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Attachment Styles as Predictors of Posttraumatic Growth

by

Nicole Schuitmaker

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- The participants at the University of Johannesburg who made this study possible.
Summary

Attachment Styles as Predictors of Posttraumatic Growth

Keywords: Adult attachment; posttraumatic growth; development; trauma; South Africa

Attachment theory has become one of the major developmental theories of the last 50 years, influencing scientists and practitioners alike. Attachment theory has focused on the emotional bond emerging during the first year of life between infants and their caregiver(s). The attachment style that develops can influence an individual’s future relationships, self-worth, emotion regulation and coping strategies. Furthermore, attachment styles can impact how an individual experiences a trauma and the aftermath thereof. Traumatic events can result in the development of posttraumatic symptoms, distress, and depression; however traumatic events can also lead to a positive transformation, known as posttraumatic growth (PTG). PTG can lead to positive changes in perceptions of the self, in relationships, and towards personal development. Although research has found that attachment styles may predict PTG, the literature is limited, particularly within South Africa. The current study aimed to investigate whether attachment styles could predict significant variance in PTG. The sample consisted of undergraduate students from a South African university who had experienced a traumatic event. An online survey consisting of a biographical questionnaire, the Experiences in Close Relationships-Revised (ECR-R) questionnaire, and the Posttraumatic Growth Inventory (PTGI) was made available via the university’s online student portal. Data were analysed using hierarchical multiple regression analyses to examine whether attachment styles were predictors of PTG. The results revealed that an anxious attachment style was a significant negative predictor of PTG. Additionally, amongst the five domains of PTG, an anxious
attachment style was a significant negative predictor for the experience of increased personal strength following a trauma. Furthermore, individuals with an avoidant attachment style were significantly less likely to experience PTG through relating to others than along the other domains of posttraumatic growth. The results highlight the importance of considering how attachment styles influence PTG, as this could inform trauma management.

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1. Preface

1.1 Article format
This minor-dissertation was done in article format as indicated by the guidelines of the University of Johannesburg.

1.2 Selected journal
The targeted journal for publication is SAGE Open. The manuscript will be submitted to the journal in accordance with the journal’s guidelines. This manuscript follows the style guidelines set forth in the sixth edition of the Publication Manual of the American Psychological Association, except where otherwise specified by the SAGE Open guidelines. For the purpose of this mini-dissertation, the pages are numbered consecutively. For submission to the above-mentioned journal, pages will be numbered according to the journal’s requirements and thus start from the title page of the manuscript.

1.3 Permission from co-authors
A letter of consent signed by the co-authors in which they give permission that the manuscript Attachment Styles as Predictors of Posttraumatic Growth may be submitted for the purpose of a mini-dissertation by the first author, Nicole Schuitmaker, has been submitted to the Faculty of Humanities at the University of Johannesburg.
2. Author Guidelines and Manuscript

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2.2 Manuscript
Attachment Styles as Predictors of Posttraumatic Growth

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Abstract

The aim of the present study was to determine whether attachment styles could predict significant variance in posttraumatic growth (PTG). Specifically, the study examined whether the two insecure attachment styles, namely anxious and avoidant attachment, were significant predictors of PTG. The sample consisted of 233 undergraduate students from a South African university who had experienced a traumatic event. Participants’ ages ranged from 18 to 33 years ($M = 21$ years) and were from various ethnic backgrounds (81.5% Black African, 7.7% White, 9% Coloured, and 3.9% Asian/Indian). Two self-report measures were administered via an online survey to assess attachment styles and PTG. Results showed that an anxious attachment style was a significant negative predictor of PTG. Furthermore, individuals with an avoidant attachment style were significantly less likely to experience PTG through relating to others than along the other domains of PTG. The results highlight the importance of considering how attachment styles influence PTG, as this could inform trauma management.

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Keywords: attachment styles; posttraumatic growth; development; trauma; South Africa
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Introduction

Close relationships are essential to health and well-being. Additionally, the ability to form intimate relationships with others is considered a normative developmental task for young adults (Cassidy, 2001). One factor that may influence the ability to form and maintain close relationships are attachment processes. Attachment theory has become one of the major developmental theories of the last 50 years, influencing scientists and practitioners alike (Otto, 2008). The central focus of attachment theory has been the dyadic bond between an infant and its mother, with the mother as the sole contributor to the child’s physical and emotional wellbeing (Ainsworth, Bell, & Stayton, 1974; Bowlby, 1969). Research has, however, expanded from this focus on infancy to attachment in adolescence, neurophysiological regulation related to attachment styles, attachment in adulthood, and clinical applications of attachment styles (Holmes, 2015; Keller, 2007).

