THE RELATIONSHIP BETWEEN

GRIEF, RESILIENCE AND POSTTRAUMATIC GROWTH

IN BEREAVED UNIVERSITY STUDENTS

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BY

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PLAGIARISM

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ABSTRACT

Losing someone close is an extremely difficult and painful experience. Nevertheless, the notion of posttraumatic growth suggests that individuals in grief can also experience positive changes following bereavement. Resilience, as a capacity to recover from the difficulties quickly and return to the previous status, may contribute to the process of posttraumatic growth. The thesis examines the relationship between grief, resilience and posttraumatic growth of the bereaved. There were three hypotheses: 1) resilience and posttraumatic growth are positively correlated, 2) grief and posttraumatic growth are in a curvilinear (Inverted U-shaped) relationship, and 3) resilience strengthens the curvilinear relationship between grief and posttraumatic growth. The sample consisted of 155 university students who had lost someone close within 3 to 24 months prior to the study. Their levels of grief, resilience and posttraumatic growth were assessed by means of Relational Active Grieving Scale, Posttraumatic Growth Inventory and Brief Resilience Scale, respectively. As a result, weak but positive correlation was found between resilience and posttraumatic growth. However, the relationship was not linear. On the other hand, a stronger, negative correlation was found between resilience and grief. A statistically significant quadratic regression suggested an inverted U-shaped curvilinear relationship between grief and posttraumatic growth. Comparative analyses between the low and high resilience groups revealed that the curvilinear relationship between grief and posttraumatic growth was enhanced by resilience which acts as a moderator. Thus, all three hypotheses were basically retained. Clinical implications and suggestions for future research were presented.

Keywords: Bereavement, Grief, Resilience, Posttraumatic Growth

ÖZET

Yakın birini kaybetmek son derece zor ve acılı bir deneyimdir. Yine de travma sonrası gelişim kavramı keder yaşayan bireylerin yas sürecinin ardından olumlu değişiklikler yaşayabileceğini önerir. Psikolojik sağlamlık, zorluklardan hızlıca iyileşme kapasitesi olarak ve önceki duruma hızlıca dönme kapasitesi olarak travma sonrası gelişim sürecine katkıda bulunabilir. Bu tez yas sürecindeki kişilerde keder, psikolojik sağlamlık ve travma sonrası gelişim arasındaki ilişkiyi incelemektedir. Bu tezde üç hipotez bulunmaktadır: 1) psikolojik sağlamlık ve travma sonrası gelişim pozitif yönde ilişki içerisindedir, 2) keder ve travma sonrası gelişim eğrisel (Ters U-şeklinde) bir ilişki içerisindedir ve 3) psikolojik sağlamlık keder ve travma sonrası gelişim arasındaki eğrisel ilişkiyi güçlendirmektedir. Araştırmanın örneklemi çalışmadan 3 ile 24 ay öncesinde yakın birini kaybeden 155 üniversite öğrencisinden oluşmaktadır. Keder, psikolojik sağlamlık ve travma sonrası gelişim seviyeleri sırasıyla, Aktif Yas Sürecinin İlişkisel Yönü, Travma Sonrası Gelişim Ölçeği ve Kısa Psikolojik Sağlamlık Ölçeği'nin ortalamaları ile ölçülmektedir. Sonuçta, psikolojik sağlamlık ve travma sonrası gelişim arasında zayıf ama pozitif yönde bir ilişki bulunmuştur. Ancak, bu ilişki doğrusal değildir. Ayrıca, psikolojik sağlamlık ve keder arasında daha güçlü ve olumsuz yönde ilişki bulunmuştur. İstatiksel olarak anlamlı karesel regresyon analizi keder ve travma sonrası gelişim arasında ters U-şeklinde eğrisel bir ilişki önermektedir. Düşük ve yüksek psikolojik sağlamlık grupları arasında yapılan karşılaştırmalı analiz, keder ve travma sonrası gelişim arasındaki eğrisel ilişkiyi psikolojik sağlamlığın düzenleyici değişken olarak davranarak arttırdığını ortaya çıkarmaktadır. Bu şekilde öncelikli olarak tüm üç hipotez korunmuştur. Klinik uygulamalar ve gelecek araştırmalar için öneriler sunulmuştur.

Anahtar kelimeler: Yas, Keder, Psikolojik Sağlamlık, Travma Sonrası Gelişim

To My Family,

ACKNOWLEDGEMENTS

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1. INTRODUCTION

Everyone at some point of their lives experiences a loss of a loved one. Despite all of us know that it is not possible to live a life without loss, the experience of loss is hard for all of us and extremely traumatic for some. The difficulty of overcoming the experience of loss unites us all over the world. Although losing someone close is a universal experience that all of us eventually face, individuals show unique emotional, cognitive and behavioral reactions to the experience of loss, which are broadly categorized as grief.

Experiencing a loss of a loved one can cause intense grief, anxiety or guilt. The experience of losing someone close is classified as a traumatic event in DSM-5 (American Psychiatric Association, 2013), usually under Posttraumatic Stress Disorder (PTSD). Although it is known that individuals who lost a loved one may suffer from a negative consequence of the trauma such as PTSD, individuals who experience loss can often show the evidence of positive changes, which researchers call Posttraumatic Growth (Michael & Cooper, 2013; Ogińska-Bulik, 2015; Taylor, 1983). Posttraumatic Growth is a concept used in positive psychology, which focuses on the positive side of unique individual experiences rather than negativities.

Positive psychology is an approach that aims to promote healthy mental functioning and wellbeing of individuals. This approach reminds us of our capacity to adapt to adverse experiences (Seligman & Csikszentmihalyi, 2000). Losing someone close is surely a traumatic experience. However, individuals can experience positive changes and show growth after the experience.

Not everyone who experiences the bereavement show posttraumatic growth. Some experience prolonged grief and have difficulty overcoming the experience. On the other hand,

there are others who do not show any disruption in their lives, who show normal functioning physically and psychologically, and who remain stable following the bereavement. These individuals are said to have "resilience" (Bonanno & Kaltman, 2001). Resilience is about maintaining a stable equilibrium after traumatic life events. Resilient individuals quickly bounce back to their normal status following traumatic events. They do not seem to be affected by the traumatic events.

Research has been carried out to determine predictor factors of posttraumatic growth such as coping style (Dirik & Karancı, 2008), social support and spirituality (Cadell, Regehr & Hemsworth, 2003; Dirik & Karancı, 2008), core beliefs and rumination (Brooks, Graham-Kevan, Lowe & Robinson, 2017; Lindstrom, Cann, Calhoun & Tedeschi, 2013). Ogińska-Bulik (2015) found a positive relationship between resilience and posttraumatic growth in individuals who had experienced a loss of someone close. Resilience is one of the factors that need more investigation in relation with posttraumatic growth. The thesis attempts to examine the condition under which grief leads to posttraumatic growth among the bereaved individuals by specifically focusing on the individual differences in resilience.

1.1. Something Good Comes Out of Suffering: Posttraumatic Growth

Traumatic life experiences have been known to cause negative psychological consequences such as Posttraumatic Stress Disorder (PTSD). However, it is also known that the outcomes of traumatic life experiences can vary from person to person and are not always adverse (Helgeson, Reynolds, & Tomich, 2006; Larner & Blow, 2011; Linley & Joseph, 2004; Palabıyıkoğlu & Cesur, 2013; Park & Helgeson, 2006; Tedeschi & Calhoun, 1996). Traumatic events may also lead to such positive outcomes that are known as Posttraumatic Growth.

The theory of posttraumatic growth was formulated by Tedeschi and Calhoun (1995, 1996, 2004). Posttraumatic growth refers to the positive psychological changes that individuals experience after facing a difficult and challenging event or during stress of major life crisis (Calhoun & Tedeschi, 1999). Following a traumatic event, individuals may experience cognitive, emotional, behavioral changes concerning the self, the others and the world. This happens because, after traumatic experiences, individuals reconstruct their schemas and beliefs about themselves, the relationship to others, and the world they live. They change the meaning they give to events. This cognitive restructuring processes give rise to posttraumatic growth to occur (Balk, & Corr 2001; Tedeschi & Calhoun, 1996).

The notion that individuals who struggle with traumatic events potentially experience positive changes can be traced back to ancient times (Tedeschi, Park, & Calhoun, 1998). "Something good comes out of suffering" is a common belief that has been widely accepted by people of diverse cultures and religions. In the 20th century, positive psychologists stared a scientific inquiry into human potentials for growth through suffering (Frankl, 1963; Maslow, 1954; Seligman & Csikszentmihalyi, 2000 as cited in Tedeschi & Calhoun, 2004).

Tedeschi and Calhoun (2004) report that just experiencing a traumatic event is not enough for posttraumatic growth to occur. It should be noted that individuals who report posttraumatic growth may also suffer and experience distress at the same time (Aldwin, 2007; Cadell, Regehr, & Hemsworth, 2003; Calhoun, Cann, Tedeschi, & McMillan, 2000; Lev-Wiesel & Amir, 2003). Tedeschi and Calhoun (2004) stated that struggling is necessary for posttraumatic growth. Experiencing distress and discomfort through struggling helps individuals to adapt into new circumstances (Tedeschi & Calhoun, 1996; Tedeschi, Park, & Calhoun, 1998). However, the relationship between suffering and growth are not linear. Znoj (1999) proposed a curvilinear relationship between distress and posttraumatic growth, stating

that high amounts of posttraumatic growth were found at a moderate level distress, whereas low levels of posttraumatic growth were found in a low or high level of distress.

1.1.1. Tedeschi and Calhoun's Five Areas of Change in Posttraumatic Growth

Posttraumatic growth is an ongoing process of change in individuals' thinking, feeling and behavior which has an interaction with their life history (Tedeschi & Calhoun, 2004). In the process of posttraumatic growth, individuals change their purposes, beliefs and behaviors that were non-functional before the traumatic event. As a consequence, they transform and grow up as a person. Through this experience, they may make moves towards self-realization (Tedeschi & Calhoun, 1996). Tedeschi and Calhoun (1996) stated that individuals experience positive changes of posttraumatic growth in the following five areas: personal strength, relating to others, spiritual change, new possibilities and an appreciation of life.

Individuals who report changes in the area of personal strength have changes in how they see themselves and the world around them. Those who experienced traumatic events usually feel vulnerable, seeing the world as more unpredictable and dangerous. However, at the same time, these individuals start to see themselves as being stronger since they have survived hard times (Lindstrom, Cann, Calhoun, & Tedeschi, 2013; Tedeschi, Park & Calhoun, 1998). They feel that they now have the power and skills to cope with similar traumatic events in future (Lindstrom, Cann, Calhoun & Tedeschi, 2013). Individuals who report changes in personal strength thus generalize this sense of being strong to future life events (Thomas, DiGiulio, & Sheehan, 1991).

Individuals who report changes in the area of relating to others tend to revise their relationships with others in the ways that strengthen their relationships and make more intimate and meaningful relationships. They choose to change their social skills in their

relationships (Tedeschi & Calhoun, 2004). Individuals develop close relationship with others and start to use their social support system that they have not used before. They may ask for help from their families or friends (Tedeschi, Park, & Calhoun, 1998). As individuals get help and share more of their experience, speak more openly and share their emotions more with their families or friends, and they feel more emotionally connected with their families or friends (Ramos & Leal, 2013; Weiss, 2004). Individuals may develop more empathy towards other individuals who experience the same experience, after they have received help from their close relationships (Taku, Cann, Calhoun, & Tedeschi, 2008; Tedeschi & Calhoun, 2004).

Individuals who report spiritual change use religion to put their life in order. After traumatic life events, individuals ask themselves religious or existential questions like the purpose and the meaning of life and death and may experience spiritual growth (Lindstrom, Cann, Calhoun, & Tedeschi, 2013). While some may question their religious beliefs and try to create their own meanings with their conscious choices, others may become more involved with their spiritual beliefs (Calhoun & Tedeschi, 2001; Sartre, 1966).

The level of spiritual growth experienced after a traumatic event is relative to the person's spiritual involvement before the traumatic experience. If the person has already been religiously active, they may use their faith as a coping mechanism (Andrykowski, 1992; Ramos & Leal, 2013; Taku, Cann, Calhoun, & Tedeschi, 2008). It should be noted that atheistic or non-religious individuals can also experience posttraumatic growth in this area. These individuals may question themselves existentially and they may experience spiritual posttraumatic growth.

Individuals who have experienced a loss of someone close to them, for example, remember their own mortality and they may want to connect with something greater and divine (Cait, 2004; Campbell, Brunell, & Foster, 2004). Having experienced in spiritual

changes, some individuals feel that they were connected more with the divine world (Sheldon & Kasser, 1995), while others may want to lose their faith, they ask themselves existential questions and start questioning life's purpose to make sense of their traumatic experiences (Tedeschi, Park, & Calhoun, 1998).

Individuals who show changes in the area of new possibilities report new ways of dealing with life. Since they have experienced a traumatic event, they start to look at life in a completely new way compared to before (Tedeschi & Calhoun, 2004). They tend to make new changes in their life. Individuals may develop new interests, or acquire new knowledge and skills after traumatic experiences because they might not have the chance to develop them before (Tedeschi, Park, & Calhoun, 1998).

Individuals who experience changes in appreciation of life report that their priorities in life has changed as a result of traumatic events (Ramos & Leal, 2013). While trying to attribute a meaning to traumatic events, individuals pay more attention to the life situations that they have not considered or to which they did not give much importance before. As a consequence, individuals start to value what they have in their life and to recognize what is really important to them (Tedeschi & Calhoun, 2004). In this way, they develop an appreciation of their life (Lindstrom, Cann, Calhoun, & Tedeschi, 2013). When individuals experience a loss, they realize that their life may also end, with this recognition, they start to appreciate their life more than before and to live more cautiously not routinely (Tedeschi & Calhoun, 1996).

1.1.2. Other Models of Posttraumatic Growth

Janoff-Bulman (2004) proposed a model of posttraumatic growth considering the changes that are experienced in individuals. This model focuses on the schemas and

assumptions people have about the world and about their own lives. It explains cognitive reappraisal processes by which individuals restructure their core assumptions into more realistic ones, as follows.

Before traumatic experiences, individuals have positive core beliefs such as the world being a safe and good place, and the self being worthy and resilient. They have fundamental schemas about their life, e.g., what their purposes in life are, how their life functions, and the meaning of life. They feel that they have control over situations; they feel that bad things never happen to them since life is predictable and meaningful. However, traumatic experiences disrupt these core beliefs and threaten existing schemas (Janoff-Bulman, 1992). Individuals start to question the positive beliefs they have about the world and about themselves. By doing so, they realize their own vulnerability (Janoff-Bulman, Berg & Harvey, 1998). They end up changing their old beliefs and assumptions to new ones in a realistic manner (Janoff-Bulman, 1992, 2004)

Another theory of posttraumatic growth was proposed by Joseph and Linley (2005). Their organismic valuing theory posits that individuals have an innate ability to know what is meaningful and important for them to live their life at its fullest. The underlying assumption of the theory is that all individuals have an intrinsic motivation to experience growth. The theory also describes how a traumatic event triggers the information processing that involves the disconfirmation of pre-existing assumptions and accommodation of renewed schemas, which then leads to a new understanding of the world.

1.1.3. Factors That Affect Posttraumatic Growth

As discussed in the previous sections, posttraumatic growth is not just about returning to the normal state that is prior to the event. It is about making a move towards adaptation or a

revision to one's life (Bellizzi & Blank, 2006). Individuals who show posttraumatic growth go beyond their previous level of functioning (Duman, 2019, Kanat & Özpolat, 2016, O'Leary, 1998). They "thrive" despite adversity (O'Leary, 1998). The positive changes in life may happen within weeks, months and years (Tedeschi & Calhoun, 1996).

However, not all individuals who have experienced adversity in their lives achieve posttraumatic growth (Ogińska-Bulik & Kobylarczyk, 2016). It is reported that 30 - 90% of individuals report positive changes after traumatic events (Tedeschi & Calhoun, 1995; Tedeschi, Park, & Calhoun, 1998). According to Park (1998), the realization of posttraumatic growth was associated with such factors as gender, age, education levels, marital status, the strength of traumatic events, the experience of prior traumatic events, the presence of posttraumatic stress symptoms, the presence of social support, the amount of time that was passed after traumatic life events, the ability to express emotions, the use of coping skills. Schaefer and Moos (1992) also list a similar set of factors that affect how traumatic experiences impact individuals: the duration of trauma, the severity of trauma, the timing of trauma, gender, culture, previous traumatic experiences, relationships, social support from family and friends, and individual characteristics prior to trauma such as resilience. Schaefer and Moos (1992) explain that these variables affect cognitive processes and coping skills which then influence posttraumatic growth (as cited in Tedeschi & Calhoun 1995).

With respect to gender differences, posttraumatic growth scores are generally found greater in women than men (Kesimci, Göral, & Gençöz, 2005; Linley & Joseph, 2004; Ogińska-Bulik, 2014a, 2014b; Park, Cohen, & Murch, 1996; Ramos & Leal, 2013). Since women perceive situations as more threatening, their schemas are changed more and this leads women to experience more posttraumatic growth (Olff et al., 2007). Mallon (2008) stated that the more frequent occurrence of posttraumatic growth in women could also be related with cultural factors in which emphasize reporting more distressful feelings in which

women tended to report more distressful feelings than men did. It was found women with higher education had higher levels of posttraumatic growth (Linley & Joseph, 2004; Tedeschi & Calhoun, 2004).

Helgeson, Reynolds and Tomich (2006) reported that younger individuals report more posttraumatic growth than older individuals because they have more capacity to learn and change. The younger people can easily change the outlook of the world whereas older individuals have already learned their lessons in their life (Carver & Antoni, 2004; Currier, Holland, & Neimeyer, 2012; Linley & Joseph, 2004; Powell, Rosner, Butollo, Tedeschi, & Calhoun, 2002). Tedeschi, Park and Calhoun (1998) report that, since university students are young, they are more able to experience posttraumatic growth after traumatic life experiences.

