally, it provides comprehensive and detailed output, making advanced statistical methods more accessible and ensuring transparency and reproducibility in research (Surucu et al., 2023).

PTG was entered as an outcome variable, and self-disclosure was entered as a predictor. Intrusive and deliberate rumination were entered as parallel mediators. Therapy attendance was included as a covariate. The multiple mediation model diagram can be found in Figure 2.

Figure 2.

Path Model of the Relations between Self-Disclosure, Deliberate Rumination, Intrusive Rumination, and PTG



Note. The path coefficients are standardised regression coefficients. The value in parentheses is the direct effect of self-disclosure on PTG.

The total effect (i.e., direct + indirect) of self-disclosure on PTG was positive and significant, $b = 1.01$, $\beta = .72$, $SE = 0.14$, $t = 7.37$, $p < .001$. The direct effect of self-disclosure on PTG (c') with the mediators in the model, was positive and significant, $b = 0.27$, $SE = 0.13$, $t = 2.09$, $p < .05$, and the influence of self-disclosure on deliberate rumination (a_1) was positive and significant, $b = 0.49$, $\beta = .62$, $SE = 0.08$, $t = 6.12$, $p < .001$. The influence of self-disclosure on intrusive rumination (a_2) was negative and significant, $b = -0.55$, $\beta = -.71$, $SE =$

0.08, t = -6.56, p < .001. The influence of deliberate rumination on PTG (b_1) was positive and significant, b = 1.27, β =*0.71, SE* = 0.14, t = 9.06, p < .001, but the influence of intrusive rumination on PTG (b_2) was not significant, b = -0.22, β = *-.12, SE* = 0.13, t = -1.67 p = .09.

The indirect effect of self-disclosure on PTG through deliberate rumination was significant, b = 0.62 and a 95% BCA confidence interval of .03 to .09. Furthermore, the examination of the specific indirect effect of self-disclosure on PTG through intrusive rumination was not significant, b = 0.10 and a 95% BCA confidence interval of -.04 and.03; Therefore, the hypothesis 3 is partially supported. Table 9 presents the results of the multiple mediation regression analysis. The SPSS outputs for Hypothesis 3 can be found in Appendix 18.

Table 9

Multiple Mediation Model

Effect	Figure 1 Path	*b*	*SE*	*t*	R^2
Total Effect:					
SD → PTG		1.01	0.14	7.37**	0.56
Direct Effects:					
SD→ PTG	c’	0.27	0.13	2.09*	—
Paths:					
SD → DR	a_1	0.49	0.08	6.12**	—
SD → IR	a_2	-0.55	0.08	-6.56**	—
DR → PTG	b_1	1.27	0.14	9.06**	—
IR → PTG	b_2	-0.22	0.13	-1.67	—
Indirect Effects:					**95% CI**

SD→PTG					
Via DR	a_1 x b_1	0.62	0.15	—	+.3314 + .9129
Via IR	a_2 x b_2	0.12	0.10	—	-.0371 + .3468
Model Summary:		***R***	***F***	***P***	R^2
		0.75	40.37	<.001	0.56

Note. *$p < .05$, **$p < .001$

Summary

This chapter detailed the results of the present study, beginning with a review of descriptive statistics and assessing whether the assumptions for regression analyses were met. It was determined that therapy attendance could act as a confounding variable; therefore, it was controlled for in subsequent analyses. It presented the results from the regression analyses and mediation analysis. The following chapter discusses these key findings as related to previous research, as well as limitations and implications for future research and clinical practice.

Discussion

This chapter provides a summary of the study and its key findings, followed by a discussion of the results. The implications of these findings will be examined from theoretical, clinical, and broader perspectives. Finally, the chapter will address the limitations of the study and offer recommendations for future research.

Summary of the Study

The purpose of the current study was to address a gap in the literature and investigate the relationship between women's self-disclosure, deliberate rumination, intrusive rumination, and PTG following pregnancy loss. Specifically, it investigated the possible mediating role of intrusive and deliberate rumination in the relationship between self-disclosure and PTG.

Based on available research, this study proposed three hypotheses. The first hypothesis suggested that higher levels of self-disclosure and deliberate rumination will predict higher levels of PTG. Conversely, it proposed that higher levels of intrusive rumination will predict lower PTG scores. The second hypothesis suggested that the more women engage in self-disclosure following pregnancy loss, the more likely they are to engage in deliberate rumination and less likely to have intrusive rumination. The final hypothesis suggested that deliberate rumination and intrusive rumination mediate the relationship between self-disclosure and PTG.

Summary of Findings

Deliberate Rumination Predicting PTG

The hierarchical regression findings indicated that deliberate rumination, measured by ERRI, was the strongest positive predictor of PTG in women following miscarriage in this study when controlling for therapy attendance. This finding is consistent with the PTG theory and supports existing research, which suggests that intentional and reflective cognitive processing plays a crucial role in fostering PTG after challenging life events (Taku et al., 2009; Lamon & Leal, 2013; Freedle & Kashubeck-West, 2020). Joseph (2011) highlights that this is especially relevant for events that bring human mortality into focus, such as miscarriage, as they often prompt individuals to confront profound existential questions about life's purpose.

Intrusive Rumination Predicting PTG

Contrary to the study's hypothesis, the hierarchical regression analysis revealed that intrusive rumination did not significantly predict PTG when controlling for therapy attendance. This finding contradicts some prior research, such as Lafarge et al. (2020), which suggested that higher levels of intrusive rumination could hinder the PTG process. Intrusive rumination is often viewed as a maladaptive response, with prolonged, distressing thoughts potentially preventing an individual from making meaning of their trauma (Platte et al., 2022). However, the lack of a significant relationship in this study suggests that the role of intrusive rumination in PTG may be more complex, and alternative explanations for this finding should be considered.

One possible explanation for the lack of a significant relationship is that intrusive thoughts may naturally emerge as a byproduct of highly stressful events, such as pregnancy loss, which is the focus of this study. Pregnancy loss is viewed as a painful and emotionally distressing experience, and it is likely that intrusive rumination occurs as part of the normal cognitive and emotional processing that follows such a major trauma (Michael et al., 2007). Rather than signalling psychological pathology, intrusive thoughts in this context may reflect a typical cognitive response to the overwhelming nature of the event (Greenberg, 1995). Several studies have suggested that immediately following a traumatic experience, intrusive rumination might not necessarily indicate maladaptive coping but instead represent an initial phase of cognitive adjustment (Hallam & Morris, 2014; Ramos et al., 2017). In fact, a recent systemic review looking into the factors facilitating the experience of PTG after perinatal loss found that intrusive rumination was not related to PTG (Alvarez-Calle & Chaves, 2023). This perspective aligns with broader research on trauma recovery, where a certain level of intrusive rumination is considered a normal part of the process of coping and coming to terms with the event (Freedle & Oliviera, 2021).

There is also evidence to suggest that intrusive thoughts may also trigger purposeful reflection, thus serving as a precursor to PTG. Some argue that intrusive rumination, while initially distressing, can indirectly contribute to PTG by prompting further cognitive processing (Alvarez-Calle and Chaves, 2023). Zhou et al. (2015) found that intrusive rumination partly mediated the relationship between challenges to core beliefs and PTSD, indicating that these intrusive thoughts can trigger the necessary cognitive work that leads to PTG. Their study, which involved Chinese middle school students who experienced the Wenchuan earthquake, revealed that intrusive rumination had a direct negative effect on PTSD but also an indirect positive effect on PTG by activating deliberate rumination. This suggests that the initial distress caused by intrusive thoughts can lead to deliberate efforts to make sense of the trauma, ultimately promoting PTG.

This perspective was also echoed by Taku et al. (2009), who examined PTG and four types of rumination: intrusive rumination soon after the event, intrusive rumination recently, deliberate rumination soon after the event, and deliberate rumination recently. Their study, which included university students who experienced various traumatic events, found that both intrusive and deliberate rumination were positively associated with PTG at different points in time. Intrusive ruminations soon after the traumatic event were more positively related to PTG, implying that they set the stage for further cognitive processing. Deliberate rumination, however, was found to be the strongest predictor of PTG, consistent with existing research. The timing of rumination is also an important factor in understanding its impact on PTG. Both Taku et al. (2009) and Cann et al. (2010) argue that not only the type of ruminative thinking but also whether it is recent or prolonged makes a difference in PTG. Their findings suggest that intrusive rumination immediately after the trauma can initiate the cognitive process, such as reflecting and meaning-making, that are necessary for PTG, while prolonged

deliberate rumination helps sustain and deepen this growth over time. As Jeon et al. (2015) mentioned, early intrusive rumination may serve as a catalyst for deliberate cognitive processing, which is more directly linked to PTG (Taku et al., 2008). The results illustrate the importance of considering intrusive rumination as multidimensional and varying across time in its impact on PTG and highlight its nuanced role in relation to PTG.

However, the current study's design did not allow for examining temporal dynamics, which might explain why intrusive rumination did not emerge as a significant predictor of PTG. Without tracking when intrusive rumination occurred, whether immediately following the event or much later, it is difficult to discern its exact role in the PTG process. Previous research argued that intrusive thoughts may not always be detrimental; rather, they may reflect a normal cognitive response to trauma or serve as a precursor to deliberate rumination, which is more directly tied to PTG (Calhoun et al., 2010).

Furthermore, Ramos et al. (2008) also provide additional insights into the potential relationship between intrusive rumination and PTG. In their longitudinal study involving women with non-metastatic breast cancer, they found that group intervention positively influenced PTG by enhancing challenges to core beliefs and intrusive rumination. While Ramos et al. (2008) reported a positive link between intrusive rumination and PTG, it is worth noting that the group intervention may have shaped the nature of rumination, making it more purposeful and constructive. This finding suggests that intrusive rumination may not be inherently harmful but could potentially facilitate PTG when coupled with interventions that promote cognitive processing and challenge core beliefs. Furthermore, the longitudinal design employed by Ramos et al. (2008) was crucial in minimising retrospective biases, which often skew the interpretation of cognitive processes in cross-sectional studies such as this one (Bolger, et al., 2003). The current study's cross-sectional nature may limit the ability

to capture the evolving nature of rumination over time, potentially explaining the lack of significant findings on the role of intrusive rumination in facilitating PTG (Hoyt, et al., 2008). Another explanation of the current results could be that intrusive rumination may have a curvilinear relationship with PTG (Kleim & Ehlers, 2009) and that too little or too much intrusive rumination may inhibit growth (Freedle & Oliviera, 2021). The current study's design was not suitable for investigating such a relationship as a linear analysis may not capture the complexities of this relationship, as it assumes a straightforward increase or decrease in PTG relative to levels of intrusive rumination. This could also explain the lack of evidence supporting the negative impact of intrusive rumination on PTG.