According to Bowlby (1969), the emotional bond formed between an infant and caregiver during the first year of life provides the infant with the basis for understanding itself and others, thereby serving as a prototype for future social relationships and development. This bond is internalized into a working model for relationships, thus forming the blueprint for future relationships and providing unconscious guidelines for experiencing and managing distressing emotions (Cooper, Shaver, & Collins, 1998). During infancy, attachment behaviours are expressed through crying, clinging, and following the caregiver around with the purpose of establishing and maintaining closeness, particularly in stressful situations. The attachment instinct encourages infants to maintain close proximity with their caregiver as a way of being protected from potential harm (Bowlby, 1969).

Originally, Ainsworth (1979) identified three different attachment styles, specifically secure attachment and two insecure attachment styles, namely anxious-ambivalent and avoidant attachment. Securely attached infants view their caregiver as reliable and loyal. They
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are often joyful in the presence of the caregiver, display negative emotion openly and show confidence in knowing that their needs are being met by the caregiver (Ainsworth & Bowlby, 1991). Insecurely attached infants may view their caregiver as absent and untrustworthy (Bylsma, Cozzarelli, & Sumer, 1997). An infant with an avoidant attachment style learns to reveal as little as possible about their inner experiences of negative affect. This is due to a fear of rejection, because of neglectful or non-responsive caregiving (Otto, 2008). Anxious-ambivalent infants typically display overtly intense negative emotions as they are not sure whether or not their needs will be met by their caregivers (Otto, 2008). They tend to have experienced overprotective or inconsistent caregiving and caregivers who misinterpreted their emotional signals (Arikan, Stopa, Carnelley, & Karl, 2016).

A secure attachment between infant and caregiver is associated with better cognitive, emotional, and physical development (Cooper et al., 2009), whereas an insecure attachment can lead to various developmental difficulties, such as social and emotional maladjustment (Malekpour, 2007). According to Hazan and Shaver (1987), attachment styles are continuous, therefore they impact the formation and maintenance of relationships throughout adolescence and adulthood. Securely attached adults are typically self-confident, social, and form stable, long-term relationships. They are comfortable in close, intimate relationships, characterized by trust, emotional investment, and friendship (Adamczyk & Bookwala, 2013). Adults who have an anxious-ambivalent attachment style lack confidence and fear rejection and abandonment. They are typically worried about their relationships and preoccupied with their partner (Arikan & Karanci, 2012). Adults with an avoidant attachment style are usually uncomfortable with long-term relationships and avoid closeness and intimacy with others. They struggle to trust others and tend to distance themselves from others (Cooper et al., 1998; Pascuzzo, Moss, & Cyr, 2015). In addition to influencing self-worth and relationships, attachment styles also have
an impact on emotion regulation and coping with stressful life events (Arikan & Karanci, 2012).

Mikulincer, Florian, and Weller (1993) argue that the early attachment relationship that infants experience with their caregivers not only serves as a blueprint for future relationships, but also as a base for understanding and managing future stressful situations. Early secure attachment experiences may teach individuals that life’s challenges are manageable, thereby creating a constructive attitude towards stress, and a buffer for emotional distress (Mikulincer et al., 1993). A secure attachment serves as a personal resource that assists with managing and coping with future stressful situations. However, during the early experiences of insecurely attached individuals (both anxious and avoidant), their caregivers provided unstable and unpredictable care (Mikulincer et al., 1993). This contributes to the development of a sense of personal inadequacy in the infant’s ability to relieve its own anxiety. The generalized working model that may develop because of this could lead to life’s stresses being perceived as threatening, irreparable, and overwhelming. When facing such stressful life events, insecurely attached individuals may struggle to react with the appropriate level of distress and feel overwhelmed, even after the threat is no longer present (Pascuzzo et al., 2015).

A highly stressful life event or trauma is an experience that considerably challenges an individual’s adaptive resources (Arikan et al., 2016). A trauma can disturb one’s beliefs about the self, others, and the world, as well as interfering with one’s coping strategies (Yumbul, Cavusoglu, & Geyimci, 2010). Traumas can range from sexual and physical abuse, bullying, community-based violence to natural disasters, terrorism, and war. Research shows that experiencing a traumatic event is fairly common; approximately 50-89% of people reported a trauma during their lifespan (Owens, 2016). Following a traumatic event, individuals may experience negative and distressing emotions, which may lead to the development of
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posttraumatic stress disorder (PTSD) (Arikan et al., 2016). However, traumatic events can also facilitate a positive psychological change, known as posttraumatic growth (PTG).

PTG can lead to positive changes in the perception of the self, more appreciation for relationships, finding life more meaningful, and discovering spirituality (Arikan et al., 2016). It can occur in conjunction with negative emotions related to the trauma, however it goes beyond that of a coping mechanism (Tedeschi & Calhoun, 2004). A fundamental aspect of PTG is that the individual surpasses their level of functioning that existed before the trauma. The individual experiences a positive transformation that is considered an improvement to their pre-trauma self (Tedeschi & Calhoun, 2004). PTG is associated with a feeling of increased personal strength and an improved outlook regarding one’s life philosophy.