Dirik and Karancı (Dirik, 2006; Dirik & Karancı, 2008) studied variables related with posttraumatic growth in rheumatoid arthritis patients. They found that age, the perceived severity of disease, problem-focused coping, and perceived social support were associated with posttraumatic growth. They found that education did not predict posttraumatic growth. However, Linley and Joseph (2004) reported that education levels were positively correlated with posttraumatic growth.

Belizzi and Blank (2006) found that individuals who are married show high levels of posttraumatic growth. According to Lepore and Revenson (2006), perceived social support is positively associated with posttraumatic growth. When it is high, people can talk about their traumatic experiences and find an opportunity to process their emotions, through which they may find alternative ways to evaluate the event and solve their problems.

The time passed since a traumatic life event was positively associated with posttraumatic growth (Kardaş & Tarhan, 2018; Teodorescu et al., 2012). Since the time that has passed after traumatic life events stabilizes the process of posttraumatic growth.

1.2. Bereavement-Related Posttraumatic Growth

We are confronted with different traumatic events throughout our life. Losing someone close is one of them (Goldberg & Williams, 1988). The grief of losing someone close like relatives or friends is experienced by all of us as part of our ordinary life.

Bereavement is defined as losing someone close who was a significant other (Stroebe, Hansson, Stroebe, & Schut, 2001). Grief is defined as physical, emotional and cognitive reactions that are experienced after loss, which is considered as a normal and natural reaction (Stroebe, Hansson, Stroebe, & Schut, 2001; Worden, 2001, 2008). Although bereavement and grief are sometimes used interchangeably in literature, these terms are clearly distinguished in this thesis. As shown in the above definitions, bereavement refers to the state of having lost someone close. Bereaved individuals thus simply refers to those who experienced the fact of loss. On the other hand, grief is a subjective reaction to the objective state of loss. It is important to distinguish grief from bereavement, because not everyone responds to the condition of bereavement with intense grief. The process of coping with loss varies from person to person (Wortman & Silver, 1989). The intensity, quality, length, and timing of grief may vary greatly.

Grief of losing a loved one can be extremely painful. Those in grief miss the person they lost. Their minds get preoccupied with the memories of the deceased, whether unconsciously or consciously. Remembering the deceased brings out intense sorrow. Grieving individuals may also report feelings like anger or guilt. They may even experience extreme physical changes such as sleep-deprivation or over-sleeping, a loss of appetite or overeating (Masten, 1994).

However, as they go through grieving processes trying to adapt to the situation with their own internal resources, bereaved individuals may as well experience positive changes, in

other words, posttraumatic growth (Malinak, Hoyt, & Patterson, 1979; Tedeschi & Calhoun, 2008). Among individuals who had experienced a loss of a loved one, some clearly showed evidences of posttraumatic growth (Hogan, Greenfield, and Schmidt, 2001). Such individuals can show changes in any of these areas of posttraumatic growth, namely: personal strength, relating to others, spiritual change, new possibilities, and appreciation of life. They report that they feel increased appreciation of family and friends, and the preciousness of life in general (Jordan, 2000; Malinak, Hoyt, & Patterson, 1979; Masten, 1994). They appreciate life more fully, by accepting life situations from both positive and negative sides (Jim & Jacobson, 2008). They also report they function better than they did before the loss (Calhoun & Tedeschi, 1999; Dirik, 2006).

According to Neimeyer (2005), bereaved individuals actively process the experience of loss. Through the change of schema or reframing, they try to find new meanings and purposes in their life (Oltjenbruns, 1991; Parkes & Weiss, 1983). Hogan, Morse and Tasón (1996) suggest that those who make new meanings for their struggling experience after the loss can better cope with the grieving process. The meaning-making also helps alleviate the grief and pain of the loss (Neimeyer, Burke, Mackay & van Dyke Stringer, 2010). Therefore, the meaning-making processes is fundamental for the bereaved individuals to overcome the loss and achieve posttraumatic growth.

Neria and Litz (2004) state that the relationship with the deceased is an important factor for the bereavement and posttraumatic growth. Armstrong and Shakespeare-Finch (2011) found that individuals who had lost their first degree relative showed more growth than those who had lost their friend or second degree relative. Currier, Mallot, Martinez, Sandy and Neimeyer (2013) found that the posttraumatic growth scores of individuals who had lost a family member were higher than individuals who have lost a friend or a relative.

1.2.1. Theories of Bereavement and Grief

There are several models of grief such as those by Kubler-Ross (1969), Horowitz (1990), Rubin (1999) and Neimeyer (2001). Kubler-Ross (1969) developed a now classic model of grief upon facing a death. This model has five stages of grief. The first stage is the denial of the loss, the second stage is being angry to loss or to the reality, the third stage is the hope to see the loss back, the fourth stage is feelings of hopelessness, disappointment, depression and the fifth stage is accepting the reality and the loss.

Horowitz's (1990) model of morning is another stage theory, describing five stages of grief: outcry, denial, intrusion, working through, and completion. In this model, individuals experience inner conflicts after losing a loved one as they do not want to change their existing schemas regarding the relationship with the person they had lost. They want to keep the person alive in their mind. Eventually, all the bereaved come to a point where they accept reality and replace their old schemas with new ones regarding themselves and others.

Rubin (1999) has developed the two-track model of bereavement. This model posits that individuals go through a period of adaptation after the loss of loved one, by reflecting on their relationship with the deceased. In this model, influence of losing someone close and the relational bond with the deceased were emphasized. The first track is called General Functioning, which is about the influence of losing a loved one on the biopsychosocial functioning of the individual. It is about individuals' responses to the loss and functioning after the loss (Malkinson, Rubin, & Witztum, 2006). The second track is called as Relational Active Grieving. This track is about the relationship with the beloved before and after their death. This track involves memories of the deceased, the relationship with the deceased, the feelings and thoughts about the deceased. Within this track how individuals form a new

relationship with the deceased is also evaluated. This track is also called the attachment dimension.

Neimeyer's (2001) newer theory posits that grief is not experienced in fixed stages but is a lifelong experience whose stages are evolving over time. For this reason, individuals try to find a meaning or a purpose in their life to organize their life and to have a predictable and controllable life (Gillies & Neimeyer, 2006). Neimeyer (2001) states that bereavement changes individuals' life stories since individuals change the meaning they assign to events in their life. Berzoff (2003) explains that the theories of Kubler-Ross (1969), Horowitz (1990), Rubin (1999) and Neimeyer (2001) are all concerned about the experience of loss resulting in the change of the bereaved individual's inner world.

Individuals display varying intensity of grief after losing someone. The grief intensity varies with personal characteristics and also with the characteristics of the death. The closeness with the deceased, the way loss is experienced, the quality of the attachment relationship are some factors that may affect the grieving process (Worden, 2008).

1.2.2. Studies of Posttraumatic Growth after Bereavement

There are numerous studies that documented posttraumatic growth following bereavement. A series of studies conducted by Ogińska-Bulik (2015; Ogińska-Bulik, & Kobylarczyk, 2016) demonstrated that posttraumatic growth is indeed seen after bereavement. A study of bereaved siblings by Forward and Garlie (2003) found that these individuals reported changes associated with posttraumatic growth following the loss; they appreciated life more fully, and developed a closer relationship with their families and friends. Malinak, Hoyt and Patterson (1979) conducted in-depth interviews with those who had lost their parents in the last two years. Their study revealed positive changes were also experienced

after bereavement, thus indicating the evidences of posttraumatic growth. Toth, Stockton and Browne (2000) also documented that university students' experience of posttraumatic growth following bereavement. Oltjenbruns (1991) studied adolescents' experience of grief and reported that the majority of them reported positive changes after their grieving experience.

Armstrong and Shakespeare-Finch (2011) studied bereaved individuals and found the relationship between severity of the trauma and posttraumatic growth. Their results showed that higher ratings of severity was associated with higher scores of posttraumatic growth. "The more suffering, the more growth" formula, however, was not supported elsewhere. Engelkemeyer and Marwit (2008) have done a study with bereaved parents about the grief intensity and posttraumatic growth. They have found that grief intensity was negatively correlated with posttraumatic growth scores.

On the other hand, Tian and Solomon (2020) studied the factors that are associated with grief and posttraumatic growth after the experience of miscarriage, which is considered as a loss experience. They found an inverted U-shaped curvilinear relationship between grief and posttraumatic growth. Posttraumatic growth increased with grief up to a certain point, after which it stated to decrease as grief becomes more intense. In other words, growth was found higher in the moderate levels of grief, while the low and the high levels of grief were associated with low posttraumatic growth.

Currier, Holland and Neimeyer (2012) conducted a study about the relationship between prolonged grief symptoms and posttraumatic growth. They also found a curvilinear relationship (an inverted U-shaped curve) between grief and posttraumatic growth. They observed that posttraumatic growth increased with grief symptoms increase up to a certain point, after which posttraumatic growth started to decrease with the increase in grief symptoms. Individuals who reported moderate amounts of grief symptoms reported highest

amount of posttraumatic growth, while individuals who had low levels of grief or highest level of grief reported lower levels of posttraumatic growth.

Yılmaz and Zara (2016) studied posttraumatic growth in bereaved individuals in Turkey. They also found an inverted-U curvilinear relationship between grief intensity and posttraumatic growth, in which individuals who had intermediate levels of grief intensity had highest level of posttraumatic growth, while those whose grief intensity was lower or higher reported lower degrees of posttraumatic growth. Yılmaz and Zara (2016) explain their finding as follows. Those who have very low grief intensity may not start the meaning-making or the cognitive restructuring processes that lead to posttraumatic growth. The perception of the loss as traumatic was transformative for experiencing positive changes in bereaved individuals. Individuals who perceived their loss as more traumatic tended to experience more posttraumatic growth. For those who have very high grief intensity, however, the healthy process of bereavement gets disturbed, according to Yılmaz and Zara (2016).

Research by Shakespeare-Finch and Laurie-Beck (2014) offers an additional support to the above studies that found inverted U-shaped relationship. Although it was not specifically about bereavement, their meta-analysis of 43 studies found that the relationship between posttraumatic stress disorder (PTSD) and posttraumatic growth was curvilinear, in the shape of an inverted-U, where posttraumatic growth is experienced the most when PTSD symptoms were at a moderate level.

1.3. Resilience

The concept of resilience comes from Latin word "*resilio*." *Resilio* means to step backwards in Latin, it means the plasticity of a matter and the possibility of turning back to the old shape of the matter (Klein, Nicholls, & Thomalla, 2003). Individuals who display resilience can return easily to their baseline despite the traumatic life experiences (Tedeschi &

Calhoun, 1995). Resilient individuals can "maintain a stable equilibrium" (p.20) even after traumatic life events. They tend to show no deviance from their normal functioning (Bonanno, 2004).

Resilience is also described as a dynamic process that fosters adaptation in adverse conditions (Garmezy 1991; Luthar 1991; Sroufe, Carlson, Levy, & Egeland, 1999). Individuals who have high levels of resilience have the capacity to adapt to extraordinary and harsh conditions (Fraser, Galinsky, & Richman, 1999; Masten, Best, & Garmezy, 1990; Stroebe, Hansson, & Stroebe, 1993; Tusaie & Dyer 2004). According to Resnick (2000), resilient individuals do not remain static; they change across their lifetime.

As seen above, there are two different conceptualizations of resilience. While some define resilience as the ability to bounce back or recover from stress and traumatic life experiences (Frazier et al., 2009; Smith et al., 2008), others define resilience as a capacity for adaptation to stressful situations and being functional despite stressful life events (Bonanno, 2004).

Lepore and Revenson (2006) propose an alternative conceptualization as three types of resilience: recovery, resistance, and reconfiguration. Recovery is a normal process of returning to the state that was prior to the trauma. Resistance is a personality trait like resiliency but it is differed from resiliency in a way that it leads individuals to resist destructive behaviors. Reconfiguration is a process that has similarities with posttraumatic growth. It includes reconfiguring with positive changes (Bensimon, 2012). Ogińska-Bulik (2015) further points out that the existence of different conceptualizations in the resilience literature in terms of the personality trait (resiliency) versus the process (resilience).

In the thesis, the definition of resilience as the ability to bounce back was adopted, because the other definition as an adaptation and change may overlaps with the definition of posttraumatic growth. Brief Resilience Scale, which is used in the present study, measures

resilience as a state (processes), being defined as the ability to bounce back or recover from stress.

1.3.1. Predictors and Outcomes of Resilience

There are some factors associated with resilience. Resilience is affected by both personal characteristics and the characteristics of the events (Olsson, Bond, Burns, Vella-Brodrickc, & Sawyer, 2003). Rutter (1999) state that early exposure to risks in life facilitates resilience in the individual's later life. According to Rutter (1987, 2013), resilience does not emerge if one avoids stressful events in life; resilience develops by experiencing stressful events and dealing with the stress. Individuals develop this capacity by getting exposed to little challenges. They gain self-confidence as a result of experiencing stressful life events and overcoming them through their life.

Resilience is important for preventing mental health disorders like depression and anxiety and controlling stress-related reactions (Connor & Zhang 2006). When confronted with traumatic events, resilient individuals may have the potential of maintaining or regaining their mental health (Hjemdal, 2007). Büyükaşık-Çokal et al. (2012) found that resilience allows individuals to develop effective ways of coping with their traumatic life events. Individuals who have high resilience levels see traumatic situations and life in general as less threatening. Experiencing a less threat helps them maintain their normal equilibrium after difficult life events (Luther, Chicchetti & Becker, 2000).

Wagnild and Collins (2009) state that resilient individuals are more tolerant against negative emotions and failures, thus displaying emotional stability. It should be noted that resilient individuals also become sad or affected badly after traumatic events. However, their functioning remains stable as they have the capacity to adapt to the traumatic events (Wagnild

& Young, 1993). Resilient individuals also experience changes in their emotions but they turn quickly to their normal functioning. The changes in their emotions are short lived. In this way, resilient individuals experience traumatic events with a minimum harm to their psychological unity (Bonanno, 2004).

1.3.2. Resilience and Posttraumatic Growth

The relationship between resilience and posttraumatic growth is confusing as researchers have reported contradictory results (Ballenger-Browning & Johnson, 2010; Tedeschi, Calhoun, & Cann, 2007). There are different views about resilience and posttraumatic growth. Johnson et al. (2007) argues that posttraumatic growth itself is a type of resilience, while others (e.g., Tedeschi & Calhoun, 1995, 1996) conceptually distinguish the former from the latter. Tedeschi and Calhoun (2004) consider resilience and posttraumatic growth as two independent phenomena. According to them, individuals who show posttraumatic growth experience transformation and they go beyond and higher than their prior levels of functioning, whereas people do not go beyond their prior levels with resilience, but just return to their normal functioning. Some researchers even claim that there is no relationship at all between resilience and posttraumatic growth, stating that they are two entirely different constructs (Westphal & Bonanno, 2007).

A number of studies (e.g., Bensimon, 2012; Nishi, Matsuoka, & Kim, 2010; Ogińska-Bulik, 2015) found the positive correlation between resilience and posttraumatic growth. Bensimon (2012) found trait resilience was negatively related to PTSD and positively to posttraumatic growth. A study of survivors of motor accidents by Nishi, Matsuoka and Kim (2010) revealed that three areas of posttraumatic growth (personal strength, relating to others, new possibilities) were positively related to resilience, while the other two areas of growth

(spiritual change and appreciation of life) were positively related to PTSD. In a study of Syrian refugees conducted in Turkey by Cengiz, Çakıcı and Ergün (2019), resilience was also found to be positively correlated with posttraumatic growth. Therefore, according to these studies, posttraumatic growth can be predicted by the level of resilience.

On the other hand, Levine, Laufer, Hamama-Raz and Solomon (2009) studied adolescents who were exposed to terror and adults who are exposed to war and found an inverse pattern of the relationship between resilience and posttraumatic growth: the higher the level of resilience, the lower the level of posttraumatic growth. They explained the inverse result as follows. Since resilient individuals were able to manage the situation well, they felt the lesser need to find a meaning of their traumatic experiences, which may lead to the missing opportunity for posttraumatic growth. It should be noted that, in this study, resilience was not directly measured but simply defined as opposition to PTSD, where the low level of PTSD means the high level of resilience and vice versa. Moore, Cerel and Jobes (2015) also found negative relationship between resilience and posttraumatic growth among parents who lost their children to suicide. Research that operationally defines resilience as the absence of PTSD symptoms following traumatic events tend to find a negative relationship between resilience and posttraumatic growth (Westphal & Bonanno, 2007).

Calhoun and Tedeschi (1998) suggested a possibility of nonlinear relationship between posttraumatic growth and resilience. Li, Cao, Cao and Liu (2015), indeed, found a curvilinear relationship between resilience and posttraumatic growth in that the highest of growth was associated with the moderate level of resilience. As an explanation, they cited Westphal and Bonanno's (2007) finding that those who have high resilience would not employ sufficient cognitive processing that is essential for posttraumatic growth to emerge. The possible reason for this is because highly resilient individuals cope well and suffer less, and less suffering means less opportunity for posttraumatic growth.

In summary, the relationship between resilience and posttraumatic growth remains to be unclear because of the different views and conflicting findings. Further studies are required to clarify this issue.

1.4. The Relationship between Grief, Resilience and Posttraumatic Growth

Resilience as a maintenance ability may help the bereaved recover from the grief of losing a loved one. Resilient individuals can maintain positive adaptation to the life despite experiencing adverse events (Luthar, Cicchetti, & Becker, 2000), so this may also lay a foundation for posttraumatic growth to occur (Bonanno, 2004).