Moreover, it is critical to acknowledge that the relationship between intrusive rumination and PTG was not significant when examining the overall PTG score. However, this finding may be partially explained by the decision to treat PTG as a single construct rather than exploring its subscales. Prior research suggests that intrusive rumination may impact specific dimensions of PTG, such as personal strength or changes in life philosophy, without necessarily influencing others (Calhoun et al., 2010). As a result, examining only the total PTG score could have masked significant associations within individual subscales. For instance, a non-significant overall result may obscure meaningful relationships between intrusive rumination and certain subcategories of PTG, or conversely, the overall effect may be driven by significant changes in only one or two dimensions of PTG. Future studies would benefit from analysing PTG subscales to better understand the nuanced effects of intrusive rumination on various aspects of growth.

Furthermore, it is also important to note that the levels of rumination reported by women in this study were elevated, 2.71 for deliberate rumination and 2.14 for intrusive rumination, which is higher than levels observed in other studies using the ERRI scale. For

example, a study reported mean scores of 1.47 and 1.35 for intrusive and deliberate rumination, respectively, among a sample of students who had experienced a traumatic event (Groleau et al., 2013) Another study reported mean scores of 1.19 and 1.09 respectively among a group of bereaved family members of cancer patients (Hirooka, et al., 2017). It is possible that the high levels of rumination observed in this study reflect the amount of cognitive work women have to engage in to process a death that is outside of the typical circle of life, where parents die first (Freedle & Kashubeck-West, 2021). Furthermore, the persistent stigma surrounding pregnancy loss may have complicated the cognitive processes needed to reconstruct core beliefs (Markin & Zilcha-Mano, 2018).

Self-disclosure predicting PTG

The finding that self-disclosure significantly predicts higher PTG after pregnancy loss, when controlling for therapy attendance, highlights the critical role that sharing personal, distressing information plays in the recovery and growth process. This result is consistent with a body of literature emphasising the positive impact of verbalising emotions and traumatic experiences on PTG (Freedle, 2020; Dong et al., 2015). Self-disclosure allows individuals to externalise their pain, which not only facilitates personal emotional processing but also fosters stronger interpersonal connections (Dirik & Göcek-Yorulmaz, 2018). Joseph (2011) explains that when individuals disclose distressing information, they often experience greater emotional intimacy with those around them. These deeper connections can contribute to emotional support, which is viewed as essential for fostering PTG, as it helps individuals feel understood, valued, and less alone (Markin, 2017). This suggests that self-disclosure can serve as a means of reducing feelings of isolation and loneliness, both of which are common emotional responses to traumatic events.

After experiences such as pregnancy loss, individuals often withdraw from social interactions, driven by feelings of shame, guilt, or the belief that others cannot understand their pain (Cacciatore et al., 2009). By sharing their personal challenges, individuals can dismantle these emotional barriers and create a sense of connection and shared experience with others. This disclosure can lead to stronger bonds with friends, family members, and support groups, reducing the loneliness and isolation that often accompany grief and trauma (Richardson, 2016). Palmer et al. (2016) agreed with this claim. They argued that this appears particularly true when sharing with people who have gone through similar traumatic experiences, as it has the positive effect of normalising the individual's situation and feelings.

The significant relationship between self-disclosure and higher PTG following pregnancy loss may partly stem from its ability to foster both emotional and practical social support (Levi-Belz, 2016). When individuals openly express their distress, they make their needs more visible to those around them, which can lead to increased social and practical support. This is particularly important after traumatic experiences like pregnancy loss, where practical help, such as assistance with daily tasks or emotional reassurance, can ease the burden of coping with the aftermath of the trauma (Tian & Solomon, 2020). Practical support can alleviate some of the day-to-day challenges during recovery, allowing individuals to focus more on their emotional healing. In this way, self-disclosure may not only benefit the discloser emotionally but also create opportunities for others to step in and offer tangible forms of help (Gross, 2015). Research has highlighted the positive relationship between social support and PTG, further underscoring the role of self-disclosure in fostering PTG (Northfield & Johnston, 2022). However, it is important to acknowledge that while self-disclosure can potentially lead to increased social support, the present study did not specifically measure the social reactions or support that followed such disclosures. As a result, while the finding that self-disclosure predicts PTG can be partly explained by its

ability to foster social support, this connection remains speculative and requires further investigation. Future studies should examine the nature of social responses to disclosure to better understand how they contribute to PTG.

In addition to its role in promoting emotional intimacy and practical support, it is widely argued that self-disclosure can also aid in the cognitive processing of trauma. For instance, Stockton et al. (2014) suggest that verbalising one's experiences allows individuals to organise their thoughts and emotions, making the traumatic experience more manageable and meaningful. This process of sense-making is central to PTG, as it often involves reconstructing one's worldview to accommodate the trauma within a new understanding of self and life. This sense-making process helps individuals integrate the traumatic event into their personal narrative, leading to a more coherent and empowered sense of self (Winter-Plumb et al., 2019).

Self-disclosure Predicting Deliberate Rumination and Intrusive Rumination

Furthermore, the current study revealed that greater distress disclosure is linked to an increase in deliberate rumination and a decrease in intrusive rumination. This suggests that when people share distressing information, they are more likely to engage in thoughtful reflection and less likely to experience unwanted, intrusive thoughts. These findings align with the PTG theory, which suggests that openly expressing distressing emotions can help people process trauma more effectively (Joseph, 2011). Instead of being overwhelmed by intrusive thoughts, individuals who disclose their feelings may shift toward more controlled and purposeful thinking (Sanki & O'Connor, 2021). This deliberate rumination allows them to reflect on their experiences, make sense of what happened, and re-evaluate their life goals (Tedeschi et al., 2018). The PTG model suggests that self-disclosure can shift ruminative thinking from mostly automatic and intrusive to more deliberate, allowing individuals to

reassess their life goals and create a meaningful narrative (Tedeschi et al., 2018). The findings of this study emphasise the potential benefits of distress disclosure in effectively managing and processing traumatic experiences.

Deliberate Rumination and Intrusive Rumination as Mediators

Moreover, the study's results indicate that deliberate rumination serves as a mediator in the relationship between self-disclosure and PTG. This means the relationship between self-disclosure and PTG is at least partially explained by deliberate rumination after pregnancy loss. This finding is consistent with the PTG theory, which proposes that disclosing one's trauma and distress may foster changes in cognitive processing (Tedeschi & Calhoun, 1996). Engaging in reflective, meaning-making, repetitive thought may aid in making accommodations to the new assumptive world or assimilating the event into an existing cognitive structure, contributing to the experience of psychological growth (Tedeshi et al., 2018). This finding not only reiterates the results of previous studies (Martin & Tesser, 2013; Treynor et al., 2003; Ko & Rhee, 2018; Kim & Bea, 2019; Wozniak et al., 2020) that deliberate rumination can promote PTG, but also partially explains how another significant predictor, self-disclosure, might be related to PTG.

Contrary to the second part of the third hypothesis, this study has found that intrusive rumination does not mediate the relationship between self-disclosure and PTG, suggesting that it does not partially explain this relationship. This is not consistent with some aspects of the PTG theory, as according to Tedeschi et al. (2018), sharing thoughts, intrusive or deliberate, after a challenging life event can foster the development of new schemas and

contribute to the experience of growth (Tedeschi et al., 2018). However, this study can only partially support this claim. Furthermore, it is crucial to highlight that the current study is the first to examine whether intrusive rumination mediates the relationship between self-disclosure and PTG, which makes drawing any conclusions challenging.

Therapy Attendance as a Confounding Variable

This study highlighted the potential influence of therapy on self-disclosure, deliberate rumination, intrusive rumination, and PTG. Initial bivariate analyses indicated that therapy attendance was positively correlated with increased deliberate rumination, self-disclosure, and PTG, while it was negatively correlated with intrusive rumination. However, when this predictor was included in the model alongside other predictors in the hierarchical regression, these relationships were no longer statistically significant. Despite this, it is argued that this study contributes pioneering insights suggesting that attending therapy may facilitate PTG. As the first study to explore the potential impact of therapy on PTG and its predictors in a sample of perinatally bereaved women, it is difficult to draw direct comparisons or definitive conclusions from the findings.

However, this research adds to the existing literature, which remains relatively limited. For example, Jeon et al. (2015) found a significant association between PTG and nurse counselling in patients who had undergone allogeneic hematopoietic stem cell transplantation. Their study reported that participants who received nurse counselling had significantly higher PTG levels, with the argument that addressing problems and providing support through post-transplant counselling calls contributed to enhanced PTG. Yet Jeon et al.'s (2015) study was cross-sectional, meaning no causal relationship could be established. Moreover, their focus on nurse counselling, which primarily involves reassurance and informational support, differs from traditional psychological therapies such as Cognitive

Behavioural Therapy (CBT). As a result, the applicability of these findings to the context of formal therapeutic interventions remains unclear. Further research is needed to gain a deeper understanding of the specific role of therapy in promoting PTG, especially in distinct populations like perinatally bereaved women.

Implications

Theoretical Implications

The findings of this study have important implications. On a theoretical level, this study demonstrates the validity of the PTG model proposed by Tedeschi and Calhoun (1996) to the experience of perinatal loss. As such, it builds on the sparse literature that indicates that women can experience PTG following perinatal loss. It confirms the crucial role that deliberate rumination plays in fostering PTG, showing that a systematic, deliberate effort in reflective thinking and seeking meaning is beneficial to women following pregnancy loss.