There are a number of aspects that can influence PTG and the way people manage traumatic events. Some of these aspects are related to pre-existing factors that may have an impact on the development of PTSD or PTG (Dekel, Mandl, & Solomon, 2011). These predictive factors include sociodemographic variables, personality traits, social support, cognitive abilities, and attachment style (Elwood & Williams, 2007; Kolokotroni, Anagnostopoulos, & Tsikkinis, 2014; Owens, 2016). Different attachment styles may influence a person’s ability to cope and adjust to a traumatic life event, as well as impact the intensity to which they experience posttraumatic emotional maladjustment (Mikulincer et al., 1993).

Although some studies have found that attachment styles may predict PTG, the literature is limited, particularly within a South African context. Research has indicated that securely attached individuals are better able to cope and adapt to stressful life events (Arikan & Karanci, 2012). Salo, Qouta, and Punamäki (2005) found a strong positive association between torture victims with a secure attachment style and the development of PTG. Conversely, adults with an insecure attachment style were more vulnerable to negative symptom development, such as anxiety, depression, and alcohol abuse, following a trauma.
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(Elwood & Williams, 2007). Declercq and Willemsen (2006) found that insecurely attached adults experienced higher degrees of stress and were more likely to develop PTSD. Furthermore, Arikan et al. (2016) reported that attachment anxiety was positively related to the development of posttraumatic symptoms and attachment avoidance predicted low PTG.

Studies on attachment styles and PTG have predominantly been conducted in developed countries (Arikan et al., 2016; Declercq & Willemsen, 2006; Elwood & Williams, 2007) or focused exclusively on male samples (Salo et al., 2005). The present study addresses the gap in the literature by focusing on a diverse sample in a developing country. Furthermore, South Africa, as a developing country, is characterized by high levels of poverty and adversity (Tomlinson, Cooper, & Murray, 2005). Studies have found that South Africa has among the highest rates of murder, robbery, rape, and partner violence worldwide (Kaminer, Grimsrud, Myer, Stein, & Williams, 2008). The prevalence of these traumatic experiences provides support for research investigating trauma and factors influencing the stress or growth thereafter.

As a result of the above discussions, the overarching aim of this study is to investigate the extent to which attachment styles can predict PTG in a South African sample. As such, the following hypothesis was formulated and tested: Attachment styles will predict a significant variance in PTG.

Method

Participants

The sample consisted of 233 undergraduate psychology students studying at a South African university. A purposive criterion sampling method was used as there was a specific criterion, i.e. the experience of trauma, that participants needed to meet in order to be included in the study. Women represented 73.8% (N = 172) and men represented 26.2% (N = 61) of the sample. Participants’ ages ranged from 18 to 33 years, with a mean age of 21.07 (SD = 1.82).
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Participants were Black African (81.5%), White (7.7%), Coloured (9%), and Asian/Indian (3.9%). The majority (60.9%) of the participants were single, 36.1% were involved with a romantic partner, and 3% were engaged.

Measures

A biographical questionnaire was used to gather demographic information. Participants were required to disclose their age, sex, race, as well as information regarding recent and past traumatic experiences. Two self-report measures were used to assess attachment styles and possible PTG.

The Experiences in Close Relationships-Revised (ECR-R) Questionnaire

The ECR-R assesses the quality of attachment in adult relationships on two subscales, namely anxiety and avoidance (Fraley, Waller, & Brennan, 2000). The ECR-R consists of 36 items and participants rate the extent to which each item describes their feelings in close relationships on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). High scores on the anxiety and avoidance subscales indicate higher levels of attachment anxiety and avoidance, respectively. The ECR-R has strong psychometric properties, including high test–retest reliability and high construct validity (Wei, Russell, Mallinckrodt, & Vogel, 2007). The present study found a very good Cronbach α of 0.9 for the full scale and the anxiety subscale. The avoidance subscale yielded a very good α of 0.91 Although it appears not to have been used in South Africa, the ECR-R has been used in diverse samples across Europe and North America (Schierholz, Krüger, Barenbrügge, & Ehring, 2016).

The Posttraumatic Growth Inventory (PTGI)
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The PTGI assesses whether the individual has experienced positive changes after trauma. It consists of 21 items that need to be answered on a six-point Likert scale (0 = I did not experience this change as a result of trauma to 5 = I experienced this change to a very great extent). The PTGI has five subscales: Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation of Life (Dekel et al., 2011). The total score for the PTGI was used as a dependent variable, as well as each of the subscales’ scores. The PTGI has good internal consistency (Cronbach’s α = 0.9) and discriminant and convergent validity (Tedeschi & Calhoun, 1996). The PTGI has been used with South African samples and it has demonstrated good reliability with a Cronbach’s α of 0.89 (Polatinsky & Esprey, 2000). The present study found a very good alpha of 0.91.