Resilience and posttraumatic growth are protective factors in the recovery process after bereavement (Henry, 2017). Therefore, resilient individuals tend not to get badly affected by trauma of losing a loved one. They are more likely to stay physically and psychologically healthy (Bonanno, 2004). Literature suggests that they may experience some dysfunctions but they go back to their normal functioning easily with a minimum or no disruption in their daily life following bereavement. They tend not to show delayed grief reactions (Bonanno et al., 2002; Bonanno, Papa, & O'Neill, 2002). According to Henry (2017), the high level of resilience and posttraumatic growth prevents and decreases prolonged grief that lasts more than 12 months after the loss.

A series of research (Ogińska-Bulik, 2015; Ogińska-Bulik and Kobylarczyk, 2016) looked into individuals who had lost someone close in Poland. It was found that resiliency, which was defined as a personality trait that facilitates coping with stress, was positively correlated with posttraumatic growth. The research suggested that the levels of posttraumatic growth after bereavement could be predicted by the level of resilience. Ogińska-Bulik's research (2015) indicated that resiliency was positively associated with bereaved adults'

posttraumatic growth, especially in the domains of changes in self-perception and appreciation of life. Subsequently, Ogińska-Bulik and Kobylarczyk (2016) found that the impact of temperamental traits on posttraumatic growth was mediated by resiliency.

While individuals who exhibit resilience do experience grief after the loss, they may well experience posttraumatic growth (Bonanno, 2004). In this process, bereaved individuals' grief intensity can be moderated by the level of their resilience. It has been indicated that resilient individuals had relatively few grief symptoms following bereavement (Bonanno, 2004, Bonanno et al., 2002). Clements (2014) also found an inverse relationship between resilience and grief symptomology.

The intensity of grief is crucial here. According to the bereavement-related posttraumatic growth studies that supported the curvilinear relationship between grief and posttraumatic growth (Currier, Holland & Neimeyer, 2012; Tian & Solomon, 2020; Yılmaz & Zara, 2016), a moderate level of grief is most likely to promote posttraumatic growth. Namely, no grief means no change, hence no growth, whereas too much grief is also associated with the lower level of growth. Grief is thus needed to be in moderation for the bereaved to be able to grow from the experience. Resilience may play an important role here in attenuating grief intensity at a manageable, moderate level.

1.5. The Purpose of the Study

The present study focuses on resilience and posttraumatic growth of individuals after losing someone close. The study aimed to demonstrate that, through difficulties of bereavement, people could also experience posttraumatic growth in the form of positive changes. However, it should be noted that the study does not mean that trauma of losing someone as desirable. While maintaining the idea that experiencing a loss is extremely hard,

this study takes on the perspective that the bereavement has another side which proposes a way for individuals to grow despite the challenge (McAdams, 1993).

The purpose of this study was to investigate the relationship between resilience, grief and posttraumatic growth among the bereaved university students. There is no known study that investigated the relationship between these variables at the same time. Based on the literature review and discussion in Section 1.4, three hypotheses were formulated for the purposes of the study:

Hypothesis One: It was hypothesized that there will be a positive correlation between resilience and posttraumatic growth of individuals who have lost someone close. This was based on the assumption that resilience, as a capacity to bounce back from the adverse state to the normal, helps to kick start a further growth process.

Hypothesis Two: A curvilinear (Inverted U-shaped) relationship between grief and posttraumatic growth was hypothesized, as indicated in Figure 1.1. The level of posttraumatic growth was expected to be changed by the level of grief. The lower and higher levels of grief are expected to be associated with the lower levels of posttraumatic growth, whereas the moderate level of grief is expected to lead to the highest level of posttraumatic growth.
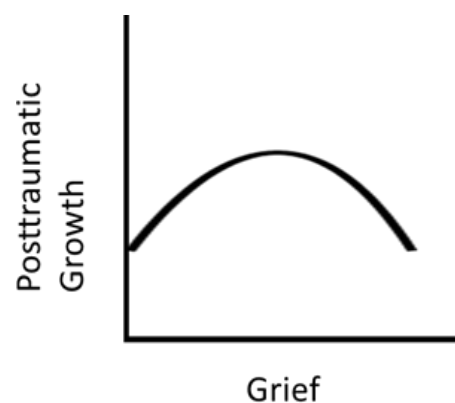
Figure 1.1. The hypothesized relationship between grief and posttraumatic growth.

Hypothesis Three: It was hypothesized that resilience moderates (i.e., enhance) the curvilinear relationship between grief and posttraumatic growth. It was expected that the higher level of posttraumatic growth will be found in individuals whose level of resilience is high, compared to those whose level of resilience is low, as illustrated in Figure 1.2.
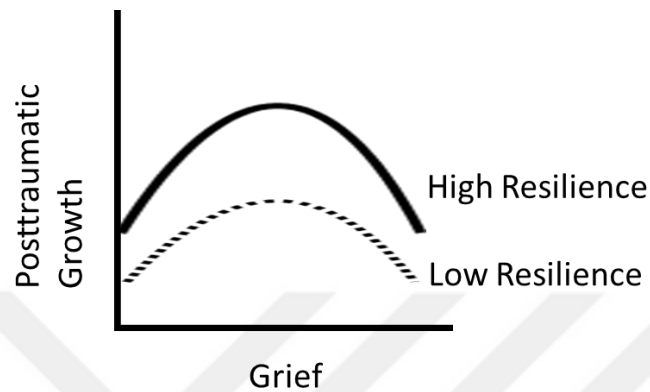
Figure 1.2. The hypothesized relationship between grief and posttraumatic growth, modified by the level of resilience.

2. METHOD

2.1. Participants

For the present study, the sample of bereaved university students in Turkey was selected via a convenience sampling method. Some participants were recruited with announcements that was made during class hours of undergraduate and graduate courses. Others were recruited randomly from those found in the canteens of universities. Participants were selected from university students who had lost someone close within the past two years. Those who lost someone within the last three months were excluded from the study. This particular period was thought to be the time when bereaved individuals are capable of accepting the consequences of the loss and experience some posttraumatic growth, and previous studies of posttraumatic growth used a sample of bereaved individuals in the same period (Currier, Holland, & Neimeyer, 2006; Currier, Mallot, Martinez, Sandy, & Neimeyer, 2013; Ogińska-Bulik, 2014; Prigerson, Vanderwerker, & Maciejewski, 2008).

As a result of recruitment, 155 university students who had experienced a loss 3-24 months prior to the study participated the study. Detailed demographic information of the participants can be found in Appendix A. The participants were composed of 114 females (73.5%) and 40 males (25.8%), with one participant (0.6%) who did not wish to specify gender. The age of participants ranged between 18 and 45 ($M = 22.72$, $SD = 3.66$).

The age range corresponded to that of young adults. This age group was considered appropriate for this study because it is known that young adults can experience more posttraumatic growth compared to the older individuals since young adults are relatively more open to learning (Tedeschi & Calhoun, 2004). Vrana and Lauterbach (1994) support the use

of university students in research by stating that university students experience trauma just as the general population do and that they are mostly comparable. It was reported that as much as 22-30% of university students experience the loss of a family member or a friend during university years (Balk, & Corr, 2001). The sample of 155 was considered as a medium-size sample, according to Kline (2005).

2.2. Instruments

A questionnaire was composed for the study. The cover page of the questionnaire was an informed consent form (See Appendix B). The informed consent form clearly explained the general purpose of the study, the criteria for voluntary participation, confidentiality of the information provided by the participant voluntarily and the right to withdraw from the study anytime if wished.

The questionnaire consisted of four main sections: (1) Sociodemographic form (See Appendix C), (2) Relational Active Grieving Scale (See Appendix D), (3) Posttraumatic Growth Inventory (See Appendix E), and (4) Brief Resilience Scale (See Appendix F). Descriptions of the sociodemographic form and the other three measures will be found in the following sections.

Given at the end was a debriefing form (See Appendix G). Since the questionnaire consisted of sensitive questions about the death of the loved one and the bereavement that followed, the contact number of Yeditepe University Psychological Counseling Center was given both in the informed consent form and in the debriefing consent form, in case the participant became uncomfortable from the questions. The debriefing form revealed the more specific purpose of the study and also provided the contact address of the researcher for further inquiries.

2.2.1. Sociodemographic Form

The first section of the questionnaire was a sociodemographic form (See Appendix B). The sociodemographic form begins with questions about the participant's gender, age, birth place, marital status, the place lived, the university, the department and the class level and traumatic events they had experienced.

Then, there was a section about the participant's loss-related experience and the information about the deceased. This section was devised largely with reference to Yılmaz's (2014) questionnaire. The participants were asked about a person whom they had lost in the past 3-24 month and whose loss affected them the most, regarding the age and gender of the deceased, the cause of the death and the time passed since the death. The closeness with the deceased was also assessed by a 5-point scale, following the method used by Chun (2014) and Bogopolskaya (2018). The participants were also asked if they had psychological or psychiatric support after the loss.

2.2.2. Relational Active Grieving Scale (RAGS)

Relational Active Grieving is a sub-scale of the Two-Track Model of Bereavement Questionnaire Turkish version (TTBQ-T). For the purpose of the present study, the Relational Active Grieving subscale was adopted to measure the level of grief of the participant. The entire TTBQ-T was not used and only RAGS was used in the study.

The Two-Track Model of Bereavement Questionnaire (TTBQ) was developed by Rubin et al. (2009). TTBQ is composed of 70 items which assess the bereavement processes of individuals on a 5-point scale. The questionnaire has a reported reliability of 0.94 in terms

of Cronbach's alpha coefficient. This implies that the questionnaire has a high level of internal consistency.

TTBQ integrates two fundamental approaches in the bereavement literature: the general functioning of the individual and the quality of the relationship between the individual and individual who was lost. TTBQ is said to be a reliable and valid tool for the evaluation of grief reactions of individuals and applying therapeutic interventions to individuals in the clinical practice (Malkinson, Rubin, & Witztum, 2006).

The TTBQ items are categorized into five factors: 1) relational active grieving, 2) close and positive relationship with the deceased, 3) conflictual relationship with the deceased and 4) biopsychosocial function and 5) traumatic perception of the loss. The first three factors were primarily associated with Track II: the relationship to the deceased, while the last two factors with Track I: aspects of functioning (Rubin et al. 2009).

Ayaz, Karancı and Aker (2014) analyzed psychometric properties of a Turkish version of Two-Track Model of Bereavement Questionnaire (TTBQ-T). The TTBQ-T was administered to 205 individuals who have lost someone close in the last five years. The reported internal consistency of TTBQ-T was very high ($\alpha = .93$), which implies the questionnaire has a good internal consistency. As the original TTBQ, the Turkish version (TTBQ-T) also yielded five factors and a 2-track superordinate structure. The "conflictual relationship with the deceased" and "social dysfunction" factors were grouped under Track I "Problems in social relationships" ($\alpha = .74$), while the "traumatic perception of the loss, the "relational active grieving" and "close and positive relationship with the deceased" factors were categorized into Track II "bereavement process" ($\alpha = .96$).

However, it should be noted that individual items that belong to each factor in TTBQ-T were different from those in the original TTBQ. The Cronbach's alpha coefficient for "relational active grieving" subscale was .91. For the "close and positive relationship with the

deceased" subscale, it was .88, for the "traumatic perception of loss" scale, it was .82, for the "conflictual relationship with the deceased" it was .78 and finally for the "social dysfunction" subscale, it was .65.

The test-retest reliability of Two-Track Model of Bereavement Questionnaire is .88. The subscales of Two-Track Model of Bereavement Questionnaire had adequate test-retest reliability. The test-retest reliability coefficient for the relational active grieving was .80, for close and positive relationship with the deceased it was .83, for traumatic perception of loss it was .78, for conflictual relationship with the deceased it was .76, and for social dysfunction sub-scales it was .62 (Ayaz, Karancı and Aker, 2014).

In Ayaz, Karancı and Aker's (2014) analysis, the Relational Active Grieving subscale of TTBQ-T consisted of 25 items and has the highest internal consistency (α =.91), compared to 16 items (α =.85) in the original TTBQ (Rubin et al. 2009). The Relational Active Grieving subscale focuses on the pathological reactions after the loss, difficulties for adapting to life without the deceased person, negative changes of the self and the meaning of life after loss. Relational Active Grieving subscale has items about painful emotions, depression, anxiety and suicidal ideation after the loss.

It was very difficult to find a reliable Turkish scale for the measurement of grief. For the purpose of the present study, the Relational Active Grieving subscale of TTBQ-T was considered as an appropriate measure of the level of grief of those who lost someone close. Yılmaz (2014; Yılmaz & Zara, 2016) has also used this subscale of TTBQ-T as a measure of grief intensity. This subscale was originally composed of 25 items from TTBQ-T. However, one item "A1: My health is …" was excluded from the Relational Active Grieving Scale (RAGS) used for the present study firstly because this item had the lowest factor loading in the study of Ayaz, Karancı and Aker (2014) and secondly because this item asks physical health aspects of grieving rather than psychological grief and originally belongs to the

biopsychosocial function factor of Rubin et al. (2009). RAGS covered mental health in the question number one "my mood is ..." (Originally Item A2). which is more important as a measure of psychological grieving, which is the focus of the study.

2.2.3. Posttraumatic Growth Inventory (PTGI)

Posttraumatic Growth Inventory (PTGI) developed by Tedeschi and Calhoun (1996) assesses positive changes that were experienced by individuals after traumatic life events. PTGI is also a measure of how successfully individuals cope with traumatic life events (Tedeschi & Calhoun, 1996).

PTGI is made of 21 items that are answered on a 6-point scale ranging from "0 = I did not experience this change as a result of my crisis," to "5 = I experienced this change to a very great degree as a result of my crisis. Higher scores of the inventory indicates that the individual has experienced a higher amount of growth after a traumatic life event.

Tedeschi and Calhoun (1996) reported the internal consistency of PTGI as α =.90 and the test-retest reliability over a 2-month period as r = .71. Five subscales of PTGI and their internal consistency were: "personal strength" (α=.72), "relating to others" (α=.85), "spiritual change" (α=.85), "new possibilities" (α= .84) and "an appreciation of life (α=.67).

The first Turkish version of PTGI was developed by Kılıç (2005, as cited in Dirik & Karancı, 2008), which used a 5-point scale instead of the 6-point scale of the original PTGI. It was reported by Dirik and Karancı (2008) that Kılıç (2005) identified four factors rather than five.

Dirik and Karancı (Dirik, 2006; Dirik & Karancı, 2008) also translated PTGI into Turkish and made some minor modifications to Kılıç's (2005) version. They also retained the original 6-point response format. They found that internal consistency of the new Turkish

PTGI was higher than the original (α = .94). Furthermore, Dirik and Karancı (2008) identified three factors, instead of the five factors of Tedeschi and Calhoun (1996) or the four factors of Kılıç (2005, as cited in Dirik & Karancı, 2008). The three factors were "changes in the relationship with others" (α =.86), "changes in philosophy" (α = .87), and "changes in self-perception" (α = .88). The three factors identified by Dirik and Karancı (2008) are congruent with three broad categories of perceived benefits of traumatic events that were discussed by Tedeschi and Calhoun (1996): "A changed sense of relationships with others" (p.456), "perceived changes in self" (p. 456) and "A philosophy of life" (p.457).

However, there is no consensus regarding the number of subscales in the Turkish version of PTGI and items that belong to each subscale. For instance, Yılmaz and Zara (Yılmaz, 2014; Yılmaz & Zara, 2016) used original five subscales instead of four subscales or three subscales identified in the Turkish version of PTGI by Dirik and Karancı' (Dirik, 2006; Dirik & Karancı, 2008). For this reason, only the total scale of PTGI was used as a measure of posttraumatic growth for the present study. The analysis of the subscales of PTGI was beyond the scope of the study.

2.2.4. Brief Resilience Scale (BRS)

Brief Resilience Scale (BRS) was developed by Smith et al. (2008). It is a self-report measure resilience, namely the ability to bounce back or recover from stress. BRS consists of 6 items. Each item is measured on a 5-point Likert scale, ranging "1= Strongly disagree" to "5 = Strongly agree." Three of them (Item 2, 4, and 6) were reverse items that were negatively worded. After the reverse coding of these items, the higher scores indicate higher resilience.

Smith et al. (2008) tested the reliability and validity of the scale on four different group. The first two groups consist of university students and the last two groups consist of

heart and fibromyalgia patients. A single factor structure was confirmed based on the results of factor analysis of four different sub-samples. The reliability of the scale in terms of Cronbach's alpha coefficients ranged from .80 to .91. The test-retest reliability was found between .62 and .69.

Doğan (2015) adapted BRS into Turkish and evaluated its psychometric properties. He tested the scale with a sample of 295 university students. He also found a single factor structure of BRS and that scale items are representing the single-factor scale at a satisfactory level. Internal consistency of the Turkish BRS scale was reported to be .83. According to him, the Turkish BRS is a valid and reliable measure for assessing resilience in university students. It was difficult to find other measures of resilience in Turkish that was tested properly. Therefore, the Turkish BRS was adopted for the present study.

2.2.5. Reliability Analysis of the Scales Used in the Study

The internal consistency of three scales used in the present study were analyzed. Table 2.1 shows Cronbach's alpha coefficients for each scale.

Table 2.1

Reliability Statistics

Measures	*n* of items	Cronbach's α
Relational Active Grieving Scale	24	.95
Posttraumatic Growth Inventory	21	.93
Brief Resilience Scale	6	.82

The Cronbach's alpha reliability of 24-item Relational Active Grieving Scale (RAGS) turned out to be higher ($\alpha = .95$) than the original 25-item subscale ($\alpha = .91$) of Ayaz, Karancı and Aker (2014). The omission of "my health is" (Item A1) from RAGS seems to have led to the higher internal consistency of the scale.

The reliability coefficients of other two scales that are used in the study were also high enough. The reliability of Posttraumatic Growth Inventory was very high ($\alpha = .93$), while the reliability of Brief Resilience Scale ($\alpha = .82$) was lower compared to the other two scales but still satisfactory.