The concurrent reliance on intrusive and deliberate rumination in this study in this study can be interpreted through the lens of bereavement theories, particularly the Dual Process Model of Bereavement proposed by Schut (1999). This model suggests that individuals alternate between loss-oriented and restoration-oriented coping mechanisms and cognitive processes following the death of a loved one. Loss-oriented coping involves managing stressors directly related to the death, such as yearning for the deceased, and may be associated with intrusive thoughts. In contrast, restoration-oriented coping addresses the broader consequences of the loss, including practical adjustments (e.g., financial changes) and psychological adaptation (e.g., developing a new self-identity) (Stroebe & Schut, 2010), which aligns more closely with deliberate rumination (Calhoun et al., 2010). According to this model, the oscillation between these two coping orientations helps individuals adjust to bereavement by confronting the reality of the loss while also attending to life's new demands, providing temporary respite from their grief. The engagement in both intrusive and deliberate

rumination may, therefore, reflect this broader process of alternating between managing the loss itself and the challenges of restoring normalcy in the aftermath (Lafarge et al., 2020).

The positive effects of self-disclosure on PTG and different rumination styles align with PTG theory, demonstrating its relevance to women who have experienced miscarriage. This situation is particularly complex due to the stigma surrounding miscarriage, which can influence how women disclose their experiences and the way they approach self-disclosure (Derlega et al., 1993). Additionally, the study found that deliberate rumination mediates the relationship between self-disclosure and PTG, further supporting PTG theory in the context of pregnancy loss.

The findings of this study, which highlight the potential benefits of self-disclosure after pregnancy loss, partially align with the Disclosure Processes Model (DPM). This model provides a comprehensive framework for understanding how interpersonal self-disclosure impacts the psychological well-being of individuals who may be stigmatised or marginalised (Chaudoir & Fisher, 2010). According to the DPM, articulating difficult or traumatic experiences can help individuals alleviate immediate emotional distress and, over time, lead to greater insight and long-term psychological benefits (Richards, 2021). However, while the DPM offers a robust theoretical foundation for these findings, it also highlights that the benefits of self-disclosure are contingent upon additional factors, such as the reactions of the confidant and the level of perceived social support. Research has demonstrated that when confidant reactions are neutral or negative, the anticipated benefits of disclosure may not be realised (Lepore et al., 2000; Rodriguez & Kelly, 2006). This is particularly relevant in pregnancy loss, where Freedle and Oliveira (2021) found that the positive effects of

disclosing distressing information are closely linked to the supportive responses received from others.

Clinical Implications

The findings of this study have significant implications for clinicians who work with women who have experienced pregnancy loss. The PTG approach offers a more flexible and holistic response to the needs of this group, focusing not only on symptom reduction but also on guiding individuals toward more fulfilling and rewarding ways of living (Steenkamp et al., 2020). One of the key insights is the role of rumination in PTG, which suggests that clinicians should actively explore and discuss the repetitive thoughts that often follow such a loss. As mentioned earlier in this section, the study found that women who experienced miscarriage reported significantly higher levels of rumination compared to other groups who had gone through traumatic life events (Freedle & Oliviera, 2021). This elevated level of rumination suggests that the emotional and cognitive responses to miscarriage can be particularly intense and pervasive (Black & Wright, 2012). Given this finding, it is crucial for clinicians to proactively address the topic of rumination with their patients. By initiating conversations about the nature of rumination, clinicians can help normalise the experience for women who have experienced a miscarriage. It's important to explain that intrusive and negative thoughts are a common and natural part of the grieving process after such a loss (Micheal & Cooper, 2013). This normalisation can alleviate some of the distress that women might feel, knowing that their experiences are a typical part of the grieving process (Barcaccia et al., 2019).

Furthermore, working with clients to increase their ability to regulate their emotions is an important step preceding deliberate rumination (Triplett et al., 2012). Clinicians may want to help clients discover the possible meaning of their experience by engaging in deliberate and reflective thinking that may facilitate positive psychological change (Gleeson et al.,

2023). Also, studies have shown that discovering new meaning in life and finding a new sense of purpose may, in turn, lead to a higher level of life psychological well-being, indicating the importance of growth (Triplett et al., 2012). In addition to discussing rumination, it is crucial for clinicians to work with clients to improve their emotional regulation skills following pregnancy loss (Cooper et al, 2019; Tedeschi & Moore, 2021). Emotional regulation is an important precursor to engaging in deliberate rumination, a more reflective and constructive form of thinking that can lead to positive psychological change (Triplett et al., 2012). By helping clients develop these skills, clinicians can facilitate the transition from automatic, intrusive thoughts to more deliberate, reflective processing of the pregnancy loss.

In line with this study's findings, the model of expert companionship proposed by Tedeschi and Calhoun (2006) offers valuable insights. Calhoun et al. (2010) argue that PTG-informed work and expert companionship model are appropriate for working with women who experienced pregnancy loss as there is a high level of distress, challenging the expectation that one will outlive one's children, disappointments and surprises about who is and who is not. This approach that attends to the possibility of posttraumatic growth is not a new form of therapy but a particular perspective, and it fits well with cognitive, humanistic-existential, and narrative-constructionist approaches. It is argued that respect for the beliefs and experiences of women who experienced pregnancy loss, often rooted in their culturally-based understandings of death and grief, is essential to setting the stage for PTG (Cowchock et al., 2010). Instead of seeking to merely provide comfort and reassurance with platitudes that are often given by well-meaning friends and family, the clinician working as an expert companion is willing to explore these beliefs and the doubts about them that the experiences of the bereaved may raise. Clinicians working with grieving persons must remember that the process by which posttraumatic growth may unfold occurs in the process of grief itself.

A fundamental concern is the timing of discussions of growth, and the attributions made for the cause of posttraumatic growth. The expert companion is sensitive to the readiness of people to consider emerging indications of growth, and how these have come about. Some bereaved persons may decide at the outset that they are going to "make something good come of this", but the vast majority are simply trying to get through their distress in the early phase of their loss. When clinically appropriate (Zeldow, 2009), the expert companion can bring to the attention of the bereaved person indications of change in the five domains of posttraumatic growth as they seem ready to engage them more deliberately. The clinician should take care to attribute these changes to the struggle with grief and loss, not to the loss itself. Bereaved individuals are often reluctant to think that their loss, such as pregnancy loss, may yield positive outcomes (Davis & Nolen-Hoeksema, 2001).

They are more willing to see that their struggle has produced something positive. It is not the loss itself but the cognitive and emotional work and the reconstructed assumptive world, including the life narrative, that produces change. This matter also highlights the crucial difference between what has been termed "perceived benefits" and posttraumatic growth (Davis, 2008). Benefits such as inheritances can certainly come in the aftermath of loss, but they differ in quality from personal growth and are more likely to be accepted with ambivalence.

The model suggests that the more expert companions allow themselves to learn from the client, the more they can empathise with the client's story (Tedeschi & Calhoun, 2013). This deepened understanding creates a space where clients can explore their emotions and cognitions, facilitating the shift from automatic rumination to deliberate reflection. For clinicians working with women who have experienced a miscarriage, it is beneficial to educate themselves thoroughly about miscarriage and its psychological impacts. The more

knowledgeable a therapist is about miscarriage, the less the client will need to explain, allowing for quicker rapport-building and trust. When a client begins to share her experience, the clinician should listen attentively, allowing her to discuss the event as often as needed. Any changes in the narrative over time should be noted, as these may signal the beginning of new cognitive processes and the reconstruction of belief structures (Joseph, 2011).

Boyd (2019) explained this stance with an example: a client might repeatedly express surprise at her miscarriage but then later mention that she had a gut feeling something was wrong. This shift could indicate that she is moving beyond automatic ruminations and starting to reflect more deeply on the actual events. As an expert companion, the therapist should gently probe these changes, which might represent the beginning of deliberate rumination and cognitive restructuring. The ultimate goal in this therapeutic relationship is not to force change but to provide a supportive space where the client can naturally develop new, deliberate ruminations and beliefs related to her experience. While the expert companionship model is highly relevant in a clinical setting, it does not need to be limited to professionals. Educating family members and friends of those who have experienced a miscarriage on how best to support them can also facilitate PTG. Simple tools and guidelines can empower loved ones to provide support, further promoting positive outcomes.

Another critical consideration for clinicians is the importance of assessing a client's history of disclosure and the social reactions they have encountered when discussing their pregnancy loss (Sanki & O'Connor, 2021). These factors can significantly influence a woman's ability to experience PTG. Helping clients improve their communication skills, particularly in expressing thoughts and feelings about their loss, can enhance their ability to seek support and share responsibilities with their partners. This, in turn, can improve couple

functioning after pregnancy loss and facilitate the shift from intrusive to deliberate rumination (Calhoun et al., 2010). Encouraging women to disclose their experiences not only to their partners but also in therapy can further support this cognitive shift (Taku et al., 2009). Clinicians should assess their clients' comfort levels with disclosure and whether they have discussed their miscarriage with others. By fostering an environment that encourages open communication, clinicians can help clients engage in the reflective thinking necessary for positive psychological change. As they begin to find new meaning and purpose in life after their loss, women may experience higher levels of psychological well-being, highlighting the importance of fostering growth (Triplett et al., 2012).

Clinicians should also recognise the importance of promoting resilience and other protective factors to minimise the risk of future trauma-related disorders. Tedeschi and Blevins (2016) differentiate between PTG and resilience, noting that while resilience involves returning to pre-trauma levels of functioning, PTG represents growth beyond those levels. Interestingly, the more resilient a person is, the less likely they may be to experience PTG, as resilience often allows individuals to avoid the rumination and disruption of core beliefs that typically precede PTG. However, those who do experience PTG often show increased resilience afterwards. Therefore, psychologists should encourage positive coping strategies, a sense of control, and connectedness to nurture resilience and support the natural process of building psychological strength (Berger, 2017).

It has been suggested that therapists are uniquely positioned to facilitate PTG in bereaved mothers by drawing on an in-depth understanding of PTG and the factors that mediate its development (Michael & Cooper, 2013). One potential avenue for fostering growth is to assess whether specific mediating factors, such as deliberate rumination and self-disclosure, are present in the bereaved individual's life. If these factors are absent, therapists

can focus on identifying and encouraging sources of support that could stimulate these processes. For example, therapeutic interventions involving the client in consistent, socially engaging activities, such as exposure therapy that emphasises interaction, may enhance psychological growth (Roeoke, 2015).