Procedure
During psychology lectures second year students were informed about the study and its purpose and invited to participate. Students were offered an incentive in the form of additional course credit. Those that did not wish to participate were provided with the option to complete an assignment in order to receive the course credit. Participants were required to access and complete the questionnaires on the university’s online student portal, which is only accessible to registered students. Once logged in, participants were required to give informed consent before proceeding with the survey. The students had one month to complete the 20-30 minute survey.

Data Analysis
Hierarchical multiple regression analyses were performed to examine whether attachment styles are predictors of PTG when sex and age are controlled for. Sex and age were controlled for, as studies have shown that women may experience PTG more than men (Tedeschi &
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Calhoun, 1996), and young adults may be more likely to experience PTG than older adults (Tedeschi & Calhoun, 2004).

Ethical Considerations

This study received ethical clearance (REC 02-051-2017) from the Faculty of Humanities Research Ethics Committee at the University of Johannesburg. Participants were briefed about the nature of the study and assured that their responses would be confidential. They were informed that participation was voluntary and that they could withdraw at any time without prejudice. Due to the sensitive nature of traumatic experiences, participants were given the contact details of the university's counselling centre, should they require debriefing.

Results

The most frequently reported traumatic event was the death of a loved one (32.6%). The second and third most frequently experienced traumatic events were being robbed (22.3%), typically violently, and having a serious accident or health problem (15.9%), respectively. Participants identified their most supportive source of help following the trauma, with 35.2% listing family, 24.5% said no one, and 14.2% said a professional, i.e. a psychologist or counsellor.

Zero-order correlations between the variables of interest were determined and are presented in Table 1. Total PTG showed a significant negative correlation with the anxious attachment style. Furthermore, Subscale 1 (Relating to Others) of the PTGI showed a small significant negative correlation with both anxious and avoidant attachment styles. Subscale 3 (Personal Strength) of the PTGI also showed a significant negative correlation with the anxious attachment style.

Insert Table 1 Here
Hierarchical multiple regression analyses were performed to determine if anxious and avoidant attachment styles significantly predicted variance in PTG when age and sex were controlled for. Table 2 summarizes the analysis results where total PTG served as the dependent variable. With age and sex as the only predictors, $R^2 = 0.03$, $F(2,210) = 0.307$, $p = 0.736$. Avoidant and anxious attachment styles explained an additional 3.6% ($R^2$ Change) of the variance in PTG, $\Delta R^2 = 0.039$, $F(2,208) = 3.876$, $p < 0.05$. In the second model of the hierarchical analysis, the relationship between the anxious attachment style and PTG ($\beta = -0.107, SE = 0.051, t = -2.077, p < 0.05$) was found to be statistically significant.

Further hierarchical multiple regression analyses were conducted in order to examine whether any of the five domains of PTG were statistically significantly predicted by the two insecure attachment styles. A series of hierarchical multiple regression analyses was conducted with each of the subscales of the PTGI as dependent variables and anxious attachment and avoidant attachment entered as predictor variables, while controlling for age and sex. Table 2 summarizes the analysis results where Subscale 1 (Relating to Others) served as the dependent variable. In the first step where age and sex were controlled for, $R^2 = 0.004$, $F(2,220) = 0.436$, $p = 0.647$. Avoidant and anxious attachment styles explained an additional 8.7% ($R^2$ Change) of the variance in terms of relating to others, $\Delta R^2 = 0.075$, $F(2,218) = 10.493$, $p < 0.01$. In the second model of the hierarchical analysis, avoidant attachment style ($\beta = -0.079, SE = 0.022, t = -3.607, p < 0.01$) was found to be a statistically significant negative predictor of PTG in terms of relating to others.
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The analysis results where Subscale 3 (Personal Strength) of the PTGI served as the dependent variable can be found in Table 2. With age and sex as the only predictors, $R^2 = .005$, $F(2,221) = 1.596$, $p = .205$. Anxious and avoidant attachment styles predicted an additional 3.9% ($R^2$ Change) of the variance $\Delta R^2 = .036$, $F(2,219) = 4.547$, $p < .05$. It was found that an anxious attachment style ($\beta = -.032$, $SE = .011$, $t = -2.784$, $p < .05$) was a statistically significant negative predictor for experiencing personal strength after trauma. Hierarchical regression analyses with Subscale 2 (New Possibilities), Subscale 4 (Spiritual Change), and Subscale 5 (Appreciation of Life) as outcome variables were found to be not statistically significant.