2.3. Procedure

Data collection was done in wherever convenient for the participant, such as offices, classrooms, canteens, cafes, libraries and halls. Each participant who are willing to participate in the study was handed a questionnaire and asked firstly to read the informed consent form on the cover page. After officially agreeing to participate in the study by signing the consent form, they proceeded to answer the main part of the questionnaire, which consisted of the sociodemographic form, Relational Active Grieving Scale, Posttraumatic Growth Inventory and Brief Resilience Scale. (See Appendices Filling the questionnaire usually took approximately 10 minutes. The participants were given the debriefing form on the completion of the questionnaire. The questionnaire can be found in Appendices B, C, D, E, and G. The data was collected between January 2020 and March 2020.

2.4. Data Analysis

All three hypotheses regarding the associations between three variables (resilience, grief and posttraumatic growth) were tested by conducting correlation and regression analyses with the scores of Brief Resilience Scale, Relational Active Grieving Scale, and Posttraumatic Growth Inventory. For each scale, the mean of scale item scores were used as a total scale score after reverse items scores, if any, had been corrected.

Spearman rank order correlation coefficient was used for the intercorrelation analyses, as it is a nonparametric statistic and affords a monotonic relationship between variables. Following the correlation analyses, both simple linear regression and nonlinear regression curves were tested between the variables.

The second hypothesis about an inverted U-shaped relationship between grief and posttraumatic growth was tested using quadratic regression model. As for the third hypothesis, a causal-comparative design was used to investigate the effect of resilience on the relationship between grief and posttraumatic growth. For this purpose, the participants were divided into two comparative groups based on their resilience (BRS) scores. Then, the inverted U-shaped regression curves were tested separately for the low resilience group and the high resilience group. The inverted U-shaped relationships were further examined using a two-line interrupted linear regression test proposed by Simonsohn (2017, 2018a).

3. RESULTS

3.1. Descriptive Information Regarding the Loss

The study was carried out with participants (N =155) who had experienced a loss of someone close during the last 3 to 24 months (M = 14.90, SD = 7.59). In cases where they had lost more than one person within the period, they were asked about the loss that affected them the most. Characteristics of the participants' experience of loss are summarized in Table 3.1.

Table 3.1

Descriptive Statistics of Participants' Loss-related Experience (N=155)

Loss related variables	n	$\%$	M	SD	Min	Max
The deceased						
Grandfather	33	21.3				
Grandmother	32	20.6				
Friend	24	15.5				
Uncle	14	9.1				
Aunt	11	7.1				
Cousin	11	7.1				
Father	10	6.5				
Mother	4	2.6				
Sibling	4	2.6				
Other relatives	3	1.9				
Brother in law	2	1.3				
Teacher	2	1.3				
Unspecified	2	1.3				
Romantic Partner	1	0.6				
Romantic Partner and Friend	1	0.6				
Both parents	1	0.6				
The number of months passed since the death			14.90	7.59	3	24
Age of the deceased			61.28	22.77	17	98
Gender of the deceased						
Male	89	57.4				
Female	66	42.6				
Cause of the death						
Chronic Disease	77	49.7				

Loss related variables	n	%	M	SD	Min	Max
Acute Disease	51	32.9				
Traffic Accident	15	9.7				
Suicide	5	3.2				
Unknown Cause	2	1.3				
Homicide	1	0.6				
War	1	0.6				
Drugs	1	0.6				
Having a Professional Help after the Loss						
Yes	18	11.6				
No	138	88.4				
The Professional Help Received after the Loss						
Psychotherapy	11	7.1				
Psychiatric Treatment	1	0.6				
Psychotherapy & Medication	6	3.9				

The most frequently experienced was the loss of their grandparents ($n = 65$; 41.9%), thus increasing the mean age of the deceased to 61.28 years old ($SD = 22.77$). Almost one in six participants experienced the loss of their friends ($n = 24$; 15.51%). Overall, the most common cause of the death was disease, both chronic and acute ($n = 128$; 83%), followed by traffic accident ($n = 15$; 9.7%).

3.2. Intercorrelations between Resilience, Relational Active Grieving and Posttraumatic Growth

There were three main variables in the present study, which were resilience, as measured by Brief Resilience Scale (BRS), grief, as measured by Relational Active Grieving Scale (RAGS), and posttraumatic growth, as measured by Posttraumatic Growth Inventory (PTGI). Table 3.2 presents summary statistics for the observed values on these measures.

Table 3.2

Summary Statistics Table for Brief Resilience Scale, Relational Active Grieving Scale and Posttraumatic Growth Inventory

Measure	*M*	*SD*	*n*	*Mdn*	*Min*	*Max*
Brief Resilience Scale	2.98	0.88	155	3.00	1.00	4.67
Relational Active Grieving Scale	2.48	0.80	155	2.33	1.08	4.88
Posttraumatic Growth Inventory	2.60	1.12	155	2.76	0.00	5.00

As the first step of analysis, correlations between participants' scores of BRS, RAGS and PTGI were examined to understand the interrelationship between these variables. Before correlation analysis was done, the distribution of data from these scales was inspected. Table 3.3 presents the results of Kolmogorov-Smirnov test of normality together with skewness and kurtosis.

Table 3.3

Tests of Normality for Scores on Brief Resilience Scale, Relational Active Grieving Scale and Posttraumatic Growth Inventory

Measure	Skewness[b]	Kurtosis[c]	Kolmogorov-Smirnov[a]	
			D (155)	*p*
Brief Resilience Scale	−.47	−.43	.088	.005
Relational Active Grieving Scale	.60	−.01	.083	.011
Posttraumatic Growth Inventory	−.46	−.21	.075	.034

[a] Lilliefors Significance Correction, [b] *SE* = .195, [c] *SE* = .387.

While skewness and kurtosis coefficients were within the acceptable range, Kolmogorov-Smirnov test suggested that BRS, RAGS and PTGI were unlikely to come from

the normal distribution. PTGI was relatively more close to normality and the inspection of the

Q-Q scatterplot for PTGI supported this view.

Since normally cannot be confidently assumed, it was decided to use Spearman rank

order correlation, instead of Pearson product-moment correlation, for the intercorrelation

analysis. Spearman rank order correlation was considered to be a better option also because it

detects monotonic relationships and is robust to outliers.

Table 3.4 shows the resulting intercorrelations between BRS, RAGS and PTGI.

Statistically significant Spearman's Rho correlations were found in the BRS-RAGS pair,

which were in the negative direction, and in the BRS-PTGI pair, which was in the positive

direction.

Table 3.4

Intercorrelations (r_s) for Scores on Brief Resilience Scale, Relational Active Grieving Scale and Posttraumatic Growth Inventory

Measure	1	2	3
1. Brief Resilience Scale	—		
2. Relational Active Grieving Scale	−.37**	—	
3. Posttraumatic Growth Inventory	.17*	.05	—

Note. N=155 * $p < .05$ (2 tailed), ** $p < .01$ (2 tailed).

The first hypothesis of the present study was the existence of positive correlation

between resilience and posttraumatic growth. As shown in Table 3.4, the results of the

Spearman's Rho (r_s) correlation analysis supported the hypothesis as there was a statistically

significant positive correlation between BRS and PTGI (r_s (155) = .17, $p = .03$). However, the

correlation coefficient was very low. Resilience and posttraumatic growth definitely have an

association in the positive direction but the association appears very weak. Thus, the

relationship between resilience and posttraumatic growth may not be direct nor straightforward one. To further investigate the association between resilience and posttraumatic growth, a linear regression analysis was run for BRS and PTGI scores, which turned out statistically nonsignificant $(R^2 = 0.018, F (1,153) = 2.843, p = 0.094)$. Thus, although a weak correlation was indicated for resilience and posttraumatic growth, there was no simple linear relationship. Other nonlinear regression models, including quadratic regression, were also tested but none of them were significant, either. However, this is also in line with the third hypothesis that resilience moderates the relationship between grief and posttraumatic growth. The relationship of resilience with posttraumatic growth may be a result of the interaction between resilience and grief.

With respect to the relationship between resilience and grief, there was a statistically significant negative correlation between the scores of BRS and RAGS $(r_s (155) = −.37, p = .000002)$. The correlation in the negative direction means that grief decreases as resilience increases. In other words, people with high resilience tend to feel less grief than those with low resilience (or people high in grief tend to have a lower level of resilience than those who feel less grief). Following the correlation analysis, a linear regression analysis was also run (see Figure 3.1). The result was highly significant $(R^2 = .141, F (1,153) = 25.15, p = .000001)$.

Therefore, it is reasonable to say that the intensity of grief can be predicted by the level of resilience. Table 3.4 also reveals that the correlation between RAG and PTGI $(r_s (155) = .05, p = .57)$ was not statistically significant. This result was also something expected, because the second hypothesis of the present study predicts that the relationship between grief and posttraumatic growth is nonlinear inverted U-shape. Correlation analysis cannot pick up such a curvilinear relationship. The relationship between grief and posttraumatic growth will be further examined by using nonlinear regression equations in the following section.
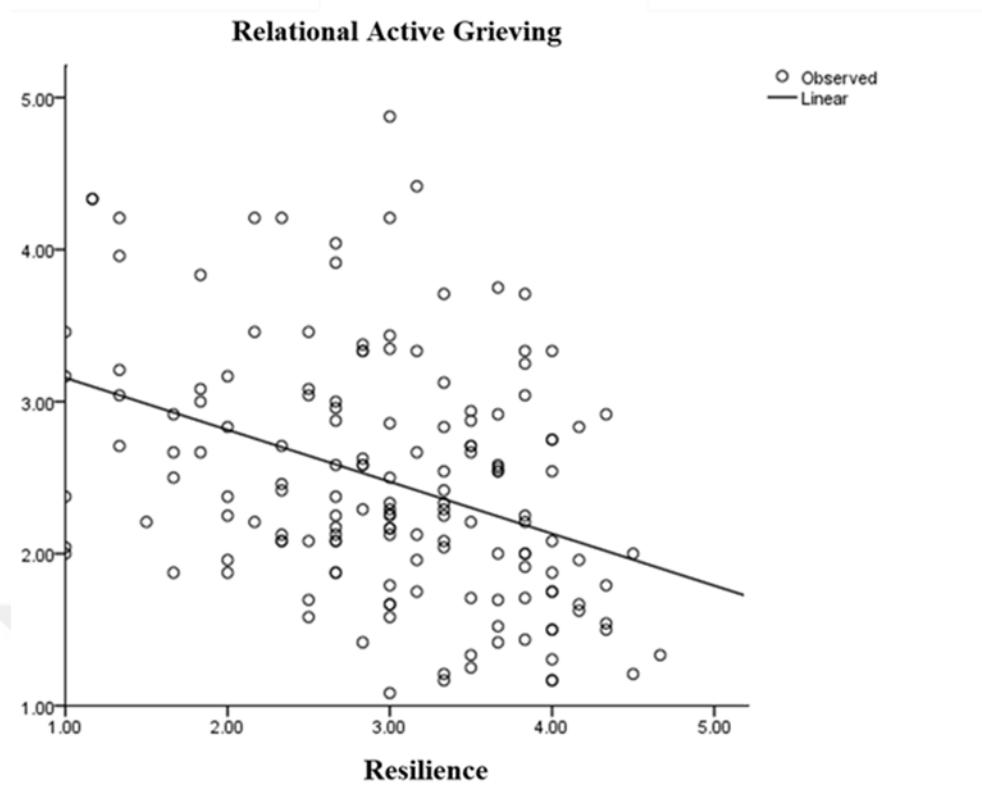
Figure 3.1. The negative linear regression ($p = .000001$) between scores on Brief Resilience Scale and Relational Active Grieving Scale

3.3. The Relationship between Relational Active Grieving and Posttraumatic Growth

A curve estimation analysis was carried out in order to investigate if the relationship between grief (RAGS) and posttraumatic growth (PTGI) is a curvilinear (inverted U-shape) one as hypothesized. Among different regression equations tested, quadratic regression was found to be the most significant and best fitted model ($R^2 = .067$, $F(2,152) = 5.43$, $p = .005$).

Figure 3.2 illustrates the quadratic regression line across the RAGS x PTGI scatterplot. In Figure 3.2, the highest level of posttraumatic growth is seen when grief is in the midpoint, whereas less posttraumatic growth is seen in the lower and higher end of grief level. The level of grief can predicts the level of posttraumatic growth along with the inverted U-

shape curve of quadratic regression line. Statistical significance of the quadratic model is a

supportive evidence for the second hypothesis of the present study.
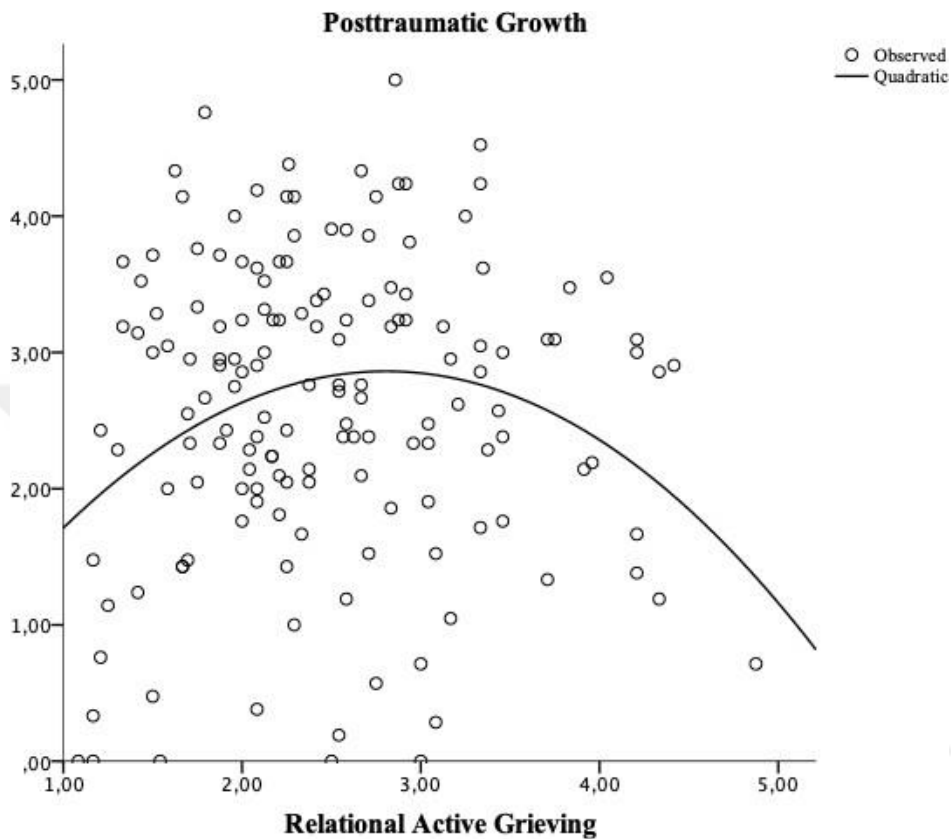
Figure 3.2. Posttraumatic growth as a function of relational active grieving, with a quadratic regression line ($p = .005$)

3.4. The Relationship between Relational Active Grieving and Posttraumatic Growth for High and Low Resilience Groups

The third hypothesis was about the moderator effects of resilience on the curvilinear

relationship between grief and posttraumatic growth. In order to assess whether the

relationship between grief and posttraumatic growth changes when resilience levels are

changed, the participants were divided into two groups according to their BRS scores. Two

groups corresponded to individuals who have low resilience and high resilience.

The median of BRS was 3.00, so this was used as a cut point. Low resilience group (*n* = 83; 63 females, 19 males, & 1 Unspecified) corresponded to the participants who had 3 and lower BRS scores (*Md* = 2.50, *M* = 2.33, *SD* = 0.63). The high resilience group (*n* = 72; 51 females & 21 males) had BRS scores higher than 3.00 (*Md* = 3.67, *M* = 3.74, *SD* = 0.37).

The gender difference in posttraumatic growth has been widely reported. It is known that women show posttraumatic growth more than men do (Kesimci, Göral, & Gençöz, 2005; Linley & Joseph, 2004; Ogińska-Bulik, 2014; Park, Cohen, & Murch, 1996; Ramos & Leal, 2013). Before conducting the comparative analysis of the high and low resilience groups, it was therefore considered necessary to control the interactional effect of gender as gender distribution within each group was not equal. Since the PTGI scores of each group were normally distributed, a two-way ANOVA was carried out to check the effects of gender and resilience on posttraumatic growth. The results indicated that, although posttraumatic growth scores of female participants (*M* = 2.72) were higher than that of male participants (*M* = 2.30) significantly (*p* = .028), there was no statistically significant interaction between the effects of gender and resilience on posttraumatic growth (*F*(1. 150) = 0.021, *p* = .885).

After confirming that the effect of gender did not interfere with the effect of resilience on posttraumatic growth of the two groups, a curve-estimation regression analysis for scores on RAGS and PTGI were conducted separately for each group. Different regression models including linear and quadratic equations were tested.

3.4.1. Low Resilience Group

None of the common regression models that were tested was statistically significant for the low resilience group, which means grief levels were not systematically associated with posttraumatic growth. Although being nonsignificant, quadratic model was found to be better

still than the other models ($R^2 = .034$, F (2, 80) = 1.39, $p = .256$). Figure 3.3 indicates the estimated curve.

Figure 3.3. Posttraumatic growth as a function of relational active grieving for the low resilience group with a quadratic regression line (*ns*).