Building on the expert companionship model, these findings suggest that it can be integrated into various therapeutic approaches, such as CBT, Mindfulness-Based CBT, and narrative therapy, to promote PTG. For example, incorporating narrative development into the treatment process has proven effective for a wide range of difficult life events, including women following pregnancy loss (Tedeschi & Moore, 2021). Creating a chronological narrative of one's life, which includes past traumatic experiences as well as positive life events, allows individuals to integrate the emotional, cognitive, and physiological effects of trauma into a new belief structure that can foster PTG (Neimeyer et al., 2010). This newly formed autobiographical narrative might support more adaptive cognitive and behavioural processes, ultimately leading to reduced distress following pregnancy loss (Robjant & Fazel, 2010). Narrative therapies, often facilitated through expressive writing, have been associated with positive outcomes in PTG. For example, Hijazi et al., (2014) utilised a life narrative approach with Iraqi refugees. Their experimental findings found greater PTG at a four-month follow-up compared to the control group. More recently, mindfulness has garnered attention for its potential role in facilitating PTG. A study by Hanley et al. (2015) found that mindfulness practices can support PTG by fostering a non-judgmental awareness of the present moment, which may aid in the process of self-reflection and reappraisal. However, the link between mindfulness and PTG has sparked debate. Some argue that mindfulness, rooted in present-focused, non-judgmental awareness, is incompatible with the reflective processes required for PTG. Others contend that mindfulness, as a contemplative activity, can indeed facilitate self-reflection and reappraisal, contributing to PTG (Lafarge, 2020).

However, therapists must approach PTG with caution. It is crucial to recognise that the absence of growth should not be interpreted as a failure, either by the therapist or the client. Additionally, therapists must avoid implying that growth is a mandatory outcome of the bereavement process, as doing so could inadvertently minimise the individual's unique personal experience (Michael & Cooper, 2013). Instead, the therapeutic focus should be on creating a supportive environment where growth can occur naturally, without pressure or expectation.

Broader Implications

At a broader level of advocacy, this study's findings emphasise the importance of increasing awareness regarding pregnancy loss and complicated grief. The absence of culturally defined and widely accepted mourning rituals for pregnancy loss often leaves parents feeling deprived of their right to grieve properly (Lang et al., 2011). This lack of formal recognition complicates the grief process, rendering miscarriage a particularly challenging form of bereavement. When parents do seek professional help, they may find it disheartening to encounter therapists who appear unsympathetic or unaware of the nuances of their situation. Consequently, there is a pressing need for enhanced training and clinical guidelines for therapists addressing pregnancy loss (Markin, 2017).

It is essential for therapists to engage in continuous efforts to diminish the stigma associated with pregnancy loss by increasing public awareness of its psychological impact. Furthermore, psychology training programs should incorporate topics related to reproductive trauma such as miscarriage, stillbirth, infertility, and birth trauma, into their curricula to better equip therapists for working with affected individuals. Addressing common clinical errors and their potential impact on therapeutic relationships can significantly improve the quality of care provided to those who have experienced pregnancy loss.

While some workplaces are beginning to recognise the need for paid leave following a miscarriage, the legislative efforts to introduce the Miscarriage Leave Bill, which would provide three days of statutory paid leave for employees experiencing pregnancy loss, highlight the ongoing need for formal support structures. Normalising conversations about miscarriage is crucial and societal and clinician awareness becomes increasingly important. As fertility treatments and medical technologies advance, enabling early diagnosis of fatal fetal anomalies, pregnancy loss is likely to become a more prominent clinical issue (Bennett et al., 2005). The growing control women have over their reproductive health means that pregnancy loss may be increasingly unexpected and distressing, potentially leading to more intense grief reactions and a greater demand for psychotherapy (Covington, 2006). Additionally, parents who experience pregnancy loss often face insensitive and uninformed comments from family, friends, and healthcare providers, which exacerbates their grief (Lang et al., 2011).

Importance of the current findings for Counselling Psychology

The framework of PTG represents a significant paradigm shift in the field of psychiatry and psychotherapy. Traditionally, the focus of therapy has been on addressing the negative or darker aspects of the human psyche, primarily aiming to reduce symptoms and alleviate distressing states. Patients typically seek therapy to mitigate the impact of negative emotions, distressing symptoms, or deficits that impair their interpersonal, social, or occupational functioning. This conventional approach often emphasises symptom reduction as the primary goal (Zoellner & Maercker. 2015). However, PTG challenges this traditional perspective by introducing a more client-centered and integrative approach that aligns more closely with the natural processes of trauma recovery.

The PTG model and the implications of this research can contribute to the Division of Counselling Psychology (DCoP). The primary aim of counselling psychology, as outlined in its standards, is to alleviate psychological distress and promote individual well-being through a humanistic and relational value system (Jones-Nielsen & Nicholas, 2016). This framework emphasises the exploration, clarification, and understanding of clients' worldviews, underlying assumptions, and emotional challenges that emerge from their interactions with the world and others. Within this context, PTG shifts the focus from merely reducing symptoms to fostering positive psychological change that can result from confronting significant life challenges. This approach acknowledges that trauma can lead not only to distress but also to profound personal growth, increased resilience, and a deeper sense of meaning and purpose (Walsh, 2003).

By incorporating PTG into psychotherapy, therapists are encouraged to move beyond a one-size-fits-all model of trauma-focused treatment. PTG suggests that each individual's response to trauma is unique, and therefore, therapeutic interventions should be tailored to the specific needs, strengths, and growth potential of each client. This framework recognises that healing from trauma is not solely about returning to a pre-trauma state but can also involve transformative changes that enhance a person's overall well-being and life satisfaction (De Castella & Simmonds, 2013). In essence, PTG broadens the scope of therapeutic work by integrating a focus on the potential for growth and positive change, even in the aftermath of significant adversity. This shift in focus from merely reducing symptoms to fostering growth represents a more holistic and empowering approach to psychotherapy, ultimately offering a more nuanced and personalised path to healing for individuals who have experienced trauma (Tedeschi & Moore, 2021).

Strengths and Limitations of the Study

While the limitations of the study have been acknowledged and will be discussed, it is also important to highlight the strengths of the current research. First of all, this study contributes to the growing body of literature on PTG in women following pregnancy loss. To the author's knowledge at the time of writing, the current research represents one of the first preliminary examinations into the mechanisms through which self-disclosure can predict PTG in this population. It is also one of the first studies to highlight the potential role of therapy in fostering PTG. By introducing therapy into the research context, the study provides a foundation for future research to explore these dynamics in greater depth. The promising results suggest that further studies can build on this initial work to gain a more nuanced understanding of how therapy supports PTG following pregnancy loss and to develop more detailed measures for assessing therapeutic impact. Furthermore, testing mediator hypotheses contributes to both theory development and practical applications. As noted by Aiken and West (2000), using regression for theory testing plays a critical role in advancing psychology as a fundamental science. Therefore, quantitative studies like the present one are essential for generating insights into potential causal mechanisms and furthering the development of psychological theory (Hedström & Ylikoski, 2010).

There are several limitations in this study that affect its generalizability and implications. A primary limitation is the small sample size, which limited the researcher's ability to control for all relevant contextual variables related to pregnancy loss. This is particularly significant, as beyond the psychological factors examined, contextual variables have been shown to influence the experience of PTG after perinatal loss (Michael & Cooper, 2013). For instance, Henson et al. (2020) identified several important variables, such as the

number of previous losses, the time elapsed since the loss, gestational age at the time of the loss, knowledge of the cause of the loss, presence of living children, severity of the traumatic event, and the intensity of grief. These factors were found to significantly explain PTG outcomes, with the variance accounted for by these variables ranging from 6.5% to 10.3% (Isguder et al., 2017; Krosch & Shakespeare-Finch, 2017; Freedle & Kashubeck-West, 2021; Freedle & Oliveira, 2021). Additionally, Waugh et al. (2018) reported that experiencing previous miscarriages amplified the emotional pain of the loss, while Lafarge et al. (2017) noted no association between prior losses and PTG. Although there is no clear consensus on how these contextual factors impact PTG, accounting for them would have provided a more comprehensive and accurate understanding of the phenomenon.

The small sample size also limited the statistical power of the study, potentially reducing the reliability of the findings and making it difficult to detect more subtle effects. This further restricts the generalizability of the results, as a larger sample might have offered more insight into the complex interplay of psychological and contextual factors in the development of PTG after pregnancy loss.

One contextual factor this study took into account was whether participants attended therapy or not after pregnancy loss. However, this led to another limitation related to how the study assessed whether participants attended therapy after their pregnancy loss. This was done through a single dichotomous question in a demographic questionnaire, where participants were simply asked to report “yes” or “no.” Although the researcher, both a researcher and practitioner, recognized the potential importance of therapy in promoting PTG, the simplicity of this measure did not adequately capture the complexity of the therapy experience. For example, no data was collected on the number of therapy sessions attended, the duration of therapy, or the specific type of therapy received. This lack of detail makes it

difficult to assess the true impact of therapy on PTG, as the experiences and potential benefits of participants who attended one session versus those who attended therapy regularly over a long period could differ significantly. The use of a "yes" or "no" question also risks overgeneralisation. This binary approach oversimplifies the relationship between therapy attendance and its effectiveness or engagement. Without more detailed information, such as the frequency of sessions or the quality of the therapeutic relationship, it is challenging to draw meaningful conclusions about how therapy influences PTG. Additionally, the question lacks sensitivity to individual circumstances that may have influenced participants' ability to attend therapy. Factors such as personal illness, family responsibilities, or financial constraints might have prevented regular attendance, yet these nuances are not captured in a simple "no" response. This limitation could lead to misleading interpretations, where a "no" is seen as a lack of commitment rather than a reflection of external barriers.

Another limitation of this study pertains to the recruitment methods and the composition of the sample. Participants were primarily recruited through social media platforms and online support groups. This approach may introduce a selection bias, as women who are active in online support communities might differ in significant ways from those who are not involved in such groups. Specifically, women engaged in online support networks could have different levels of rumination and self-disclosure compared to those who do not participate in these communities (Lee et al., 2013).