Discussion

The aim of the present study was to determine whether attachment styles, specifically the insecure attachment styles, could predict statistically significant variance in PTG amongst a sample of university students in South Africa. In general, the findings supported the hypothesis that attachment styles can predict some variance in PTG. The results indicated that an anxious attachment style was a negative predictor of PTG, thus suggesting that this attachment style may be negatively related to an individual’s likelihood of experiencing PTG following a traumatic event. Furthermore, amongst the five domains of PTG, an anxious attachment style was a statistically significant negative predictor for the experience of increased personal strength following a trauma.

According to attachment theory, one’s internal working model influences one’s perception of the self and others, as well as one’s emotion regulation strategies and vulnerability to stressful life events. An anxious attachment style, stemming from early caregiving experiences, may contribute to the development of an internal working model where an individual’s stresses are seen as overwhelming (Cooper et al., 1998). Due to inconsistent or unpredictable caregiving, an anxiously attached child may learn to exaggerate and intensify
their distress in order to maintain proximity with their primary caregiver (Main & Cassidy, 1988). The child realizes that allowing oneself to be soothed may lead to a loss of contact with the inconsistently available parent, thus they exaggerate their suffering. In doing so, the child learns to use hyperactivating strategies for emotion regulation when confronted with stressful situations. The use of hyperactivating strategies includes exaggeration of threats, over-dependence on attachment figures, and hypervigilance to cues of danger and abandonment when faced with stressful circumstances (Mikulincer & Florian, 1995; Pascuzzo et al., 2015). These strategies may become the blueprint for dealing with stressful events and become further ingrained after each stress-related situation. Although these strategies may help the anxiously attached individual maintain the attention of the attachment figures, they may also intensify negative feelings, such as helplessness and stress. Previous trauma studies have indicated that anxiously attached individuals report more distress and problems than securely attached individuals (Besser & Neria, 2010; Besser, Neria, & Haynes, 2009; Mikulincer et al., 1993; Ogle, Rubin, & Siegler, 2016; Salo et al., 2005). This, in turn, may negatively impact the potential development of PTG in anxiously attached individuals, which is in line with the results from the present study.

Furthermore, due to inconsistent parenting, children are prompted to dwell in negative emotional states and helplessness, rather than overcoming them, in the hope of securing attention (Holmes, 2015). Thus, anxiously attached individuals tend to have a negative view of the self, developing the self-perception of being vulnerable and the view that others cannot be relied upon to support them in times of distress (Pascuzzo et al., 2015). This may contribute to a sense of personal inadequacy and difficulty in reacting appropriately to distress. Interestingly, the results of the present study indicated that of the different domains of PTG, anxiously attached individuals are least likely to experience PTG in the form of increased personal strength or the recognition of possessing personal strength. Growth in this domain is associated
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with gaining an understanding that stress and difficulties may occur but that they are also manageable (Tedeschi & Calhoun, 2004). This suggests that due to negative self-appraisal that is associated with an anxious attachment style, these individuals may struggle to view their self as capable of managing and overcoming a traumatic event.

Of particular interest in this study was that no significant correlation was found between an avoidant attachment style and total PTG. A possible reason for this could be that due to the internal working model that formed during early childhood from rejecting caregivers, the individual learned to inhibit attachment-seeking behaviours, such as the expression of negative emotion, in times of stress (Pascuzzo et al., 2015). At a young age the child learned to use deactivating strategies in stressful situations in order to avoid the pain of rejection from the caregiver. These deactivating strategies include denial of emotion-related thoughts, suppression of emotional expressivity, as well as distancing and repressing the trauma (Mikulincer & Shaver, 2007). Therefore, individuals with an avoidant attachment may be less likely to openly express themselves when discussing a traumatic event or even undermine the severity, in order to evade negative emotions and avoid appearing vulnerable. This could explain why an avoidant attachment style did not negatively predict PTG in the present study.

However, the results indicated that of the five domains of PTG, individuals with an avoidant attachment style are least likely to experience PTG through relating to others. This could also be explained by examining the internal working model that developed during childhood. As mentioned, due to rejecting caregivers the child learned to inhibit attachment-seeking behaviours, which also includes proximity seeking, in times of stress (Pascuzzo et al., 2015). In other words, because support seeking behaviour was typically met with rejection, the child learned to avoid the attachment figure and engage in self-soothing behaviours. Based on their experiences, children with an avoidant attachment style view others as untrustworthy and incapable of providing support (Cassidy, 2001). Studies have found that avoidantly attached
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adults are typically uncomfortable with intimacy and avoid closeness with others. Furthermore, they are less likely than securely attached adults to seek support in response to stress (Alfasi, Gramzow, & Carnelley, 2010; Arikan & Karanci, 2012; Mikulincer et al., 1993). Therefore, across the different domains of PTG, it is understandable that individuals with an avoidant attachment are least likely to experience PTG through relating to others.