3.4.2. High Resilience Group

The result of curve estimation analysis for the RAGS and PTGI scores of the high resilience group indicated inverse *($R^2 = .152$, F (1,70) = 12.53, $p = .001$)*, logarithmic *($R^2 = .123$, F (1,70) = 9.86, $p = .002$)*, quadratic *($R^2 = .154$, F (2,69) = 6.30, $p = .003$)* and linear regression *($R^2 = .093$, F (1,70) = 7.20, $p = .009$)* models were all highly significant statistically. The estimated lines can be seen in Figure 3.4. As expected, quadratic regression was found significant as well as the best fit among the tested models in terms of R^2. In the

high resilience group, the lower-half levels grief of were clearly and positively associated with posttraumatic growth in that as grief level increases, posttraumatic growth increases as well.

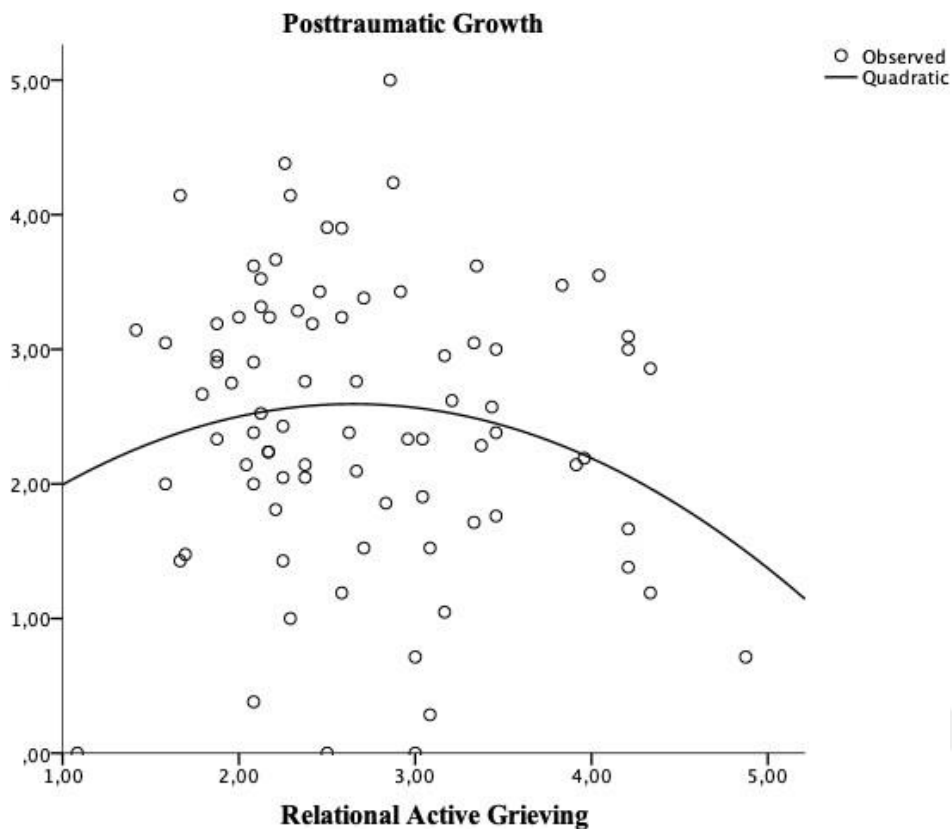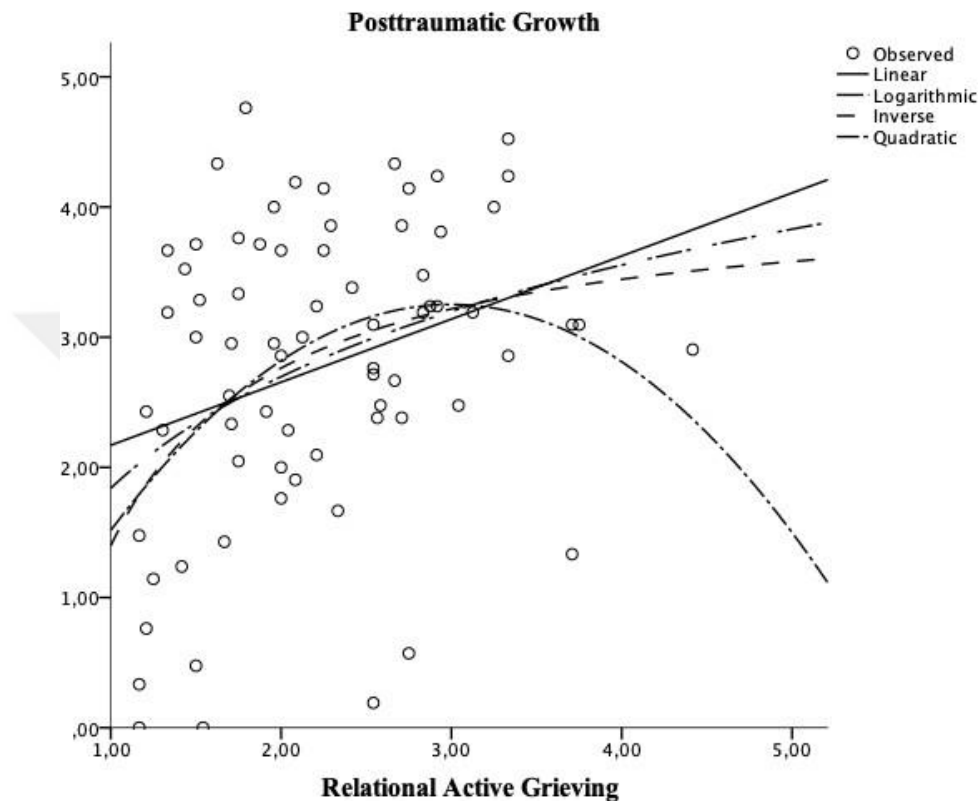*Figure 3.4.* Posttraumatic growth as a function of relational active grieving for the high resilience group, with regression lines ($p < .01$).

However, the way in which the higher grief levels affect posttraumatic growth is inconclusive. Judging from the other significant models other than quadratic model, there is a possibility that growth will continue despite the higher level of grief unlike the inverted U-shaped relationship hypothesized in this study. Figure 3.5 displays the quadratic model together with two other best fitted models for comparison. At this point, it is difficult to decide the best model by inspecting the scatterplots because only a few observations were found after the midpoint of RAGS.
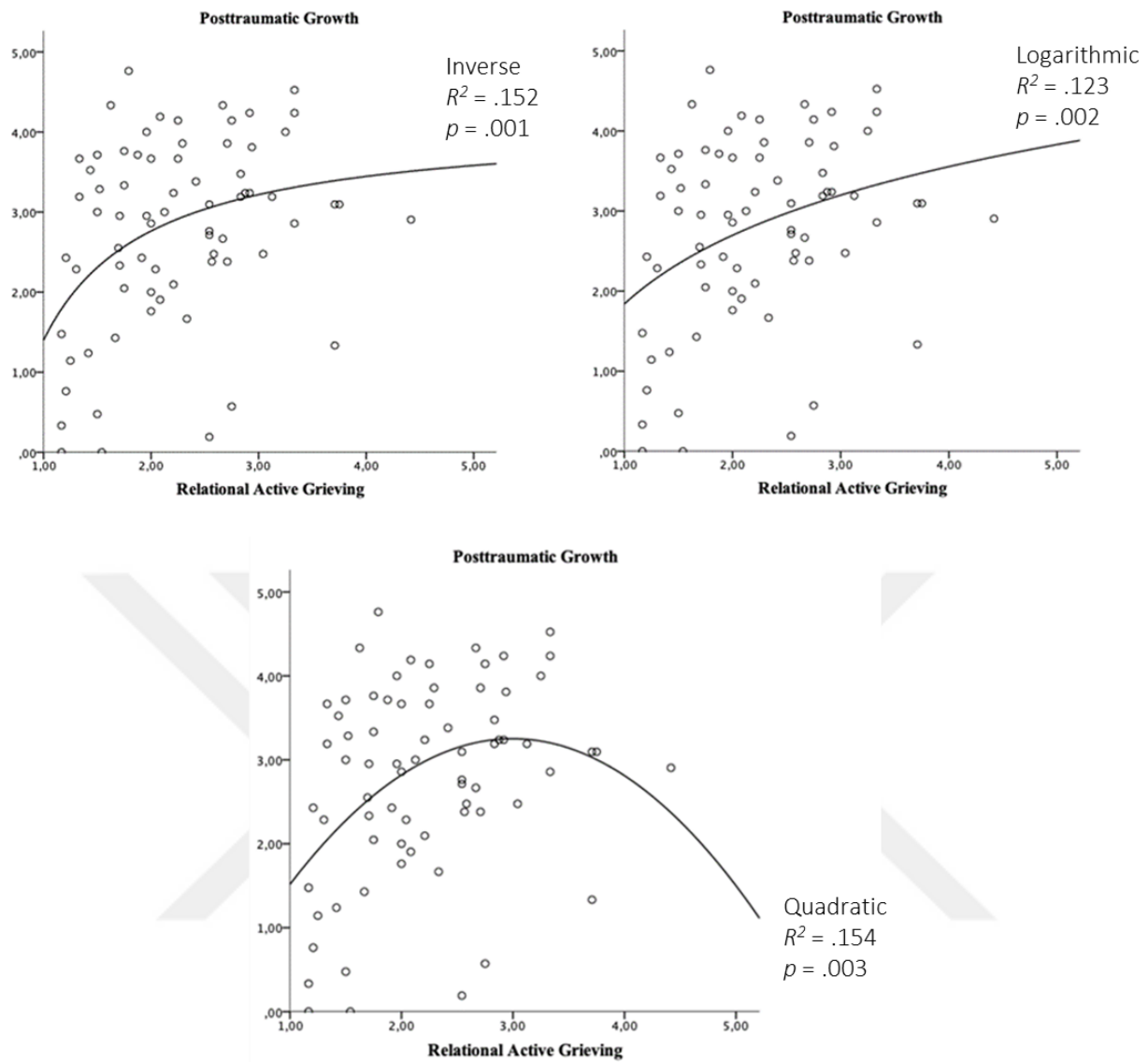
Figure 3.5. Posttraumatic growth as a function of relational active grieving for the high resilience group, with the three best fitted regression lines.

3.4.3. Group Comparison across Low and High Resilience Groups

It has been suggested by the results of curve estimation so far that the relationship between grief and posttraumatic growth is changed with the degree of resilience. Figure 3.6 displays the distribution of observations and the estimated quadratic regression curves for the high resilience groups and the low resilience groups next to each other for a comparison.
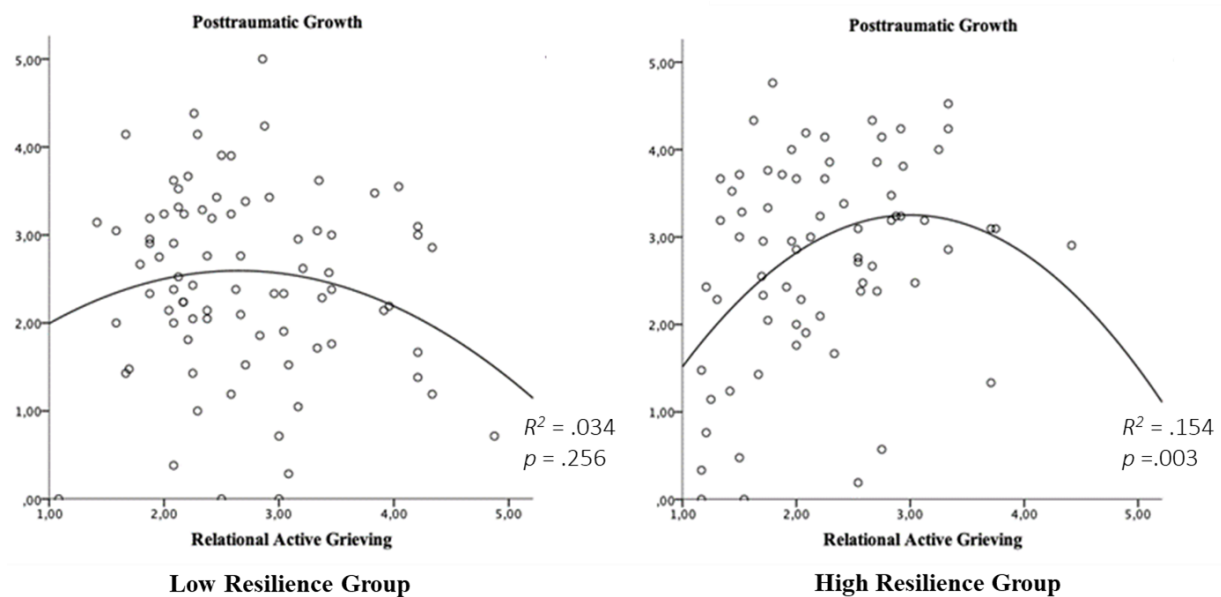
Figure 3.6. Posttraumatic growth as a function of relational active grieving, with a quadratic regression line: A comparison between low and high resilience groups

In the low resilience group, the relatively flat-curved quadratic regression line was estimated but found statistically nonsignificant. The distribution of observations also seems random and unsystematic, thus indicating no clear relationship between grief and posttraumatic growth. On the other hand, in the high resilience group, an inverted U-shape relationship between grief and posttraumatic growth was suggested by the significant quadratic regression curve. It can also be observed that the curve for the high resilience group leaps much higher, indicating that individuals who have high resilience levels achieve more posttraumatic growth than those who have low resilience levels. Furthermore, the plot for the high resilience group clearly shows distribution in the slope of positive direction up to the middle range of RAGS. Only a few observations were found in the higher range of RAGS, presumably because resilience moderates grief levels.

3.5. Two-Line Analysis of an Inverted U-Shaped Relationship between Relational Active Grieving and Posttraumatic Growth

The use of quadratic regressions as a diagnostic tool for a U-shaped relationship has been questioned by Simonsohn (2017, 2018a) recently, because of the high rate of false positive results. He warns that a significant quadratic correlation does not garantee the true existence of the U-shaped relationship and that quadratic regression analysis may find a nonexistent U shape or may miss a real U shape.

Simonsohn (2017, 2018a) proposes the two-lines test which involves breaking the data at the peak of the quadratic regression curve and running two separate linear regression estimates to test quadratic regressions and for detecting U shapes. By taking the above argument into consideration, the decision was made to conduct additional two-line regression analysis to check the previous results of quadratic regression analyses (Sections 3.3 & 3.4) and to detect the existence of inverted U-shape relationship between relational active grieving and posttraumatic growth. Two-line test application version 0.52 (Simonsohn, 2017, 2018b) was used to re-analyze the data. In the two-line analysis, the optimum point on a quadratic curve is specified and used as a breakpoint for separating linear regression into two sloping lines. The algorithm to specify this optimum breakpoint was devised by Simonsohn (2017, 2018a). To be confident about the inverted U-shaped relationship, the first line should be a positive regression line (i.e., an upward slope) and the second line be a negative one (i.e., a downward slope), and each of which should be statistically significant.

Figure 3.7 shows the result for all participants group. The first line (Slope 1) turned out to be a statistically highly significant linear regression ($p = .004$) in the positive direction. The second line (Slope 2) after the breakpoint (RAGS = 2.13) was negative linear regression ($p = .1382$), although not statistically significant. It is possible to observe from Figure 3.7 that

posttraumatic growth increases as the level of grief increases while the level of grief is lower

than 2.13. However, when grief is higher than 2.13, posttraumatic growth slowly starts to
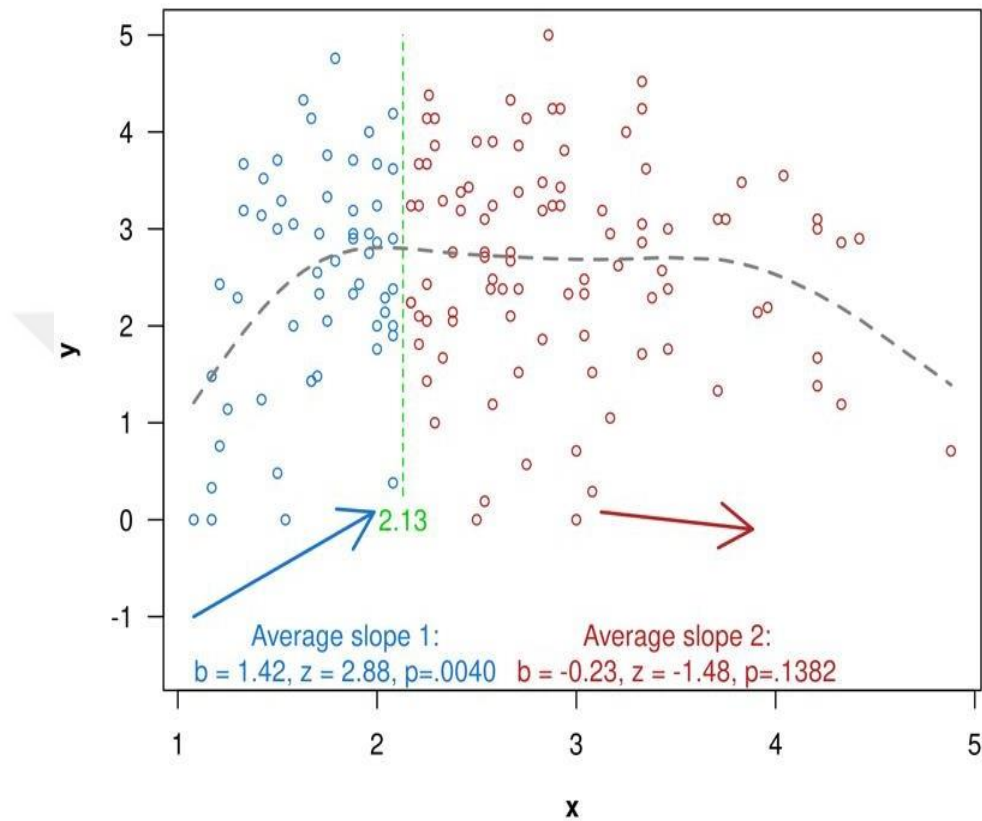
decrease.