Moreover, the sample in this study was predominantly White (62.1%) and highly educated, with most participants holding Master’s degrees. This lack of diversity in both racial, socio-economic, and educational backgrounds limits the generalizability of the study’s findings. The overrepresentation of well-educated, White women means that the results may not fully reflect the experiences of women from other racial, socio-economic, and educational

groups. This is particularly concerning given that miscarriage rates are significantly higher among Black women, who experience miscarriage nearly twice as often as White women (Mukherjee, 2014). Consequently, the findings may not fully capture the experiences and needs of women from different racial and socio-economic backgrounds. This limitation underscores the need for future research to include more diverse samples in order to better understand how factors such as race shape the experiences of women following pregnancy loss. Despite efforts to avoid this, the participant group in this study closely resembles the samples used in existing research on PTG after pregnancy loss. Roberts et al. (2020) also draw attention to this issue, arguing that the lack of racial diversity in psychology stands to leave the field unprepared for an increasingly diverse society. They further suggest that diversity could be incentivised in the review process, with participant diversity being evaluated alongside theoretical novelty, methodological rigour, and clarity of writing. Such an approach could encourage researchers to prioritise more diverse sampling in their studies.

Another limitation of this study is the use of the DDI to assess distress disclosure. The DDI was selected to allow for meaningful comparisons with existing literature; however, it primarily measures a general tendency to disclose distress rather than focusing specifically on disclosure related to miscarriage. This limitation is significant because the DDI does not capture important aspects of trauma disclosure, such as the desire to disclose, the actual act of disclosing after a miscarriage, or the reactions from significant others to these disclosures. These factors are crucial, as research suggests that social reactions can mediate the relationship between self-disclosure and PTG. By not addressing these nuances, the study may overlook key dynamics that influence PTG in the context of perinatal loss. Despite its limitations, the DDI was chosen to ensure that the study's findings could be compared with previous research, but it leaves room for future studies to use more specialised tools (Ward et al., 2007).

It is also important to note that this study depended on retrospective self-report methods, which could be constrained by participants' ability to accurately remember and describe their thoughts and feelings at the time of their loss. A final limitation of this study is its use of a correlational, cross-sectional design, which prevents the inference of causality. Additionally, the study's design and analytical methods do not account for the possibility that the relationships between variables may be non-linear, leaving such patterns undetected.

Suggestions for Future Research

Based on the limitations identified in this study, several key recommendations can be made for future research to enhance understanding of PTG following pregnancy loss. One major recommendation is to include a larger sample size, which is essential for exploring the complex factors that influence PTG. With a greater number of participants, researchers can achieve more robust statistical power, allowing for more detailed analyses and a deeper understanding of how different variables interact to impact PTG. This approach will enable researchers to identify subtle patterns and relationships that may be obscured in smaller samples.

Furthermore, a mixed-methods design could further enrich the study by combining quantitative measures with qualitative interviews. While quantitative data would track rumination and PTG through standardised scales, qualitative interviews would explore participants' subjective experiences of self-disclosure, rumination, and its transformation over time following pregnancy loss (Bishop, 2015). This approach adds depth by revealing how individuals experience rumination and growth and whether rumination sometimes acts as a catalyst for deliberate cognitive processing. The qualitative insights could be cross-referenced

with quantitative data to examine if subjective experiences align with overall trends (Povee & Roberts, 2015).

Moreover, there is a need for studies employing designs other than exploratory or correlational to achieve a more nuanced understanding of how intrusive rumination affects PTG following pregnancy loss over time. Given the sequential cognitive processes involved in the development of PTG (Tedeschi et al., 2018), longitudinal study designs could offer valuable insights. This type of study can track participants over an extended period following a traumatic event, such as pregnancy loss. In this design, participants would be assessed at several intervals which could be immediately after the event, and then at 3, 6, 12, and 18 months, to monitor changes in intrusive rumination and its impact on PTG. This approach would allow researchers to observe how rumination evolves and determine whether it becomes beneficial by acting as a catalyst for PTG or detrimental by causing persistent distress. Advanced statistical techniques, such as growth curve modelling, could help pinpoint when this shift occurs and what factors, such as lack of social support or therapy attendance, might influence it (Duncan et al., 2013). This could track the evolution of intrusive rumination and its impact on growth, providing deeper insights into the temporal dynamics of this relationship. Understanding whether there is a tipping point where intrusive rumination shifts from being a catalyst for PTG to a barrier could have significant implications for therapeutic interventions aimed at fostering PTG (Henson et al., 2020).

Additionally, future research should explore both positive and negative indicators of women's functioning following pregnancy loss. These outcomes are not mutually exclusive and are likely to co-occur (Shakespeare-Finch & Lurie-Beck, 2014). Understanding the interplay between PTG and negative outcomes like grief and PTSD is crucial, as these factors may be driven by similar underlying processes (Tedeschi & Calhoun, 2004). To date, only a few studies have quantitatively examined PTG alongside negative post-loss factors (Krosch

& Shakespeare-Finch, 2017; Lafarge et al., 2020). Thus, future research should focus on clarifying the factors contributing to both PTG and PTSD and exploring their potential curvilinear relationship.

Future research should also use experimental or quasi-experimental designs to evaluate the effects of therapeutic interventions on intrusive rumination, deliberate rumination, and PTG. In this design, participants could be randomly assigned to different intervention groups, such as therapy versus a control group, with their progress tracked over time. This allows researchers to directly observe the impact of therapy on rumination patterns and PTG. Various therapeutic approaches, including cognitive-behavioural therapy, expressive writing, or group therapy, could be tested to determine their effectiveness in fostering rumination and PTG. Pre- and post-intervention assessments would provide insights into how therapy influences these cognitive processes, with either positive or negative post-loss adjustment over time. This approach would provide valuable insights into how therapeutic interventions influence these factors and contribute to positive psychological growth.

Furthermore, based on the gap in research, one major recommendation is to include a more diverse sample. Research indicates that women of colour experience a higher risk of perinatal loss (Mukherjee, 2014), yet their experiences and the factors influencing their psychological growth following such losses are not well understood. To address this gap, future studies should aim to include participants from varied racial and socio-economic backgrounds. This diversity will help provide a more comprehensive view of PTG following pregnancy loss and ensure that findings are applicable to a broader population.

Conclusions

The current study aimed to fill a gap in the literature by examining the connections between women's self-disclosure, deliberate rumination, intrusive rumination, and PTG following pregnancy loss. Specifically, it explored whether intrusive rumination and deliberate rumination mediated the relationship between self-disclosure and PTG. The findings indicate that both deliberate rumination and self-disclosure are significant positive predictors of PTG, whereas intrusive rumination does not significantly predict PTG. Consistent with existing literature, the study also found that self-disclosure positively predicts deliberate rumination and negatively predicts intrusive rumination. Additionally, deliberate rumination was found to mediate the relationship between self-disclosure and PTG, whereas intrusive rumination did not. By investigating these mechanisms, the study contributes to a more nuanced understanding of PTG and suggests a multifaceted approach to trauma research and intervention. This approach integrates cognitive-behavioural, narrative, existential, and interpersonal elements, emphasizing the importance of expert guidance. It not only addresses trauma-related distress but also empowers survivors to achieve profound and enduring personal growth, ultimately helping them rebuild their lives in meaningful ways.

Appendices

Appendix 1: Ethical Approval

Outlook

Decision - Ethics ETH2223-2197: Ms Irem Aksu (Low risk)

From Research Manager - DO NOT REPLY <haplo@city.ac.uk>
Date Fri 30/06/2023 11:17
To Aksu, Irem <Irem.Aksu@city.ac.uk>

City, University of London

Dear Irem

Reference: ETH2223-2197

Project title: Doctoral Research Project

Start date: 1 Feb 2023

End date: 30 Sep 2024

I am writing to you to confirm that the research proposal detailed above has been granted formal approval from the Psychology low risk review. The Committee's response is based on the protocol described in the application form and supporting documentation. Approval has been given for the submitted application only and the research must be conducted accordingly. You are now free to start recruitment.

Please ensure that you are familiar with City's Framework for Good Practice in Research and any appropriate Departmental/School guidelines, as well as applicable external relevant policies.

Appendix 2: Online Recruitment Flyer

Department of Psychology

City, University of London

PARTICIPANTS NEEDED FOR RESEARCH ON THE EXPERIENCES OF WOMEN WHO HAVE GONE THROUGH MISCARRIAGES AND HOW THEY CAN FIND STRENGHT AND GROWTH AFTER THIS CHALLENGING EVENT

Research looking for volunteers to take part in an online survey about your experiences of miscarriage and mental health. All women who are over 18 years old and have experienced one or more miscarriages more than 12 months ago are invited to this study.

As a participant in this study, you would be asked to rate each statement based on the degree to which this change occurred in your life because of your miscarriage experience. All responses will be anonymised, and no identifiable information will be collected at any stage of the study. This survey would take approximately 20 minutes

To take part in this study, please click on the following link: ***[LINK]***

For more information about this study for this study, please contact:

Irem Aksu: irem.aksu@city.ac.uk or Dr Seraphine Clarke: seraphine.clarke@city.ac.uk

This study has been reviewed by and received ethics clearance by City, University of London Research Ethics Committee (ETH2223-2197)

If you would like to complain about any aspect of the study, please contact the Secretary to the Senate Research Ethics Committee on 020 7040 3040

City, University of London is the data controller for the personal data collected for this research project. If you have any data protection concerns about this research project, please contact City's Information Compliance Team at dataprotection@city.ac.uk

Appendix 3: Participant Information Sheet

Participant Information Sheet

Title of study: Post-traumatic growth in women following miscarriage

REC reference number: ETH2223-2197

Name of the researcher: Irem Aksu

We would like to invite you to take part in a research study. Before you decide whether you would like to take part it is important that you understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. You will be given a copy of this information sheet to keep.

What is the purpose of the study?

This study aims to understand how we can promote psychological growth after experiencing a stressful event, such as a miscarriage. It aims to shed light on the effects of different predictors of psychological growth including the tendency to self-disclose and ruminate.

Why have I been invited to take part?

All women who are over 18 years old and have experienced one or more miscarriages more than 12 months ago are invited to this study. Please inform the researcher if any of these details are inaccurate.

Do I have to take part?

Participation in the project is voluntary, and you can choose not to participate in part or all of the project. You can withdraw at any stage of the project without being penalised or disadvantaged in any way. It is up to you to decide whether or not to take part. If you do decide to take part, you will be asked to sign a consent form and you are still free to withdraw at any time until you submit your responses without giving a reason. Once you press "submit", you will no longer be able to withdraw your data. If you want to withdraw from the study before you submit your responses, your data collected up to the point of withdrawal will be destroyed.