Limitations and Recommendations of the Study

Some limitations of the present study should be noted. Firstly, the sample consisted of students from one university in South Africa, therefore it may not be possible to generalize the results to other populations. Secondly, the use of self-report questionnaires may lead to limited information gathered, thus a mixed methods approach may enrich the findings. Furthermore, due to the limitations posed by the cross-sectional design of this study, it is suggested that the use of a longitudinal design would be beneficial from a developmental growth perspective.

Overall, the limitations of the present study point out several avenues for future research. Future studies may benefit from alternative or additional means of assessment, other than self-report measures. This could allow for more in-depth exploration of the different variables impacting PTG. This could also include obtaining qualitative data for a richer understanding of the different types of traumas experienced and the support that was provided. Additionally, it is recommended that future research use methods that measure all of the attachment styles (i.e. secure, anxious, and avoidant) to assess more comprehensively the link between the different attachment styles and PTG.

Conclusion

The current study examined whether attachment styles predicted any significant variance in the development of PTG. The results highlight the association between an insecure attachment and
ATTACHMENT STYLES

the negative impact on the development of PTG. Specifically, the results indicated that an anxious attachment style may negatively influence the development of PTG. Furthermore, an individual with an avoidant attachment style is less likely to experience PTG through relating to other people, than along the other PTG domains. The results from the present study have important implications for clinical practice and research. There is empirical evidence that suggests that an insecure attachment style may negatively influence an individual’s view of the self, others, distress tolerance, and emotion regulation strategies (Woodhouse, Ayers, & Field, 2015). Anxiously attached individuals are more likely to develop PTSD symptoms following a trauma, whereas individuals with an avoidant attachment style are less likely to seek support, particularly when in distress. Addressing this may improve treatment outcomes following a trauma (Forbes, Parslow, Fletcher, McHugh, & Creamer, 2010). Specifically, based on this research, understanding that an anxious attachment style may negatively influence the development of PTG, could inform trauma management. This also highlights the importance of a secure attachment style, thus providing support for more research and programmes aimed at promoting a secure attachment style. Prevention and intervention programmes focusing on parent-child attachment relationships may have a long-lasting impact on an individual, particularly in a South African context where trauma is highly prevalent. Programmes aimed at teaching adaptive emotion regulation strategies and distress tolerance skills could help improve the possibility of experiencing PTG, as well as reduce post-traumatic symptom development.

Research has indicated that there are many different variables influencing the development of PTG, such as attachment style, personality characteristics, cognitive abilities, and support systems (Dekel et al., 2011). The present study contributes to the body of research exploring the influence of attachment styles, as well as factors impacting the development of PTG. It provides a deeper understanding of the continuing impact of early attachment
ATTACHMENT STYLES

relationships and how it can influence the experience of trauma, and specifically growth after trauma.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research and/or authorship of this article.

Note

1. These population groups are described in accordance with the South African census categories.
ATTACHMENT STYLES

References


Besser, A., & Neria, Y. (2010). The effects of insecure attachment orientations and perceived social support on posttraumatic stress and depressive symptoms among civilians
ATTACHMENT STYLES

exposed to the 2009 Israel–Gaza war: A follow-up cross-lagged panel design study. *Journal of Research in Personality, 44*, 335–341. doi:10.1016/j.jrp.2010.03.004


ATTACHMENT STYLES


ATTACHMENT STYLES


ATTACHMENT STYLES


### Table 1. Inter-correlations between PTG and Anxious and Avoidant Attachment Styles

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<thead>
<tr>
<th></th>
<th>PTGI-1</th>
<th>PTGI-2</th>
<th>PTGI-3</th>
<th>PTGI-4</th>
<th>PTGI-5</th>
<th>PTGI-Total</th>
<th>ANX-TOT</th>
<th>AVOID-TOT</th>
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<tr>
<td>PTGI-1</td>
<td>-</td>
<td>.575**</td>
<td>.408**</td>
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<td>-</td>
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<td>.436**</td>
<td>.513**</td>
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<td>.356**</td>
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<td>.595**</td>
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<td>-</td>
<td>-.094</td>
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<td>.442**</td>
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</table>

**. Correlation is significant at the 0.01 level (2-tailed).
### Table 2. Avoidant and Anxious Attachment Styles as Predictors of PTG