Figure 3.7. The two-line regression analysis for scores on RAGS (x) and PTGI (y) of all
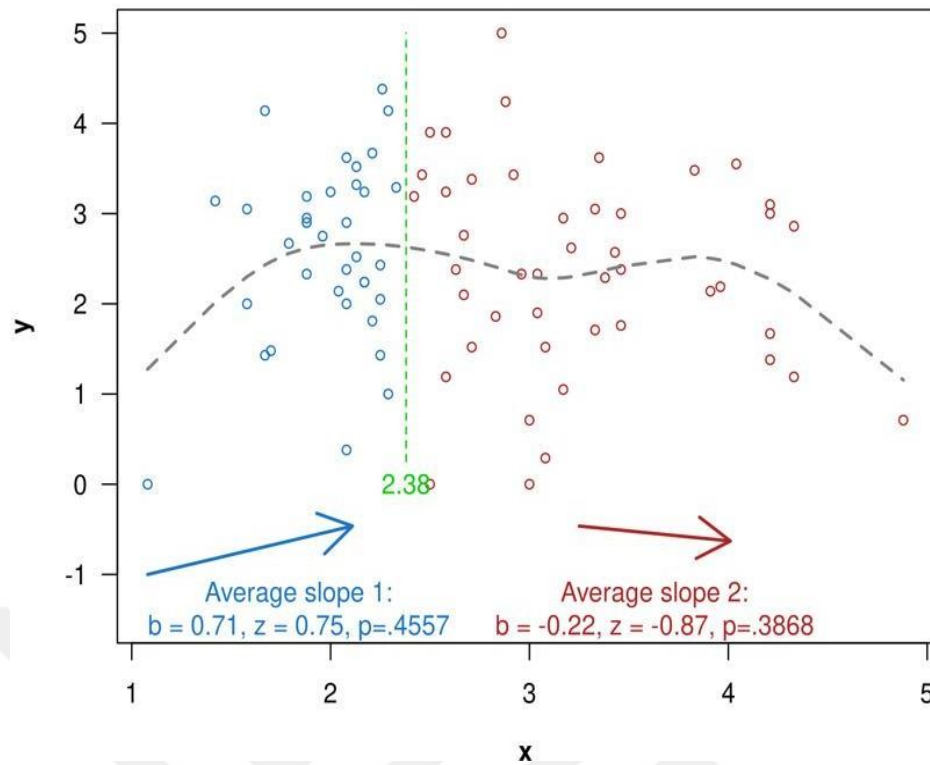participants.

Figure 3.8. The two-line regression analysis for scores on RAGS (x) and PTGI (y) of the low resilience group
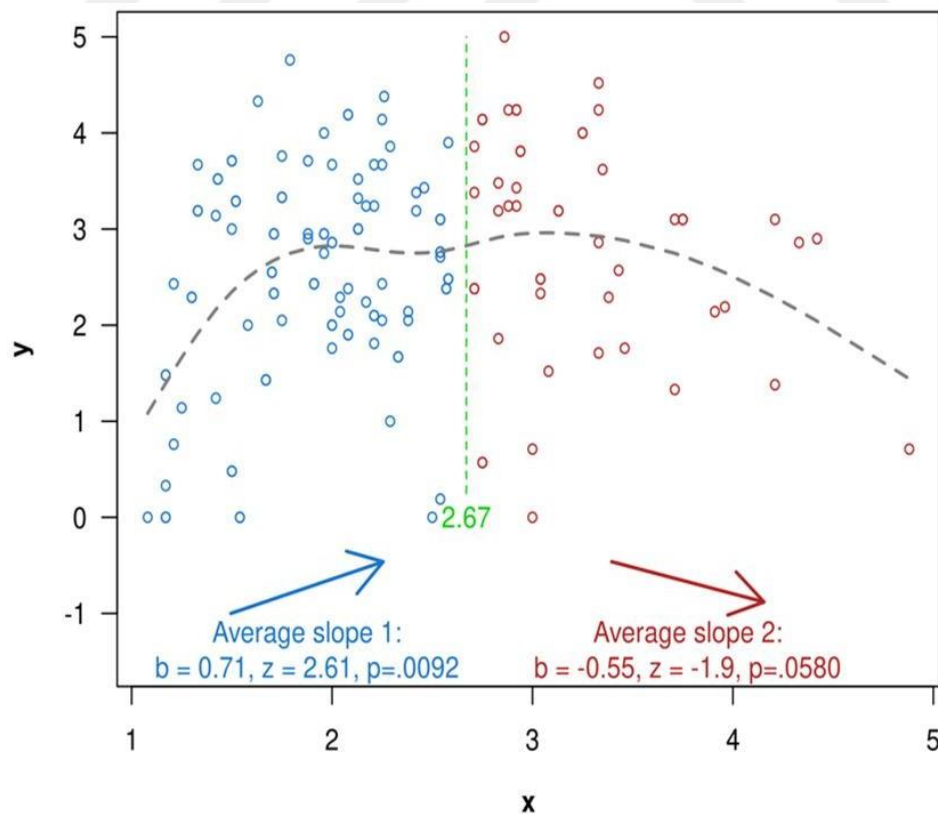

Figure 3.9. The two-line regression analysis for scores on RAGS (x) and PTGI (y) of high resilience group.

Figure 3.8 presents the result for the low resilience group. The two lines divided by the breakpoint (RAGS = 2.38) were both statistically nonsignificant (p = .4557 for Line 1; p = .3868 for Line 2). Nevertheless, the direction of the lines supports the inverted U-shape. Namely, the first line was in a positive direction while the second line was in a negative direction as expected.

Figure 3.9 shows the result for the high resilience group. The breakpoint (RAGS = 2.67) was higher than those of the other groups. Again, the first regression lines before the breakpoint was positive and the second line thereafter was negative. While the first line was statistically highly significant (p = .0092), the second line could be judged as being marginally significant (p = .058). Thus, the most prominent inverted U-shaped relationship was found for the high resilience group.

Overall, for all three groups, the slope of first line was always positive (upward) and the slope of second line negative (downward). This increase-then-decrease shape is indeed indicative of the inverted U-shaped relationship. Inverse and logarithmic models suggested in Section 3.4.2 can now be confidently rejected, because the second line was never found to be in the positive direction.

With respect to statistical significance of two lines, the first line was highly significant for both the high resilience group (p = .009) and the all participants group (p = .004). Especially for high resilience group, the second line, which showed negative regression between grief and posttraumatic growth, was almost significant (p = .058) as well. The results of two-line analyses thus supported the hypothesis that there was an inverted U-shaped relationship between grief and posttraumatic growth, specifically for the high resilience group. For the all participants group, the inverted U hypothesis was only partially supported, namely only the first half of inverted U-shaped curve was confirmed. For the low resilience

group, no significant relationship between grief and posttraumatic growth was found. The difference between low and high resilience groups also confirmed the positive effect of high resilience on posttraumatic growth.

4. DISCUSSION

The present study may be one of the first studies on the relationship between posttraumatic growth and grief that includes resilience. Although there have been separate groups of research that examined the relationship between grief and posttraumatic growth (e.g., Currier, Holland & Neimeyer, 2012; Tian & Solomon, 2020; Yılmaz & Zara, 2016) and the relationship between resilience and posttraumatic growth (e.g., Bensimon, 2012; Nishi, Matsuoka, & Kim, 2010; Ogińska-Bulik, 2015) respectively, research looking into these three variables at the same time was nonexistent to my knowledge.

Using correlation and regression analyses, the study successfully demonstrated the complex relationship between resilience, grief and posttraumatic growth. One of the difficulties encountered in the analysis stage was that, because not all the relationships between the variables were linear, a conventional multiple regression analysis could not be used. However, with the help of regression curve estimation and causal-comparative design that compared the high and low resilience groups, the study graphically demonstrated the curvilinear relationships between grief and posttraumatic growth as well as the role of resilience as a moderator of this relationship.

The schematic summary of the findings regarding the relationship between resilience, grief and posttraumatic growth is provided in Figures 4.1. Following sections will discuss the results in light of hypothesis and related literature. Clinical implications and suggestions for future research will be given after that. The chapter ends with a conclusion section.
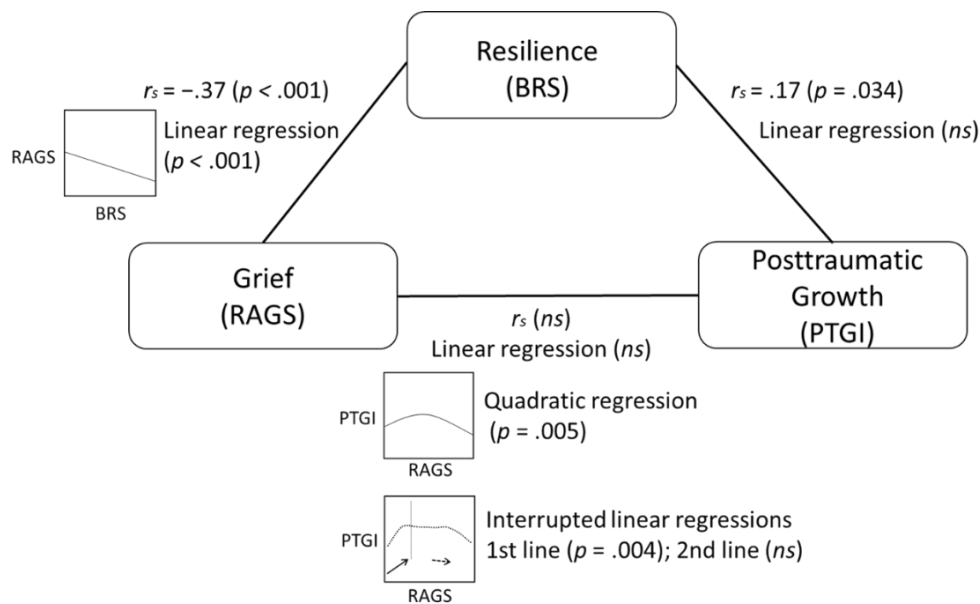
Figure 4.1. The relationship between grief, resilience and posttraumatic growth.

4.1. Hypothesis One: The Positive Relationship between Resilience and Posttraumatic Growth

The relationship between resilience and posttraumatic remains an unsolved question in the literature as contradictory research findings have been reported (Tedeschi, Calhoun, & Cann, 2007). Some (e.g. Bensimon, 2012; Nishi, Matsuoka, & Kim, 2010; Ogińska-Bulik, 2015, Roberts, 2013) found positive relationship between the two, whereas others (e.g., Levine et al., 2009) found an inverse relationship. Li et al. (2015), on the other hand, found an inverted-U curvilinear relationship between the two. Calhoun and Tedeschi (1998) also suggested a possibility of nonlinear relationship between posttraumatic growth and resilience. Lepore and Revenson (2006) even suspect that posttraumatic growth is a form of resilience. If so, this discussion on the relationship between the two would be irrelevant. Further investigation was needed to clarify the association between resilience and posttraumatic growth.

The hypothesis one of the present study expected a positive correlation between resilience and posttraumatic growth, based on the assumption that resilience as a capacity to bounce back was needed for posttraumatic growth to occur. As shown in Figure 4.1, a weak, positive relationship between resilience and posttraumatic growth was found as a result of Spearman's Rho correlation analysis in this study. This result added a further support to the previous research that showed the positive association between the two. First of all, the finding of weak correlation supports the notion that resilience and posttraumatic growth are two separate constructs, as opposed to Lepore and Revenson's (2006) claim that posttraumatic growth is a form of resilience. With respect to the nature of relationship between resilience and posttraumatic growth, neither linear regression nor quadratic regression was found statistically significant. Thus, the relationship between was nonlinear, but the inverted U-shaped relationship documented in the study by Li et al. (2015) was not replicated in the present study.

In addition, the correlation analysis revealed a much stronger negative association between resilience and grief, in that grief decreases as resilience increases. In terms of the strength of correlation, higher resilience was associated more with reduced grief than increased growth.

4.2. Hypothesis Two: The Curvilinear Relationship between Grief and Posttraumatic Growth

The second hypothesis about a curvilinear relationship (Inverted-U shaped) between grief and posttraumatic growth was formulated based on the previous research findings. Yılmaz and Zara (2016) found a curvilinear relationship between grief levels and posttraumatic growth in the study of bereaved individuals. Tian and Solomon (2020) found a

curvilinear relationship in bereaved mothers, between grief intensity and posttraumatic growth after of a loss of a miscarriage. Currier, Holland and Neimeyer (2012) also found a curvilinear relationship between posttraumatic growth and grief intensity after experiencing a loss.

The quadratic regression analysis of the present study also found that posttraumatic growth levels changed in the shape of inverted U responding to the grief levels (See a summary in Figure 4.1). Lower and higher levels of grief were associated with lower levels posttraumatic growth, while the moderate range of grief was related to higher levels of posttraumatic growth. The inverted U-shaped quadratic regression was statistically significant. A further analysis using a two-line interrupted linear regression test confirmed the first slope (positive regression line up to the peak), whereas the second slope (negative regression line after the peak) was statistically non-significant. Thus, the second hypothesis was partially retained in the study. Further research is needed to confirm the second slope.

4.3. Hypothesis Three: Resilience as a Moderator of the Curvilinear Relationship between Grief and Posttraumatic Growth

The third hypothesis was concerned about the moderator role of resilience that enhances the curvilinear relationship between grief and posttraumatic growth. Figure 4.2 summarizes the findings regarding this hypothesis. The differences between the low and high resilience groups support the hypothesis.
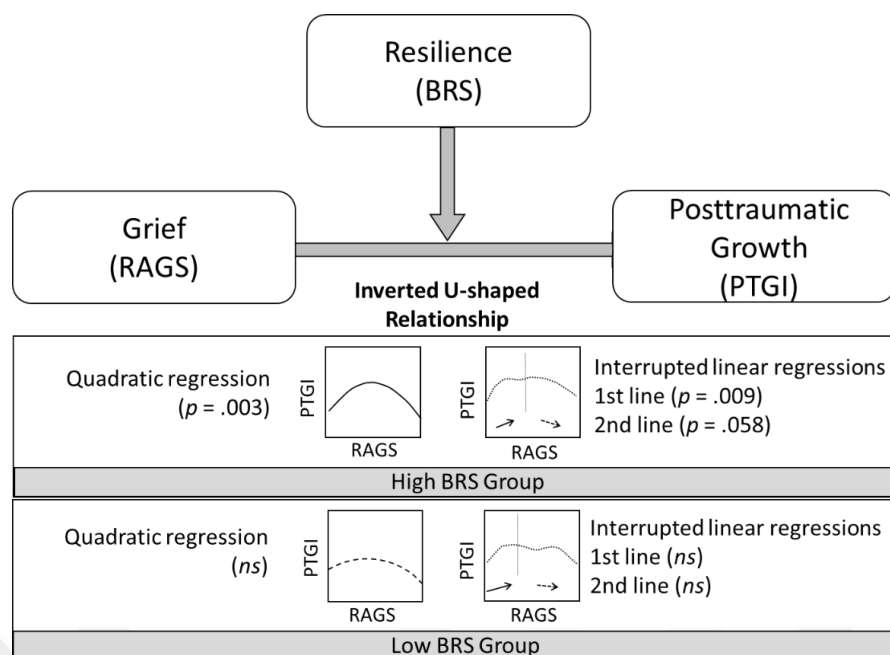
Figure 4.2. Resilience as a moderator (enhancer) of the relationship between grief and posttraumatic growth.

First of all, the regression curve of the high resilience group was relatively higher than the one for the low resilience group, as expected by the positive correlation between resilience and posttraumatic growth. The result of quadratic regression analysis indicated no statistically significant relationship between grief and posttraumatic growth in the low resilience group. In the high resilience group, on the other hand, a statistically significant inverted U-shaped curvilinear relationship was found between grief and posttraumatic growth. The two-line interrupted linear regression test also confirmed the positive regression line (line one) and the negative regression line (line two) of posttraumatic growth against the grief axis, although the significance level of the second line was marginal. Overall, the curvilinear relationship between grief and posttraumatic growth that was found in the high resilience group was more significant than that was found in the all-participant group. This is a very important finding, as the role of resilience has not been looked into by the previous research (e.g., Currier, Holland and Neimeyer, 2012; Tian and Solomon, 2020; Yılmaz & Zara, 2016) that identified

the curvilinear model of grief and posttraumatic growth. According to the findings of the present study, it is those whose resilience level is high that fit into this curvilinear model. Those whose resilience level is low are unlikely to show posttraumatic growth in this way.

As suggested by the negative correlation between resilience and grief, individuals with high resilience scores tended to have lower grief scores than those with low resilience scores did. For this reason, a smaller number of individuals in the high resilience group were observed on the higher end of the grief scale, compared to the number in the low resilience group. The marginally significant result of the second line of interrupted linear regression test may be due to the lack of observations on the higher end of the grief scale for the high resilience group. One way of increasing the number of observations in the higher end of grief scale may be simply increasing the number of participants as a whole, because finding highly resilient individuals who show higher levels of grief in particular is expected to be difficult, considering the inverse nature of the relationship between resilience and grief. Another way to improve the distribution may be to use a sample of individuals who experienced a particularly traumatic loss.

4.4. Clinical Implications of the Study

The present study was done with individuals who had experienced bereavement. Bereaved individuals who have difficulties in dealing with the loss may want a professional help from clinicians via clinical intervention. The study may have implications for clinicians working with bereaved individuals.

First of all, the study illustrates that, through difficulties of bereavement, something good like posttraumatic growth can also happen. Clinicians working with bereaved individuals may look into the areas in which posttraumatic growth can occur in individuals

who have come for a help during the period following the loss. Clinicians may follow each individual's experiences carefully in therapy and look for signs of positive changes after their losses. However, it should be kept in mind that posttraumatic growth cannot be forced by clinicians; it can only be facilitated by individuals in grief for themselves. It should also be noted that not all clients will develop posttraumatic growth. The way each individual experience bereavement is unique. Individuals may vary in the way they exhibit grief reactions after losing a close one. Clinicians need to be congruent with the needs of each client.