What will happen if I take part?

You will complete four online questionnaires. In the first part, you will be asked about yourself (i.e., your age, ethnicity, employment status etc.) and your loss (i.e., the number of miscarriages you had). Please note that you will not be asked to disclose any identifiable information. In the other three parts, you will be asked to rate each statement based on the degree to which this change occurred in your life because of your miscarriage experience. Completing this survey will take approximately 30 minutes.

What are the possible disadvantages and risks of taking part?

Psychological distress as a result of completing the questionnaires is possible, though not anticipated. You are encouraged to discuss any emotional upset with your GP and with the list of resources provided in debrief sheet at the end of the study. Also please remember your participation is voluntary and you are able to withdraw at any stage before you submit your responses.

What are the possible benefits of taking part?

Despite being common, miscarriage can be unexpected and emotionally difficult for mothers and this 'invisible' pain and grief gets often overlooked in psychology research. This is an opportunity to share your experience and contribute to the knowledge to support people who experience a miscarriage which will benefit the field of counselling psychology and possibly benefit future patients.

Will my taking part in the study be kept confidential?

No identifiable information will be collected at any stage of the study. Once you submit your answers, the data will be stored in City University's encrypted OneDrive for 10 years. Only if you wish to receive the results of the study, your contact details will also be kept for this purpose.

Data privacy statement

City, University of London is the sponsor and the data controller of this study based in the United Kingdom. This means that we are responsible for looking after your information and using it properly. The legal basis under which your data will be processed is City's public task.

Your right to access, change or move your information are limited, as we need to manage your information in a specific way in order for the research to be reliable and accurate. To safeguard your rights, we will use the minimum personal-identifiable information possible (for further information please see https://ico.org.uk/for-organisations/guide-to-data-

protection/guide-to-the-general-data-protection-regulation-gdpr/lawful-basis-for-processing/public-task/.

City will use your name and contact details to contact you about the research study as necessary. If you wish to receive the results of the study, your contact details will also be kept for this purpose. The only people at City who will have access to your identifiable information will be the researcher, Irem Aksu. City will keep identifiable information about you from this study for 1 year after the study has finished.

You can find out more about how City handles data by visiting https://www.city.ac.uk/about/governance/legal. If you are concerned about how we have processed your personal data, you can contact the Information Commissioner's Office (IOC) https://ico.org.uk/.

What will happen to the results of the research study?

The findings of this study will be written up as part of a thesis for a Professional Doctorate in Counselling Psychology. The findings may also be included in various future academic publications. There will be no identifiable or personal information in the final thesis or any other publications, so there will be no way for readers to identify you. If you would like to be sent the results of the study, please inform the researcher and consent to your contact details being kept for this purpose on the 'participant consent form.'

Who has reviewed the study?

This study has been approved by City, University of London Research Ethics Committee.

What if there is a problem?

If you have any problems, concerns or questions about this study, you should ask to speak to a member of the research team. If you remain unhappy and wish to complain formally, you can do this through City's complaints procedure. To complain about the study, you can phone 020 7040 3040. You can then ask to speak to the Secretary of Senate Research Ethics Committee and inform them that the name of the project is Post-traumatic growth in women following miscarriage

You can also write to the Secretary at:
John Montgomery
Research & Enterprise Office
City, University of London
Northampton Square
London, EC1V 0HB
Email: j.montgomery@city.ac.uk
Insurance
City University London holds insurance policies which apply to this study, subject to the terms and conditions of the policy. If you feel you have been harmed or injured by taking

part in this study, you may be eligible to claim compensation. This does not affect your legal rights to seek compensation. If you are harmed due to someone's negligence, then you may have grounds for legal action.

Further information and contact details

Researcher: Irem Aksu
Irem.aksu@city.ac.uk

Research Supervisor: Dr Seraphine Clarke
Seraphine.clarke@city.ac.uk

Thank you for taking the time to read this information sheet.

Appendix 4: Consent Form

CITY UNIVERSITY LONDON

REC reference number: ETH2223-2197
Title of study: Post-traumatic growth in women following miscarriage
Name of the researcher: Irem Aksu

		Please tick
1	I confirm that I have read and understood the participant information dated [DATE] for the above study. I have had the opportunity to consider the information and ask questions which have been answered satisfactorily.	
2	I understand this will involve: Completing questionnaires asking me about my miscarriage experience.	
3	I understand that my participation is voluntary and that I am free to withdraw without giving a reason without being penalised or disadvantaged.	
4	I understand that I will be able to withdraw my data up to the submission of my responses.	
5	I agree to City recording and processing this information about me. I understand that this information will be used only for the purpose(s) explained in the participant information and my consent is conditional on	

	City complying with its duties and obligations under the General Data Protection Regulation (GDPR).	
6	I would like to be informed of the results of this study once it has been completed and understand that my contact details will be retained for this purpose.	
7	I agree to take part in the above study.	

_____ ☐ I consent _____

Name of Participant Date

_____ _____ _____

Appendix 5: Demographic and Loss Context Questions

1	How old are you?	○ 18-24 ○ 25-34 ○ 34-44 ○ 45-54 ○ 55-64 ○ Above 65 ○ Prefer not to say
2	Which ethnic group do you primarily identify with?	○ White ○ Black/Black British ○ Asian/Asian British ○ Mixed ○ Other ○ Prefer not to say
3	What is your religion?	○ Christian ○ Muslim ○ Jewish ○ Hindu ○ Atheist ○ Other ○ Prefer not to say
4	What is your education level?	○ High School/ A-level ○ Bachelor's degree ○ Master's degree

		○ Doctoral degree ○ Other ○ Prefer not to say
5	What is your employment status?	○ Full time employment ○ Self-employed ○ Part-time employed ○ Unemployed (looking for work) ○ Unemployed (not looking for work) ○ Student ○ Prefer not to say
6	What is your relationship status?	○ Single, never married ○ Married or domestic partnership ○ Widowed ○ Divorced ○ Separated ○ Prefer not to say
7	Have many miscarriages have you had?	○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ More than 5 ○ Prefer not to say
8	Time since the loss	○ 1-3 years ○ 4-6 years

		○ 7-10 years ○ More than 10 years
9	How many weeks were you pregnant for?	○ 0-10 weeks ○ 11-20 weeks ○ 21-30 weeks ○ 31-42 weeks ○ Prefer not to say
11	Have you had living children at the time of loss?	○ Yes ○ No ○ Prefer not to say
13	Have you had therapy/counselling after miscarriage?	○ Yes ○ No ○ Prefer not to say

Appendix 6: Post-Traumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996)

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

0 = I did not experience this change
1 = I experienced this change to a very small degree
2 = I experienced this change to a small degree
3 = I experienced this change to a moderate degree
4 = I experienced this change to a great degree
5 = I experienced this change to a very great degree

Possible areas of Growth and Change:

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

21……. I better accept needing others.

Appendix 7: Event-Related Rumination Inventory (ERRI; Cann et al., 2011)

After being hurt, people sometimes, but not always, find themselves having thoughts about their experience even though they don't try to think about it. Indicate for the following items how often, if at all, you have had the experiences described after the miscarriage.	
1.	I thought about the event when I did not mean to.
2.	Thoughts about the event came to mind and I could not stop thinking about them.
3.	Thoughts about the event distracted me or kept me from being able to concentrate.
4.	I could not keep images or thoughts about the event from entering my mind.
5.	Thoughts, memories, or images of the event came to mind even when I did not want them.
6.	Thoughts about the event caused me to relive my experience.
7.	Reminders of the event brought back thoughts about my experience.
8.	I found myself automatically thinking about what had happened.
9.	Other things kept leading me to think about my experience.
10.	I tried not to think about the event but could not keep the thoughts from my mind.

After being hurt, people sometimes, but not always, deliberately and intentionally spend time thinking about their experience. Indicate for the following items how often, if at all, you deliberately spent time thinking about the infidelity.	
1.	I thought about whether I could find meaning from my experience.
2.	I thought about whether changes in my life have come from dealing with my experience.
3.	I forced myself to think about my feelings about my experience.
4.	I thought about whether I have learned anything as a result of my experience.
5.	I thought about whether the experience has changed my beliefs about my relationship.

6.	I thought about what the experience might mean for my future.
7.	I thought about whether my relationships with others have changed following my experience.
8.	I forced myself to deal with my feelings about the event.
9.	I deliberately thought about how the event had affected me.
10.	I thought about the event and tried to understand what happened.

Appendix 8: Distress Disclosure Index (DDI; Kahn & Hessling, 2001)

Instructions: Please read each of the following items carefully. Indicate the extent to which you *agree* or *disagree* with each item according to the rating scale below:

1	2	3	4	5
Strongly Disagree				Strongly Agree

……1. When I feel upset, I usually confide in my friends.

……2. I prefer not to talk about my problems.

……3. When something unpleasant happens to me, I often look for someone to talk to.

……4. I typically don't discuss the things that upset me.

……5. When I feel depressed or sad, I tend to keep those feelings to myself.

……6. I try to find people to talk to about my problems.

……7. When I am in a bad mood, I talk about it with my friends.

……8. If I have a bad day, the last thing I want to do is to talk about it.

……9. I rarely look for people to talk with when I am having a problem.

……10. When I am distressed, I don't tell anyone.

……11. I usually seek out someone to talk to when I am in a bad mood.

……12. I am willing to tell others my distressing thoughts.

Appendix 9: Debrief Sheet

CITY UNIVERSITY LONDON

The Power of Suffering: Post-Traumatic growth in women who experienced miscarriage

DEBRIEF INFORMATION

Thank you for taking part in this study. Now that it's finished, we'd like to tell you a bit more about it.

This research aimed to investigate the relationships between rumination (repetitive negative thinking), the tendency to self-disclose and perceived Post-Traumatic Growth.

In the survey, you answered questions from validated questionnaires which are widely used in research: the Post-traumatic Growth Inventory (PTGI), Event-Related Rumination Inventory (ERRI), and Distress-Disclosure Index (DDI). Ultimately your answers will help psychologists and other mental health professionals learn to best support bereaved parents.