<table>
<thead>
<tr>
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<th></th>
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<td>Adj. $R^2$</td>
<td>F</td>
<td>β</td>
<td>$R^2$</td>
<td>Adj. $R^2$</td>
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<td>.007</td>
<td>.307</td>
<td>.063</td>
<td>.004</td>
<td>.436</td>
</tr>
<tr>
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<td></td>
<td>.185</td>
<td></td>
<td></td>
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<tr>
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<td></td>
<td></td>
<td>.581</td>
<td></td>
<td></td>
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<td>Step 2</td>
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<td>.020</td>
<td>3.876*</td>
<td>.091</td>
<td>.075</td>
<td>10.493**</td>
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<tr>
<td>Avoidant Attachment</td>
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<td></td>
<td>-.079**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxious Attachment</td>
<td>-.107*</td>
<td></td>
<td></td>
<td>-.020</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05  **p < .01
Appendices

Appendix A: Ethical Clearance

FACULTY OF HUMANITIES
RESEARCH ETHICS COMMITTEE

26 May 2017

REC 02-051-2017

APPLICANT: Ms N Schuitmaker
TITLE OF RESEARCH PROJECT: Attachment Styles as Predictors of Posttraumatic Growth
DEPARTMENT: Psychology
SUPERVISORS: Dr P Basson
                     Dr G Kruger

Dear Ms Schuitmaker

The Faculty Research Ethics Committee has considered your research proposal. We have approved the proposal with recommendations as stipulated in the accompanying letter. Please quote the approval number above in all communication to the REC.

The REC would like to extend their best wishes to you with your project.

Yours sincerely,

Prof Tharina Guse
Chair: Faculty of Humanities REC
Tel: 011 559 3248
DEPARTMENT OF PSYCHOLOGY

STUDY: Attachment Styles as Predictors of Posttraumatic Growth

Dear Prospective Participant,

You are being invited to take part in a research study which forms part of my MA (Clinical Psychology) degree. The purpose of this research is to gain a better understanding of our relationships and how they impact on our lives, as well as our experience of difficult events. You are welcome to ask any questions about any part of this study that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved.

Your participation is entirely voluntary and you are free to decline to participate. If you decline participation, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to participate. Should you wish to withdraw, all data that you have supplied will be destroyed accordingly. Furthermore, your responses will remain confidential, therefore no one other than the researchers from the psychology department will have access to your answers.

Some questions relate to traumatic events that you may have experienced. Due to the sensitive nature of this topic, should you feel distressed after completing the survey, please contact PsyCad, the Centre for Psychological Services and Career Development, at 082 054 1137.

If you agree to participate, please answer the questions that follow as honestly as possible. It should take approximately 20 minutes to complete.
ATTACHMENT STYLES

This study has been approved by the Faculty of Humanities Research Ethics Committee at the University of Johannesburg and will be conducted according to the ethical guidelines and principles stipulated by the committee.

If you have any questions regarding this research study, please feel free to contact me (nicoschuitmaker@gmail.com). Alternatively, you can contact Dr Basson (pbasson@uj.ac.za) or Dr Kruger (gkruger@uj.ac.za). As co-supervisors for this study and staff members in the psychology department, they will be able to assist you.

Please sign to indicate that you consent to participate in this study. Your participation in this important research is appreciated.

Kind Regards,
Ms Nicole Schuitmaker
Principal Researcher

Declaration by participant

By clicking consent and continuing with this survey, I agree to take part in this research study.

I declare that:

- I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is voluntary and I have not been pressurised to take part.
- I may choose to withdraw at any time and will not be penalised or prejudiced in any way.

☐ I give consent
Biographical Questionnaire

1. Gender:
   Male  Female

2. Date of Birth: ____________________________

3. Age: ___________________________________

4. Population group: _______________________

5. First language: _________________________

6. How would you describe your place of living:
   Urban  Peri-urban  Rural  Other

   If other, please elaborate: __________________________________________________

7. How would you describe your socio-economic status:

   Upper  Upper-middle  Middle  Lower-middle  Lower

8. Religion: ______________________________

9. How would you describe your relationship status:

   Single  Married or engaged  Involved with a romantic partner  Divorced or widowed

10. Have you ever experienced an event that you considered to be traumatic?
    Yes  No

11. When did this event occur (Year and month)?
    ______________________________________

12. How old were you then? ____________________________
13. Please briefly describe this event:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

14. What was your biggest struggle immediately after this event?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

15. What and/or who helped you during and after the event/period?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

16. How long did it take you to get to a “place” where you felt you could handle what happened?

_____________________________________________________________________
_____________________________________________________________________

17. Anything else you would like to mention or explain?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________
### The Experiences in Close Relationships-Revised (ECR-R) Questionnaire

The statements below concern how you feel in emotionally intimate relationships. We are interested in how you *generally* experience relationships, not just in what is happening in a current relationship.