The present study indicated that level of resilience in each individual plays an important role. In the study, although a positive correlation was found between resilience and posttraumatic growth, it is not a linear relationship. A linear negative correlation was found between resilience and grief. Furthermore, it was found that the relationship between grief and posttraumatic growth was curvilinear, and that the curvilinear relationship was more evident for the highly resilient individuals than for those with low levels of resilience. All these findings suggest the moderator role of resilience in the relationship between grief and posttraumatic growth, which has some important clinical implications.

From the finding that the resilience enhances and strengthen the curvilinear relationship between grief and posttraumatic growth, it can be suggested that highly resilient individuals do not need much help because they are generally coping well by themselves. They are more likely to turn grief into positive changes. On the other hand, those with low resilience may need much support. This idea was also supported by Bonanno, Papa, & O'Neill (2002). Therefore, testing the level of resilience before therapy might be a good idea.

The findings of negative correlation between resilience and grief in this study also support the idea that individuals with low resilience need extra help. Clinicians should support bereaved individuals who have low resilience, because having low levels of resilience is

associated with high levels of grief. In clinical settings, supporting the development of resilience could be an important aim of the therapy.

The curvilinear relationship found between grief and posttraumatic growth indicated that individuals who have experienced moderate amounts of grief are most likely to show higher levels of posttraumatic growth. Therefore, monitoring of the bereaved client's level of grief is crucial for the outcome of the bereavement. In this respect, Tian and Solomon (2020) also suggest that clinicians need to pay attention to grief intensity of bereaved individuals. They state that clinicians try to make interventions for individuals to come into a moderate level of grief.

The role of clinical psychologists is to help foster positive changes and growth as well as dealing with negative outcomes of bereavement. When working with bereaved clients, the level of resilience and the intensity of grief should be carefully evaluated. Clinicians can develop tools to assess the degree of resilience of their clients and use them to improve their therapy sessions. Since, individuals who have low resilience will need more therapeutic work, clinicians can devise a tailor-made therapy session for each client's needs. If clinicians identify low resilience levels in their clients, they can work on improving resilience to achieve more posttraumatic growth and for clients to feel less grief. Another important factor to look at is grief. As the result of the present study suggests, if clients are experiencing highly intense grief, they will have less chance to achieve posttraumatic growth. Clinicians can work with such clients to decrease their grief and thus achieve more posttraumatic growth.

4.5. Suggestions for Future Studies

The present study has some limitations. One of the limitations was that the participants consisted of university students who had experienced the loss of family members, relatives,

friends and others. Although the age of the sample was thought to be appropriate for the study of posttraumatic growth (See Section 2.1), the student sample may not represent the overall population (Vrana & Lauerterbach, 1994). As they were young, the most frequently experienced loss was that of grandparents. Depending on whom they had lost, some of the losses may be relatively less traumatic than others. Future research can focus on a sample who experienced a specific type of loss, for example, parental loss.

Selecting a sample from those who experienced a traumatic type of loss may also solve the problem of the lack of observations on the higher end of the grief scale for the high resilience group, discussed in Section 4.3. To improve the distribution of observations and to be more confident with the curvilinear model, the type of loss should be carefully selected as well as the increase in sample size. As the time passed since loss is known to be negatively associated with grief, sampling from those who experienced loss relatively recently would also increase the number of participants with intense grief.

Another issue regarding the sample is that it was based on a convenience sampling, which might also limit the generalizability of the results. Although finding research participants just after the bereavement is difficult, if possible, future research should try to use a more systematic sampling of bereaved individuals from the larger population to tackle the generalization issues.

As a result of convenient sampling, the sample was composed more of women than man. Given the reported gender differences in posttraumatic growth (Kesimci, Göral, & Gençöz, 2005; Linley & Joseph, 2004; Ogińska-Bulik, 2014; Park, Cohen, & Murch, 1996; Ramos & Leal, 2013), further research should either balance the number of participants between gender groups or statistically control the effect of gender. In the present study, the effect of gender on posttraumatic growth was assessed with low and high resilience groups. As expected, posttraumatic growth scores of female participants were significantly higher

than those of male participants. However, the interaction between gender and resilience was found nonsignificant.

The study has used self-report measures. As in all cases of self-report measurement, reported scores may not represent actual levels, given the possibility of inaccurate responses to questions (Ransom et al., 2008). In fact, finding a reliable and valid Turkish scale that can measure the intensity of grief following bereavement was a challenge, although there were a number of bereavement-related scales available in Turkish. Grief Cognitions Questionnaire (Cesur & Durak-Batıgün, 2018; See Boelen & Lensvelt-Mulders, 2005 for an original English version), which was concerned about problematic cognitions after the loss, was not used in the study, because the purpose of the study was not about assessing grief-related cognitions. The Unfinished Business in Bereavement Scale-Brief Form (Cesur-Soysal, 2020; See Holland, Klingspon, Lichtenthal, Neimeyer, 2018 for an original English version) specifically focuses on the unresolved issues with the deceased, which can predict the risk of prolonged grief reactions. This scale was not adopted because it does not measure grief reactions directly. The Mourning Scale (Balcı-Çelik, 2006) was not used because it was about the physiological, cognitive, behavioral and emotional responses in the process of mourning and not specifically focusing on relational grief. A Turkish version of Prolonged Grief Disorder Scale (Danışman, Yalçınay, & Yıldız, 2017; See Prigerson, et al., 2009 for an original English version) has been tested only recently on cancer patients in Turkey to assess their grief reactions to illness and losses. Since there are not enough evidence for the use for other populations, the scale was not selected. Hogan Grief Reaction Checklist (Yıldırım & Fışıloğlu, 2005; See Hogan, Greenfield & Schmidt, 2001 for an original English version) measures different dimensions of grief that are despair, panic behavior, blame and anger, detachment, personal growth and disorganization. Since the personal growth subscale of Hogan Grief Reaction Checklist overlaps with posttraumatic growth measurement in the

present study, it was considered unsuitable for the present study. Core Bereavement Items (Selvi, Öztürk, Ağargün, Beşiroğlu, & Çilli, 2011; See Burnett, Middleton, Raphael, & Martinek, 1997 for an original English version) were developed to assess bereavement experiences of bereaved spouses, adult children and parents. This scale was not used because it offers a broad assessment of the bereavement phenomenon rather than a measurement of grief intensity. The original Texas Revised Inventory of Grief (Faschingbauer, Zisook, DeVaul, 1987) is one of the most widely used scale of grief intensity. However, Yıldız & Cimete's (2011) Turkish version has only been tested with parents who lost their babies and not with other bereaved groups. Again, due to the lack of evidence for reliability and validity, this measure was not used. In general, more scale-development and reliability-testing research is needed for Turkish bereavement and grief scales.

The present study used Relational Active Grieving Scale (RAGS), which was adopted from the relational active grieving subscale of Two-Track Model of Bereavement Questionnaire in Turkish (TTBQ-T) (Ayaz et al., 2014). The relational grieving subscale of TTBQ-T was also used by Yılmaz & Zara (2016). RAGS was suitable for the purpose of using it for a sample of bereaved university students. It was an appropriate tool to measure grief intensity following the bereavement. However, the original Relational Active Grieving subscale by Ayaz et al. (2014) consisted of 25 items whereas RAGS in this study was a 24-item scale as a result of omitting one item ("A1: My health is…") that had the lowest factor loading. Consequently, the internal validity of RAGS was higher than that of the original subscale. In order for RAGS to be used as a standalone grief scale for the bereavement sample, further research with different samples of bereaved individuals and reliability testing of the scale are needed.

The study was based on quantitative data. To complement the results of quantitative research, future research can use a combination of quantitative and qualitative measures of

post-bereavement experience. Qualitative methods such as in-depth interviews can shed light on personal experience of the bereavement and subjective meanings attributed to it by the person. The relationship between resilience, grief and posttraumatic growth can also be explored in this way to truly understand the phenomenon.

Another limitation of the study was that it was a one-off study. The study did not take into consideration the time passed from the onset of bereavement, either. No cross-sectional analysis was conducted according to the time passed following the bereavement. Because of this, the study cannot make inferences about how resilience, grief, and posttraumatic growth scores change over time or whether the relationship between them changes across time or not. A longitudinal study following the bereaved individuals at certain intervals after the loss would be ideal. If this is not possible, at least a cross-sectional design can be used to investigate the change with time.

Given the nature of the topic involving the bereavement, experimental design is unfeasible. The study used correlation and regression analyses to examine the relationship between resilience, grief and posttraumatic growth. Because of the nature of these analyses, it is not appropriate to make any causal inferences regarding the association among these variables except for the prediction of one variable from another. However, the causal-comparative design of the study, comparing the high and low resilience groups enabled researchers to examine the enhancing effect of resilience on the relationship between grief and posttraumatic growth. Future research should be creative to come up with different research designs and methodologies for the purpose of further understanding the experiences of bereaved individuals.

4.6. Conclusion

The purpose of the study was to investigate the relationship between grief, resilience and posttraumatic growth in bereaved university students. The statistically significant associations found in the study clarified the nature of relationship between these variables.

A very weak positive correlation was found between resilience and posttraumatic growth and the relationship was nonlinear. Resilience and grief, on the other hand, were in a linear, negative correlational relationship. An inverted U-shaped curvilinear relationship was found between grief and posttraumatic growth, although the negative regression curve after the peak was less conclusive. Resilience can be considered as a moderator that enhances and strengthens the curvilinear relationship between grief and posttraumatic growth.

Thus, the positive changes after the bereavement can be predicted by the intensity of grief. The inverted-U relationship between grief and posttraumatic growth suggests that, when in a moderate level of grief, not too low nor too high, bereaved individuals tend to experience the posttraumatic growth the most. Resilience of the individuals matters. High resilience is associated with reduced grief and also enhance the curvilinear relationship between grief and posttraumatic growth.

Because of the contradictory findings reported in literature, future research should further look into the relationship between resilience and posttraumatic growth. The role of resilience as a moderator of the relationship between and grief and posttraumatic growth should also be investigated further. This study is useful for clinicians who work with bereaved clients. It can show clinicians the importance of resilience promotion and grief management for the facilitation of posttraumatic growth.

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Appendix A: Demographic Information of the Participants

Variables		n	%	M	SD	Min	Max
Gender							
	Female	114	73.5				
	Male	40	25.8				
	Other	1	0.6				
Age				22.72	3.66	18	45
Birth Place							
	İstanbul	72	46.5				
	İzmir	12	7.7				
	Ankara	5	3.2				
	Çanakkale	5	3.2				
	Muğla	2	1.3				
	Edirne	2	1.3				
	Bursa	2	1.3				
	Tekirdağ	3	1.9				
	Ordu	5	3.2				
	Kocaeli	3	1.9				
	Eskişehir	2	1.3				
	Bingöl	1	0.6				
	Kahramanmaraş	1	0.6				
	Sakarya	5	3.2				
	Rize	3	1.9				
	Kırıkkale	2	1.3				
	Balıkesir	1	0.6				
	Adana	2	1.3				
	Elâzığ	1	0.6				
	Samsun	1	0.6				
	Uşak	1	0.6				
	Tokat	1	0.6				
	Hatay	2	1.3				
	Antalya	2	1.3				
	Bartın	1	0.6				
	Bakü	1	0.6				
	Şanlıurfa	1	0.6				
	Gaziantep	1	0.6				
	Reutlingen	1	0.6				
	Diyarbakır	1	0.6				
	Nürnberg	1	0.6				
	Ardahan	1	0.6				
	Aydın	1	0.6				
	Uşak	1	0.6				
	Kosova	1	0.6				
	Ağrı	1	0.6				
	Muş	1	0.6				
	Van	1	0.6				
	Zonguldak	2	1.3				
	Afyonkarahisar	1	0.6				
	Bitlis	1	0.6				

Variables		n	%	M	SD	Min	Max
	Karabük	1	0.6				
Marital Status							
	Single	152	98.1				
	Married	3	1.9				
Current Place of Living							
	Metropolitan	100	64.5				
	Province	26	16.8				
	District	23	14.8				
	Town	1	0.6				
	Village	5	3.2				
University							
	Beykent	2	1.3				
	Bahçeşehir	5	3.2				
	Yeditepe	75	48.4				
	İstanbul	13	8.4				
	Bilgi	3	1.9				
	Anadolu	4	2.6				
	Nişantaşı	1	0.6				
	Aydın	1	0.6				
	Ayvansaray	1	0.6				
	Sakarya University of Applied Scienece	27	17.4				
	İstanbul Technical University	1	0.6				
	Çukurova	1	0.6				
	Medipol	3	1.9				
	Kocaeli	1	0.6				
	Sakarya	1	0.6				
	Yıldız Technical University	2	1.3				
	Politecnico di Milano	2	1.3				
	Selçuk	1	0.6				
	Özyeğin	2	1.3				
	Boğaziçi	1	0.6				
	Çanakkale Onsekiz Mart	2	1.3				
	Marmara	1	0.6				
	Kent	1	0.6				
	Sabancı	1	0.6				
	Dokuz Eylül	1	0.6				
	Cyprus International	1	0.6				
	Eskişehir Technical University	1	0.6				
Department							
	Law	1	0.6				
	Civil Engineering	4	2.6				
	Psychological counseling and guidance	8	5.2				
	Clinical Psychology	7	4.5				
	Private Law	1	0.6				
	Urban Design and Landscape Architecture	1	0.6				
	Management	5	3.2				

Variables		n	%	M	SD	Min	Max
	Graphic Design	3	1.9				
	Digital Game Design	1	0.6				
	Psychology	13	8.4				
	Journalism	2	1.3				
	Radio and television	3	1.9				
	Gastronomy and Culinary Arts	12	7.7				
	Elementary Mathematics Education	4	2.6				
	Nursing	1	0.6				
	English language and literature	1	0.6				
	English language teacher education	3	1.9				
	Electrical electronics engineering	1	0.6				
	Nutrition and dietetics	7	4.5				
	Architecture	3	1.9				
	İnterior Architecture	1	0.6				
	Fashion and textile design	1	0.6				
	Physical therapy and rehabilitation	3	1.9				
	Translation studies	4	2.6				
	Turkish language and literature	2	1.3				
	Mining Engineering	2	1.3				
	Chemical Engineering	3	1.9				
	Geological Engineering	1	0.6				
	Theater	1	0.6				
	Metallurgy and materials engineering	2	1.3				
	Mechanical Engineering	1	0.6				
	Maritime Transportation and Management Engineering	1	0.6				
	Sociology	3	1.9				
	Mathematics	2	1.3				
	International Logistics and Transportation	2	1.3				
	Information Systems	1	0.6				
	Political Science	2	1.3				
	Tourism Management	7	4.5				
	Tourism Guidance	13	8.4				
	Visual Communication	1	0.6				
	Electronic Communication Engineering	1	0.6				
	Polymer Science and Technology	1	0.6				
	Medicine	1	0.6				
	Industrial Design and Engineering	1	0.6				
	Construction Technology	1	0.6				
	Biochemistry	1	0.6				
	Design	1	0.6				
	International Relations	1	0.6				
	Economy	1	0.6				
	Media and communication	1	0.6				
	Primary School Teaching	1	0.6				
	Nanoscience and Nanotechnology	1	0.6				

Variables		n	%	M	SD	Min	Max
	International trade and business	1	0.6				
	Chemistry	1	0.6				
	Genetics and Bioengineering	1	0.6				
	Physics	1	0.6				
Class Level							
	Preparatory Class	1	0.6				
	1st Year	43	27.7				
	2nd Year	45	29.0				
	3rd Year	24	15.5				
	4th Year	42	27.1				
Traumatic Event Experienced							
	Natural Disasters	40	25.8				
	Accidents	45	29.0				
	Physical Violence	24	15.5				
	Being witnessed to Death	121	78.1				
	Divorce	1	0.6				
	Family Problem	1	0.6				
	Psychological Violence	2	1.3				
	Sexual Abuse	14	9.0				

Appendix B: Informed Consent Form

Bilgilendirilmiş Onam Formu

Sizi, Yeditepe Üniversitesi Klinik Psikoloji Yüksek Lisans öğrencisi Feyza Melis Kösoğlu tarafından Dr. Öğr. Üyesi Mari İto Alptürer danışmanlığında yürütülen tez çalışmasına davet ediyoruz. Bu araştırma, üniversite öğrencilerinde kayıp yaşamış kişilerde ortaya çıkabilecek durumları incelemeye yöneliktir. Araştırma kapsamında sizden bazı soruları cevaplamanız istenmektedir. Tahminen bu işlem yaklaşık 15 dakikanızı alacaktır. <u>Araştırmaya katılabilmek için 18 yaş üzerinde bir üniversite öğrencisi olmak ve son 3 ay ile 2 yıl arasında herhangi birinin kaybını yaşamak gerekmektedir.</u>

Araştırma sırasında sizden alınacak kişisel bilgileriniz gizli tutulacak, bilgileriniz yalnızca araştırma amaçlı kullanılacaktır. Araştırmanın hiçbir yerine isminizi yazmayınız, isminiz anketin hiçbir yerinde sorulmayacaktır. Bu araştırmaya katılım gönüllülük esasına dayanmaktadır, araştırmada yer almayı reddedebilir, araştırma boyunca herhangi bir nedenden dolayı rahatsız olursanız, istediğiniz soruya cevap vermeyebilir veya herhangi bir aşamada istediğiniz zaman araştırmadan çekilebilirsiniz. Araştırmayı bitirmeye veya bitirmemeye karar verirseniz, anketi araştırmacıya teslim ediniz.