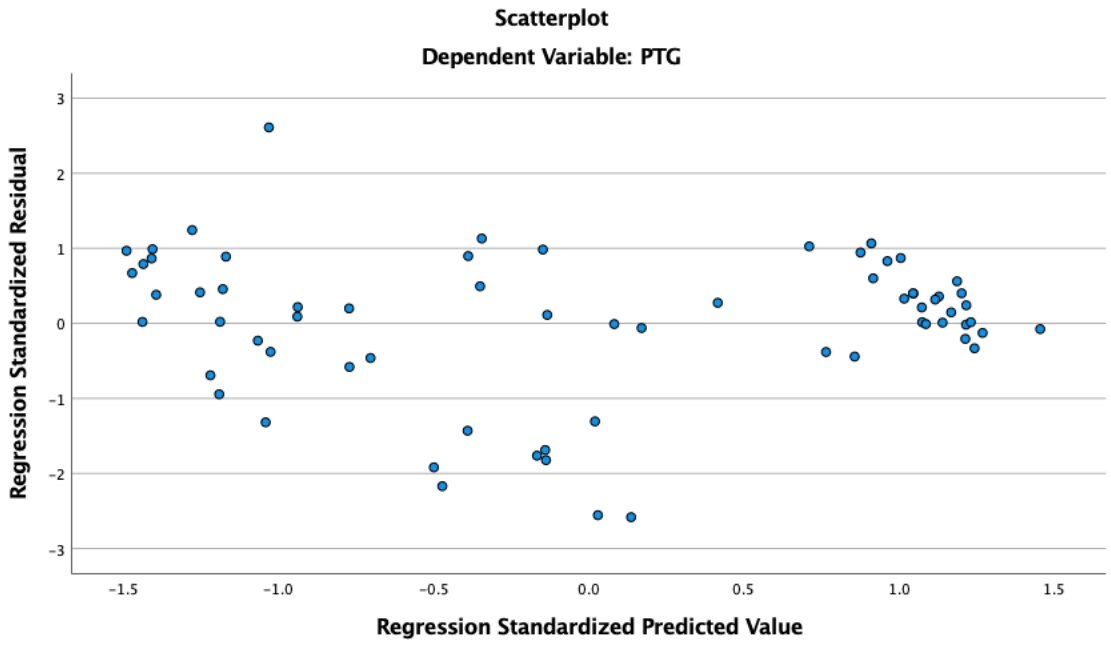
Participation in this study has likely evoked feelings, emotions, and/or memories related to your own miscarriage. If you would like support to process anything related to this study, please contact your GP and see the resources below:

Teddy's wish support@teddyswish.org
The Miscarriage Association info@miscarriageassociation.org.uk
Saying goodbye support@sayinggoodbye.org
Cradle Charity info@cradlecharity.org

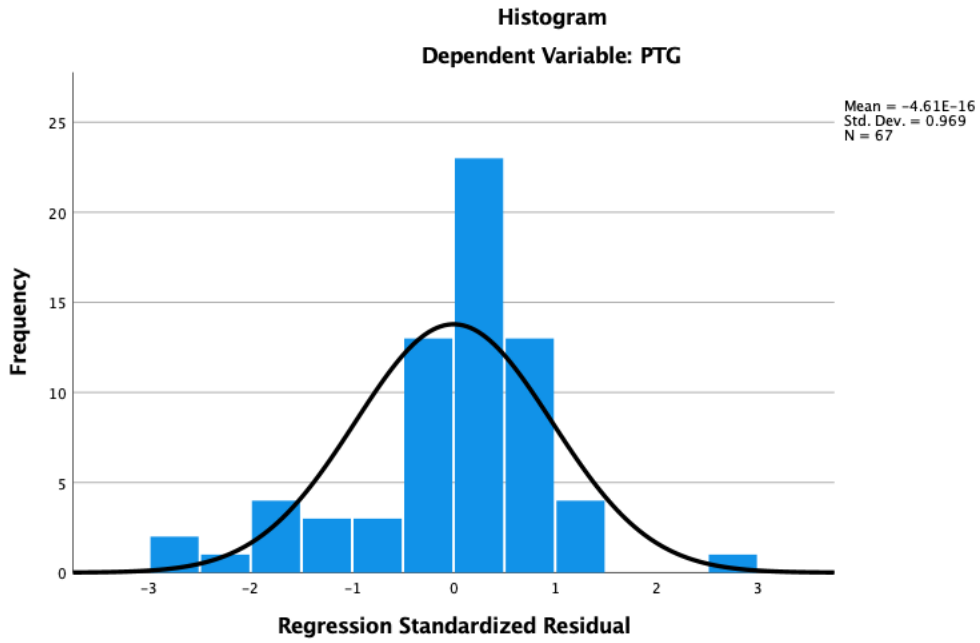
We hope you found the study interesting. If you have any other questions, please do not hesitate to contact us at the following:
Researcher: Irem Aksu Irem.aksu@city.ac.uk
Research Supervisor: Dr Seraphine Clarke Seraphine.clarke@city.ac.uk

Ethics approval code: ETH2223-2197

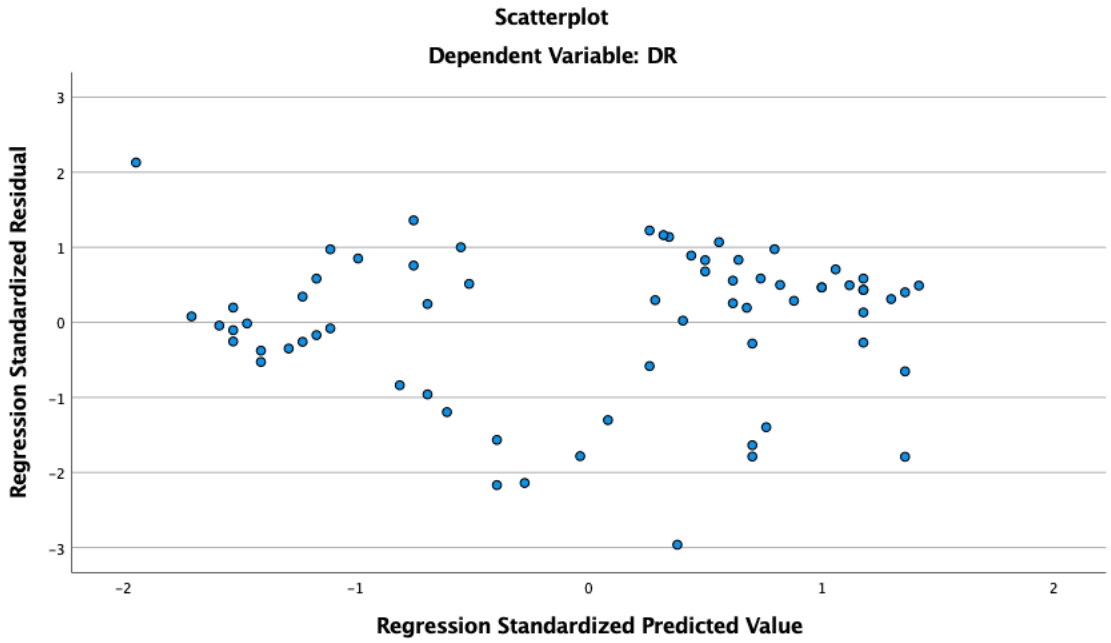
Appendix 10: The scatterplot of the standardised residual against the standardised predicted value for Hypothesis 1



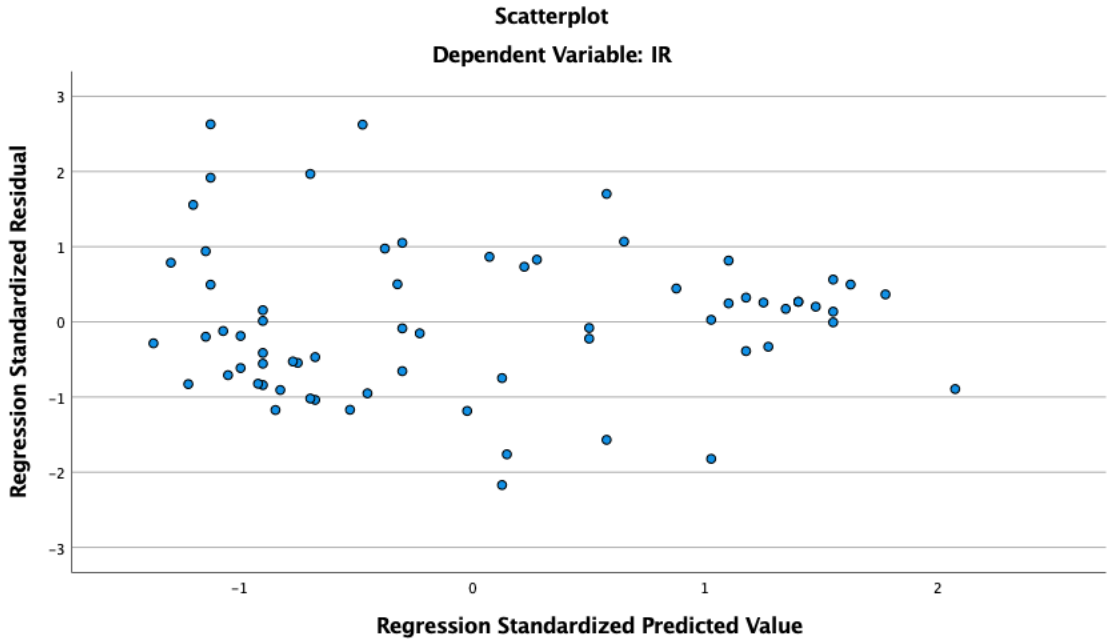
Appendix 11: Normality of residuals for Hypothesis 1