Please use the scale below by placing a number between 1 and 7 in the space provided to the right of each statement.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>Strongly agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. I'm afraid that I will lose my partner's love.  
2. I prefer not to show a partner how I feel deep down.  
3. I often worry that my partner will not want to stay with me.  
4. I feel comfortable sharing my private thoughts and feelings with my partner.  
5. I often worry that my partner doesn't really love me.  
6. I find it difficult to allow myself to depend on romantic partners.  
7. I worry that romantic partners won't care about me as much as I care about them.  
8. I am very comfortable being close to romantic partners.  
9. I often wish that my partner's feelings for me were as strong as my feelings for him or her.  
10. I don't feel comfortable opening up to romantic partners.  
11. I worry a lot about my relationships.  
12. I prefer not to be too close to romantic partners.  
13. When my partner is out of sight, I worry that he or she might become interested in someone else.  
14. I get uncomfortable when a romantic partner wants to be very close.  
15. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.  
16. I find it relatively easy to get close to my partner.
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>ATTACHMENT STYLES</strong></td>
<td></td>
</tr>
<tr>
<td>17. I rarely worry about my partner leaving me.</td>
<td></td>
</tr>
<tr>
<td>18. It’s not difficult for me to get close to my partner.</td>
<td></td>
</tr>
<tr>
<td>19. My romantic partner makes me doubt myself.</td>
<td></td>
</tr>
<tr>
<td>20. I usually discuss my problems and concerns with my partner.</td>
<td></td>
</tr>
<tr>
<td>21. I do not often worry about being abandoned.</td>
<td></td>
</tr>
<tr>
<td>22. It helps to turn to my romantic partner in times of need.</td>
<td></td>
</tr>
<tr>
<td>23. I find that my partner(s) don't want to get as close as I would like.</td>
<td></td>
</tr>
<tr>
<td>24. I tell my partner just about everything.</td>
<td></td>
</tr>
<tr>
<td>25. Sometimes romantic partners change their feelings about me for no apparent reason.</td>
<td></td>
</tr>
<tr>
<td>26. I talk things over with my partner.</td>
<td></td>
</tr>
<tr>
<td>27. My desire to be very close sometimes scares people away.</td>
<td></td>
</tr>
<tr>
<td>28. I am nervous when partners get too close to me.</td>
<td></td>
</tr>
<tr>
<td>29. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.</td>
<td></td>
</tr>
<tr>
<td>30. I feel comfortable depending on romantic partners.</td>
<td></td>
</tr>
<tr>
<td>31. It makes me mad that I don't get the affection and support I need from my partner.</td>
<td></td>
</tr>
<tr>
<td>32. I find it easy to depend on romantic partners.</td>
<td></td>
</tr>
<tr>
<td>33. I worry that I won't measure up to other people.</td>
<td></td>
</tr>
<tr>
<td>34. It's easy for me to be affectionate with my partner.</td>
<td></td>
</tr>
<tr>
<td>35. My partner only seems to notice me when I’m angry.</td>
<td></td>
</tr>
<tr>
<td>36. My partner really understands me and my needs.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix E: Posttraumatic Growth Inventory

**Post Traumatic Growth Inventory**

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

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

Please mark the relevant number for each question with an **X**

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I changed my priorities about what is important in life.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I have a greater appreciation for the value of my own life.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I developed new interests.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I have a greater feeling of self-reliance.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I have a better understanding of spiritual matters.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I more clearly see that I can count on people in times of trouble.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I established a new path for my life.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. I have a greater sense of closeness with others.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. I am more willing to express my emotions.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
## ATTACHMENT STYLES

10. I know better that I can handle difficulties.
   0 1 2 3 4 5

11. I am able to do better things with my life.
   0 1 2 3 4 5

12. I am better able to accept the way things work out.
   0 1 2 3 4 5

13. I can better appreciate each day.
   0 1 2 3 4 5

14. New opportunities are available which wouldn't have been otherwise.
   0 1 2 3 4 5

15. I have more compassion for others.
   0 1 2 3 4 5

16. I put more effort into my relationships.
   0 1 2 3 4 5

17. I am more likely to try to change things which need changing.
   0 1 2 3 4 5

18. I have a stronger religious faith.
   0 1 2 3 4 5

19. I discovered that I'm stronger than I thought I was.
   0 1 2 3 4 5

20. I learned a great deal about how wonderful people are.
   0 1 2 3 4 5

21. I better accept needing others.
   0 1 2 3 4 5
ATTACHMENT STYLES

Appendix F: Turnitin Report
Attachment Styles as Predictors of Posttraumatic Growth

**Originality Report**

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<th>Similarity Index</th>
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<td>2%</td>
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**Primary Sources**

1. www.newmediaandsociety.com
   Internet Source

2. Amber L. Paulk, Joe Pittman, Jennifer Kerpelman, Francesca Adler-Baeder.
   "Associations between dimensions of security in romantic relationships and interpersonal competence among dating and non-dating high school adolescents", Journal of Social and Personal Relationships, 2011
   Publication

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