Bu araştırmada kayıp ile ilgili sorular olacağı için rahatsız olursanız, ihtiyaç halinde Yeditepe Üniversitesi Psikolojik Danışma Birimi ile 0216 578 00 80 ile pazartesi günleri saat 09:00- 12:00 arası iletişime geçip randevu alabilirsiniz. Araştırma hakkında daha fazla bilgi almak için araştırmacı ile e posta üzerinden iletişime geçebilirsiniz. Bu formu imzalamanız kendi isteğinizle hiçbir baskı veya zorlama olmadan araştırmaya katılmayı kabul ettiğiniz anlamına gelecektir.

Tarih:

İmza:

Appendix C: Sociodemographic Form

I.

1. Cinsiyetiniz: ( ) Kadın   ( ) Erkek   ( ) Belirtmek İstemiyorum

2. Yaşınız: _____

3. Doğum yeriniz: _____

4. Medeni durumunuz: ( ) Bekar   ( ) Evli   ( ) Eşini kaybetmiş   ( ) Boşanmış

5. En uzun süre yaşadığınız yerleşim birimi hangisidir?
( ) Büyükşehir   ( ) İl   ( ) İlçe   ( ) Kasaba   ( ) Köy

6. Üniversiteniz: _____

7. Bölümünüz: _____

8. Sınıfınız: _____

> Hayatımız devam ederken, hayatımızı sekteye uğratabilen, aniden oluşan; korku, üzüntü, endişe, suçluluk gibi duygular hissettirebilen olaylara travmatik olaylar denir; doğal afetler, kazalar, fiziksel şiddete maruz kalmak ya da tanık olmak travmatik olaylardan sayılır.

9. Belirtilen travmatik olayların tanımına göre hayatınızda daha önce travmatik olay deneyimlediniz mi? ( ) Evet ( ) Hayır

10. Eğer daha önce travmatik olay deneyimlediyseniz, aşağıdaki seçeneklerden deneyimlediğiniz travmatik olayı işaretleyiniz:

( ) Doğal afetler (örn. sel, deprem,)
( ) Kazalar (örn. trafik kazası, iş/ev kazası)
( ) Fiziksel şiddete maruz kalmak, tanık olmak
( ) Cinsel istismara maruz kalmak
( ) Birinin ölümüne yakından şahit olmak
( ) Diğer (Belirtiniz:_____)

> Birçok kişi, yaşamlarının herhangi bir döneminde tanıdıkları kişinin vefat etmesine tanık olmuştur. Kişisel olarak tanınan bir kişinin hayatını kaybetmesi tanınan kişiye dair kayıp yaşama sürecidir. Aşağıda kişisel olarak tanıdığınız ve hayatını kaybeden kişiyle ilgili sorular sorulacaktır.

11. Daha önce kişisel olarak tanıdığınız bir kişinin kaybını yaşadınız mı?

( ) Evet   ( ) Hayır

12. Bugüne kadar tanıdıklarınızdan kaybettiğiniz kişileri işaretleyiniz.
( ) Anne ( ) Baba ( ) Kardeş ( ) Eş ( ) Çocuk
( ) Dede ( ) Büyükbaba ( ) Anneanne ( ) Babaanne ( ) Teyze
( ) Dayı ( ) Amca ( ) Hala ( ) Sevgili ( ) Arkadaş
( ) Diğer (Belirtiniz:_____)

13. Yukarıda işaretlediğiniz tanıdıklarınızdan 2 yıl (En az 3 ay önce vefat etmiş olmalıdır) içerisinde kaybettiğiniz kişileri işaretleyiniz.
( ) Anne ( ) Baba ( ) Kardeş ( ) Eş ( ) Çocuk
( ) Dede ( ) Büyükbaba ( ) Anneanne ( ) Babaanne ( ) Teyze
( ) Dayı ( ) Amca ( ) Hala ( ) Sevgili ( ) Arkadaş
( ) Diğer (Belirtiniz:_____)

14. Yukarıda işaretlediğiniz son 2 yıl içerisinde kaybettiğiniz tanıdıklarınızdan, kaybı sizi en çok etkileyen kişiyi işaretleyiniz. <u>Lütfen sadece bir kişiyi işaretleyiniz.</u>
( ) Anne ( ) Baba ( ) Kardeş ( ) Eş ( ) Çocuk
( ) Dede ( ) Büyükbaba ( ) Anneanne ( ) Babaanne ( ) Teyze
( ) Dayı ( ) Amca ( ) Hala ( ) Sevgili ( ) Arkadaş
( ) Diğer (Belirtiniz:_____)

Yukarıda işaretlediğiniz, <u>son iki yıl içerisinde kaybettiğiniz ve kaybının sizi en çok etkileyen kişi</u> ile ilgili sorular yer almaktadır. Lütfen soruları bu kişiyi düşünerek

15. Bu kişi vefat edeli ne kadar zaman oldu?_____yıl_____ay

16. Bu kişi kaç yaşında vefat etti?_____

17. Bu kişinin cinsiyeti nedir? ( ) Kadın ( ) Erkek

18. Bu kişiyi hangi sebepten dolayı kaybettiniz?
( ) Kronik hastalık (örn. kanser, şeker hastalığı)
( ) Ani hastalık (örn. kalp krizi, beyin kanaması)
( ) Trafik kazası
( ) Cinayet
( ) İntihar
( ) Doğal afet (örn. sel, deprem)
( ) Diğer (Belirtiniz:_____)

19. Bu kişiyle olan ilişkinizin yakınlığını işaretleyiniz.

Hiç Yakın Değil				Çok Yakın
1	2	3	4	5

20. Tanıdığınız kişinin kaybından sonra herhangi bir profesyonelden psikolojik veya psikiyatrik destek aldınız mı?   ( ) Evet   ( ) Hayır

21. Evet ise, destek türünü belirtiniz.

( ) Psikoterapi/ Psikolojik danışma

( ) Psikiyatrik yardım/ İlaç kullanımı

( ) Psikoterapi ve ilaç yardımı bir arada

Appendix D: Relational Active Grieving Scale

II.

Aşağıdaki anket, sizin için önemli olan bir kişiyi kaybettikten sonraki yaşamınızla ilgili soruları içermektedir. Bu anketin amacı insanların, kendileri için önemli olan bir kişinin ölümüne verdikleri tepkileri öğrenmektir. Lütfen soruları yukarıda belirttiğiniz, sizi en çok etkilediğini düşündüğünüz kişiye göre okuyunuz ve size en uygun gelen cevabı işaretleyiniz.

Aksi belirtilmediği takdirde lütfen aşağıdaki soruları geçen haftanızı düşünerek değerlendiriniz.

1. Ruh halim:

1-Çok üzgün ve çökkün	2-Üzgün ve çökkün	3-Orta	4-Pek üzgün ve çökkün değil	5-Hiç üzgün ve çökkün değil

2. Kendimi:

1-Çok kaygılı hissediyorum	2-Kaygılı hissediyorum	3-Orta	4-Pek kaygılı hissetmiyorum	5-Hiç kaygılı hissetmiyorum

3. Hayatımın anlamında değişikliklerin yönü:

1-Sadece kötü	2-Çoğunlukla kötü	3-Biraz kötü, biraz iyi	4-Çoğunlukla iyi	5-Sadece iyi

4. Düşünceler ve duygular beynime hücum ediyor ve aklımı karıştırıyorlar:

1-Günde pek çok kez	2-Neredeyse her gün	3-Neredeyse her hafta	4-Neredeyse her ay	5-Hiçbir zaman

5. Çeşitli etkinliklere katılıyorum ve günlük işlerimi yerine getiriyorum:

1-Hiç	2-Biraz	3-Orta	4-Oldukça çok	5-Çok fazla

6. İşimi _____ yapabiliyorum.

1-Çok iyi	2-İyi	3-Orta	4-Pek iyi değil	5-Hiç iyi değil	6-Bu cevaplar bana uymuyor. Lütfen nedenini belirtiniz:

7. Bu hafta kendi hakkımdaki düşüncelerim

1-Sadece olumsuz	2-Çoğunlukla olumsuz	3-Ne olumlu, ne olumsuz	4-Çoğunlukla olumlu	5-Sadece olumlu

8.Sosyalleşmeyi / sosyal aktivitelere katılmayı zor buluyorum:

1-Hiç doğru değil	2-Çoğunlukla doğru değil	3-Kısmen doğru	4-Çoğunlukla doğru	5-Doğru

9.Kayıptan sonra, bugünkü durumum en doğru şöyle ifade edilebilir

1-Yardıma çok ihtiyacım var	2-Yardıma ihtiyacım var	3-Biraz yardıma ihtiyacım var	4-Yardıma pek ihtiyacım yok	5-Yardıma hiç ihtiyacım yok

Lütfen sonraki bölüm için aşağıdaki yönergeyi okuyunuz ve devam ediniz. Aşağıdaki sorularda bir çizgi (_____) gördüğünüz zaman, lütfen bu soruları çizginin olduğu yerde kaybettiğiniz yakınınızın adı yazılmış gibi cevaplayınız. Aksi belirtilmediği takdirde bütün soruları geçen haftanızı düşünerek yanıtlayınız.

10. Bazen, sanki_____'nun öldüğüne inanmıyormuşum gibi davranıyorum ya da duygusal tepkiler veriyorum. Bu bana:

1-Doğru	2-Çoğunlukla doğru	3-Kısmen doğru	4-Çoğunlukla doğru değil	5-Doğru değil

11. Bana_____'nu hatırlatan şeyleri fark ediyorum. Mesela; ona benzeyen insanlar, sesler ya da sanki o yakınımdaymış hissi. Bu bana:

1-Günde pek çok oluyor	2-Neredeyse her gün oluyor	3-Neredeyse her hafta oluyor	4-Neredeyse her ay oluyor	5-Hiçbir zaman oluyor

12. Her zaman_____'nu düşünüyorum:

1-Günde bir kaç kez	2-Neredeyse her gün	3-Neredeyse her hafta	4-Neredeyse her ay	5-Neredeyse hiçbir zaman

13._____'nu hatırlıyorum:

1-Doğru	2-Çoğunlukla doğru	3-Kısmen doğru	4-Çoğunlukla doğru değil	5-Doğru değil

14. _____'nsuz hayata katlanmak çok zor:

1-Günde pek çok kez	2-Neredeyse her gün	3-Neredeyse her hafta	4-Neredeyse her ay	5-Hiçbir zaman

15.Şiddetli bir şekilde_____'nun yanımda olmasını istiyorum ve çok fazla özlüyorum:

1-Doğru	2-Çoğunlukla doğru	3-Kısmen doğru	4-Çoğunlukla doğru değil	5-Doğru değil

16. _____'nu her hatırladığımda acı çekiyorum:

1-Günde pek çok kez	2-Neredeyse her gün	3-Neredeyse her hafta	4-Neredeyse her ay	5-Hiçbir zaman

17.Yakınını kaybeden insanların neden hayatlarına son vermeyi düşündüklerini şimdi anlıyorum:

1-Doğru	2-Çoğunlukla doğru	3-Kısmen doğru	4-Çoğunlukla doğru değil	5-Doğru değil

18. Bugün onun ölümünden sonraki durumumu şöyle tarif etmek mümkün:

1-Çok acı çekiyorum	2-Acı çekiyorum	3-Biraz acı çekiyorum	4-Pek acı çekmiyorum	5-Hiç acı çekmiyorum

Lütfen devam ediniz. Aşağıdaki sorular sizin bugünkü duygu ve düşüncelerinizle ilgilidir.

19. Bu kaybı yaşamaktan dolayı öfkeliyim:

1-Günde pek çok kez	2-Neredeyse her gün	3-Neredeyse her hafta	4-Neredeyse her ay	5-Hiçbir zaman

20. Ölüm anına ilişkin görüntüler ve resimler düşüncelerime giriyor:

1-Günde pek çok kez	2-Neredeyse her gün	3-Neredeyse her hafta	4-Neredeyse her ay	5-Hiçbir zaman

21. Kafamın içinde_____'nunla ilgili resimler ve görüntüler görüyorum:

1-Günde pek çok kez	2-Neredeyse her gün	3-Neredeyse her hafta	4-Neredeyse her ay	5-Hiçbir zaman

22. Kendimi_____'nunla ilgili düşüncelerden kaçınmaya çalışırken buluyorum:

1-Günde pek çok kez	2-Neredeyse her gün	3-Neredeyse her hafta	4-Neredeyse her ay	5-Hiçbir zaman

23. Gerginim ve rahat değilim:

1-Günde pek çok kez	2-Neredeyse her gün	3-Neredeyse her hafta	4-Neredeyse her ay	5-Hiçbir zaman

24_____'nun ölümüyle ilgili düşünceler ve duygular zihnimi dolduruyor:

1-Doğru	2-Çoğunlukla doğru	3-Kısmen doğru	4-Çoğunlukla doğru değil	5-Doğru değil

Appendix E: Posttraumatic Growth Inventory

III.

Aşağıda kaybettiğiniz kişiden sonra yaşamınızda olabilecek bazı değişikler verilmektedir. Her cümleyi dikkatle okuyunuz ve belirtilen değişikliğin sizin için ne derece gerçekleştiğini aşağıdaki ölçeği kullanarak belirtiniz.

0= Kayıptan dolayı böyle bir değişiklik yaşamadım
1= Kayıptan dolayı bu değişikliği çok az derecede yaşadım
2= Kayıptan dolayı bu değişikliği az derecede yaşadım
3= Kayıptan dolayı bu değişikliği orta derecede yaşadım
4= Kayıptan dolayı bu değişikliği oldukça fazla derecede yaşadım,
5= Kayıptan dolayı bu değişikliği aşırı derecede yaşadım

	Hiç yaşamadım	Çok az derecede yaşadım	Az derecede yaşadım	Orta derecede yaşadım	Oldukça fazla derecede yaşadım	Aşırı derecede yaşadım
1. Hayatıma verdiğim değer arttı.	0	1	2	3	4	5
2. Hayatımın kıymetini anladım.	0	1	2	3	4	5
3. Yeni ilgi alanları geliştirdim.	0	1	2	3	4	5
4. Kendime güvenim arttı.	0	1	2	3	4	5
5. Manevi konuları daha iyi anladım.	0	1	2	3	4	5
6. Zor zamanlarda başkalarına güvenebileceğimi anladım.	0	1	2	3	4	5
7. Hayatıma yeni bir yön verdim.	0	1	2	3	4	5
8. Kendimi diğer insanlara daha yakın hissetmeye başladım.	0	1	2	3	4	5
9. Duygularımı ifade etme isteğim arttı.	0	1	2	3	4	5
10. Zorluklarla başa çıkabileceğimi anladım.	0	1	2	3	4	5
11. Hayatımı daha iyi şeyler yaparak geçirebileceğimi anladım.	0	1	2	3	4	5
12. Olayları olduğu gibi kabullenmeyi öğrendim.	0	1	2	3	4	5

	Hiç yaşamadım	Çok az derecede yaşadım	Az derecede yaşadım	Orta derecede yaşadım	Oldukça fazla derecede yaşadım	Aşırı derecede yaşadım
13. Yaşadığım her günün değerini anladım.	0	1	2	3	4	5
14. Yaşadığım olaydan (kayıptan) sonra benim için yeni fırsatlar doğdu	0	1	2	3	4	5
15. Başkalarına karşı şefkat hislerim arttı.	0	1	2	3	4	5
16. İnsanlarla ilişkilerimde daha fazla gayret göstermeye başladım.	0	1	2	3	4	5
17. Değişmesi gereken şeyleri değiştirmek için daha fazla gayret göstermeye başladım.	0	1	2	3	4	5
18. Dini inancım daha da güçlendi.	0	1	2	3	4	5
19. Düşündüğümden daha güçlü olduğumu anladım.	0	1	2	3	4	5
20. İnsanların ne kadar iyi olduğu konusunda çok şey öğrendim.	0	1	2	3	4	5
21. Başkalarına ihtiyacım olabileceğini kabul etmeyi öğrendim.	0	1	2	3	4	5

Appendix F: Brief Resilience Scale

IV.

Aşağıda bulunan ölçeği kullanarak her ifadenin sizin için ne kadar uygun olup olmadığını belirtmek için ifadelerden bir tanesini işaretleyiniz.

	Hiç uygun değil	Uygun değil	Biraz uygun	Uygun	Tamamen uygun
1. Sıkıntılı zamanlardan sonra kendimi çabucak toparlayabilirim.	1	2	3	4	5
2. Stresli olayların üstesinden gelmekte güçlük çekerim.	1	2	3	4	5
3. Stresli durumlardan sonra kendime gelmem uzun zaman almaz.	1	2	3	4	5
4. Kötü bir şeyler olduğunda bunu atlatmak benim için zordur.	1	2	3	4	5
5. Zor zamanları çok az sıkıntıyla atlatırım.	1	2	3	4	5
6. Hayatımdaki olumsuzlukların etkisinden kurtulmam uzun zaman alır.	1	2	3	4	5

Appendix G: Debriefing Form

Katılım Sonrası Bilgilendirme Formu

Araştırmaya vakit ayırıp katıldığınız için teşekkür ederiz. Araştırmamız kayıp yaşayan bireylerin travma sonrası büyüme ve psikolojik dayanıklılık ilişkilerinin incelenmesi ile ilgilidir. Araştırmaya katıldığınızda toplanan bütün bilgiler gizli kalacaktır, bu yüzden bilgilerinizin hiçbir şekilde anlaşılma olasılığı yoktur. Araştırma bireysel cevaplarla değil, bütün sonuçlara göre oluşan genel temalarla ilgilenmektedir.

Araştırma ile ilgili daha fazla bilgi almak veya araştırma ile ilgili soru sormak için araştırmacıya e posta atarak iletişime geçebilirsiniz. Araştırma sonunda rahatsız olduğunuzu hissederseniz ihtiyaç halinde Yeditepe Üniversitesi Psikolojik Danışma Birimi ile 0216 578 00 80 ile pazartesi günleri saat 09:00- 12:00 arası iletişime geçiprandevu alabilirsiniz.