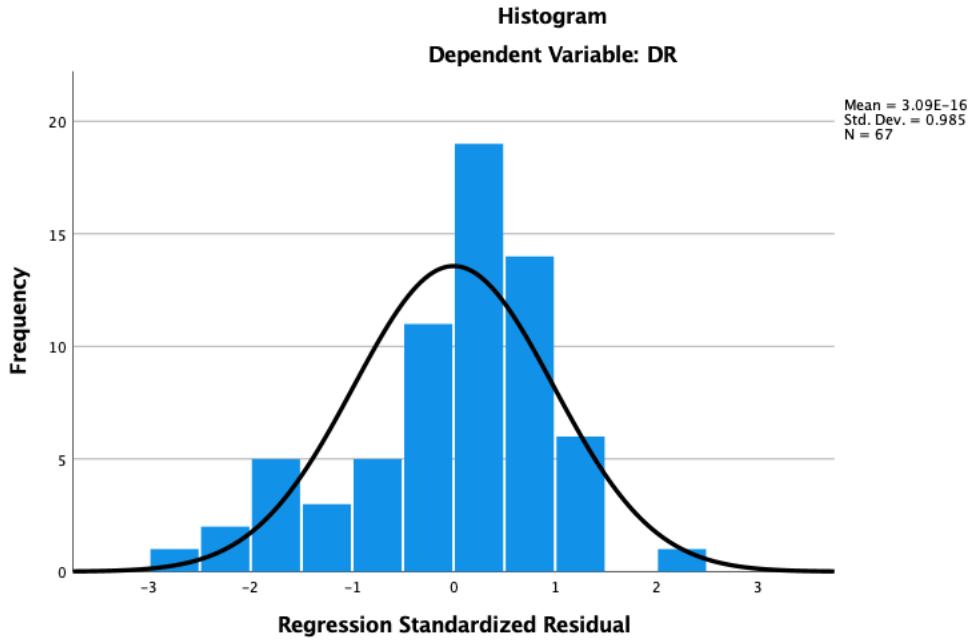
Appendix 12: The scatterplot of the standardised residual against the standardised predicted value for Hypothesis 2 with deliberate rumination as the outcome



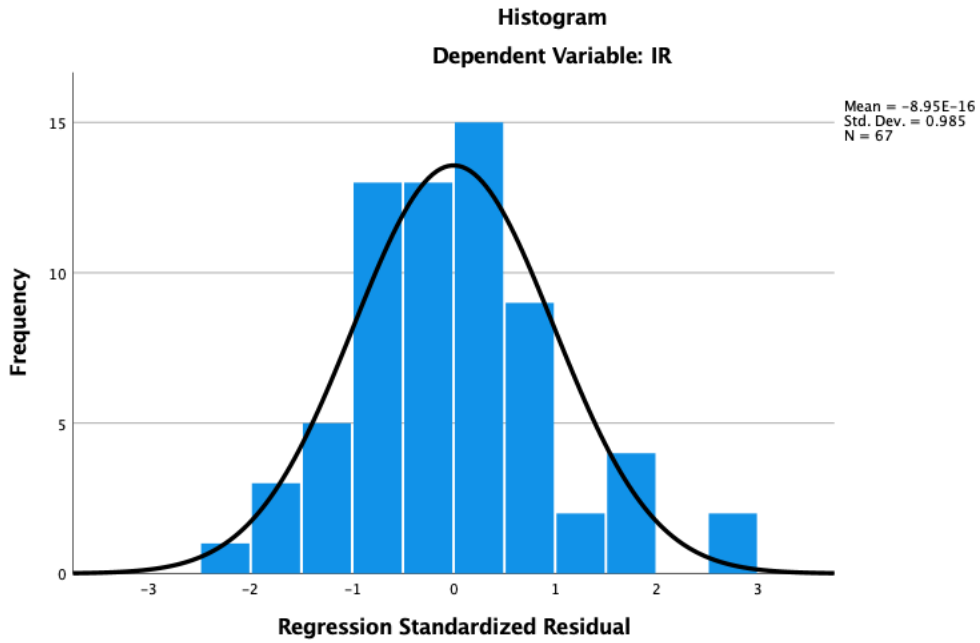
Appendix 13: The scatterplot of the standardised residual against the standardised predicted value for Hypothesis 2 with intrusive rumination as the outcome



Appendix 14: Normality of residuals for Hypothesis 2 with deliberate rumination as the outcome



Appendix 15: Normality of residuals for Hypothesis 2 with intrusive rumination as the outcome



Appendix 16: SPSS Output for Hierarchical Regression Analysis of Hypothesis 1

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Have you had therapy/counselling after miscarriage? - Selected Choice[b]	.	Enter
2	IR, DR, SD[b]	.	Enter

a. Dependent Variable: PTG

b. All requested variables entered.

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin–Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.410[a]	.168	.155	1.54053	.168	13.127	1	65	<.001	
2	.905[b]	.819	.808	.73538	.651	74.417	3	62	<.001	1.116

a. Predictors: (Constant), Have you had therapy/counselling after miscarriage? – Selected Choice

b. Predictors: (Constant), Have you had therapy/counselling after miscarriage? – Selected Choice, IR, DR, SD

c. Dependent Variable: PTG

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.153	1	31.153	13.127	<.001[b]
	Residual	154.260	65	2.373		
	Total	185.414	66			
2	Regression	151.885	4	37.971	70.215	<.001[c]
	Residual	33.529	62	.541		
	Total	185.414	66			

a. Dependent Variable: PTG

b. Predictors: (Constant), Have you had therapy/counselling after miscarriage? – Selected Choice

c. Predictors: (Constant), Have you had therapy/counselling after miscarriage? – Selected Choice, IR, DR, SD

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	5.804	.650		8.924	<.001		
	Have you had therapy/counselling after miscarriage? – Selected Choice	-1.399	.386	-.410	-3.623	<.001	1.000	1.000
2	(Constant)	-.679	.894		-.760	.450		
	Have you had therapy/counselling after miscarriage? – Selected Choice	.233	.222	.068	1.053	.296	.693	1.444
	SD	.269	.128	.191	2.110	.039	.355	2.820
	IR	-.215	.132	-.119	-1.628	.109	.544	1.839
	DR	1.274	.140	.718	9.100	<.001	.469	2.132

a. Dependent Variable: PTG

Appendix 17: SPSS Output for Hierarchical Regression Analyses of Hypothesis 2

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Have you had therapy/counselling after miscarriage? - Selected Choice[b]	.	Enter
2	SD[b]	.	Enter

a. Dependent Variable: DR

b. All requested variables entered.

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin–Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.489[a]	.239	.227	.82990	.239	20.406	1	65	<.001	
2	.721[b]	.520	.505	.66442	.281	37.410	1	64	<.001	1.847

a. Predictors: (Constant), Have you had therapy/counselling after miscarriage? – Selected Choice

b. Predictors: (Constant), Have you had therapy/counselling after miscarriage? – Selected Choice, SD

c. Dependent Variable: DR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.054	1	14.054	20.406	<.001[b]
	Residual	44.767	65	.689		
	Total	58.821	66			
2	Regression	30.569	2	15.284	34.623	<.001[c]
	Residual	28.253	64	.441		
	Total	58.821	66			

a. Dependent Variable: DR

b. Predictors: (Constant), Have you had therapy/counselling after miscarriage? – Selected Choice

c. Predictors: (Constant), Have you had therapy/counselling after miscarriage? – Selected Choice, SD

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.224	.350		12.055	<.001
	Have you had therapy/counselling after miscarriage? – Selected Choice	-.940	.208	-.489	-4.517	<.001
2	(Constant)	1.580	.515		3.065	.003
	Have you had therapy/counselling after miscarriage? – Selected Choice	-.341	.193	-.177	-1.765	.082
	SD	.487	.080	.615	6.116	<.001

a. Dependent Variable: DR

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Have you had therapy/counselling after miscarriage? – Selected Choice[b]	.	Enter
2	SD[b]	.	Enter

a. Dependent Variable: IR

b. All requested variables entered.

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin–Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.256[a]	.066	.051	.90352	.066	4.573	1	65	.036	
2	.666[b]	.443	.426	.70290	.378	43.399	1	64	<.001	2.132

a. Predictors: (Constant), Have you had therapy/counselling after miscarriage? – Selected Choice

b. Predictors: (Constant), Have you had therapy/counselling after miscarriage? – Selected Choice, SD

c. Dependent Variable: IR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.734	1	3.734	4.573	.036[b]
	Residual	53.063	65	.816		
	Total	56.797	66			
2	Regression	25.176	2	12.588	25.478	<.001[c]
	Residual	31.621	64	.494		
	Total	56.797	66			

a. Dependent Variable: IR

b. Predictors: (Constant), Have you had therapy/counselling after miscarriage? – Selected Choice

c. Predictors: (Constant), Have you had therapy/counselling after miscarriage? – Selected Choice, SD

Appendix 18: SPSS Output for Mediation Analysis of Hypothesis 3

Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.1 *****************

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****
Model : 4
Y : PTG
X : SD
M1 : DR
M2 : IR

Covariates:
Therapy

Sample
Size: 67

****

OUTCOME VARIABLE:
DR

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7247	.5252	.4416	35.4036	2.0000	64.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.5813	.5215	3.0320	.0035	.5394	2.6231
SD	.4878	.0798	6.1153	.0000	.3285	.6472
Therapy	-.3430	.1950	-1.7587	.0834	-.7326	.0466

****
OUTCOME VARIABLE:
IR

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6726	.4524	.4913	26.4369	2.0000	64.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	4.5788	.5501	8.3233	.0000	3.4798	5.6778
SD	-.5523	.0841	-6.5639	.0000	-.7204	-.3842
Therapy	-.1521	.2057	-.7395	.4623	-.5631	.2588

****
OUTCOME VARIABLE:
PTG

Model Summary

R	R-sq	MSE	F	df1	df2	p
.9065	.8217	.5458	71.4489	4.0000	62.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.6179	.8948	-.6905	.4924	-2.4066	1.1708
SD	.2681	.1282	2.0911	.0406	.0118	.5243
DR	1.2744	.1407	9.0590	.0000	.9932	1.5556
IR	-.2234	.1334	-1.6749	.0990	-.4900	.0432
Therapy	.2144	.2237	.9583	.3416	-.2328	.6616

********** DIRECT AND INDIRECT EFFECTS OF X ON Y **********

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI

```
     .2681     .1282     2.0911     .0406     .0118     .5243

Indirect effect(s) of X on Y:
        Effect    BootSE   BootLLCI   BootULCI
TOTAL     .7450     .1649     .4479     1.1007
DR        .6217     .1467     .3314     .9129
IR        .1234     .0954    -.0371     .3468

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
 95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
 5000

------ END MATRIX -----
```

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